PATTERNS OF CITIZEN DEMANDS FOR POLICE SERVICE

by

Stephen L. Percy

and

Eric J. Scott

Workshop in Political Theory and Policy Analysis
Indiana University
Bloomington, Indiana

...epared under Grant Number 80-IJ-CX-0014 from the National Institute of Justice, U.S. Department of Justice. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

WORKSHOP
IN
POLITICAL THEORY
AND
POLICY ANALYSIS

Indiana University
814 East Third
Bloomington, IN 47405

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

ACKNOWLEDGEMENTS

The authors would like to thank several individuals and organizations without whose assistance and support this project could not have been designed and implemented. From its nascent stages through the grant award by the National Institute of Justice (80-IJ-CX-0014) to the eventual completion of this report, William E. Saulsbury of the Office of Research Programs at NIJ provided important substantive and administrative assistance; he was the ideal program monitor.

Our hosts at the Fort Worth Police Department could not have made our tasks any easier nor our work there more enjoyable. We owe a great debt to the many officers and civilians who willingly provided technical assistance and information. We wish to thank Chief H. F. Hopkins for allowing us to conduct the study in his department and for providing us with office space convenient to the communications center. Lieutenant David Dees and Officer David Garrett offered useful technical assistance, especially in initiating the project. Deputy Chief B. M. Kennedy of the Technical Services Bureau and Lt. Ben Dumas of the Communications Division made it easy for us to monitor call processing procedures and to obtain necessary voice and data tapes. Sergeants J. R. Brizendine and M. M. Gresham and Officer Chris Drake were particularly gracious in explaining complicated telephone and dispatching procedures and in helping us understand the computer-aided dispatch system. Deputy Chief Homer Clark facilitated the distribution of the officer survey. To the FWPD call takers and dispatchers go our sincere appreciation for their assistance throughout the project. Thanks also to the citizens of Fort Worth who agreed to be interviewed regarding their contact with the police and to the FWPD officers who completed and returned our questionnaire.

Our Fort Worth field staff was a most efficient and personable unit, carrying out their assigned tasks with a great deal of ability and good humor. Asha Swarup filled the role of citizen interview coordinator and general resource person with much skill and vitality. She was instrumental in all phases of the project, from survey design through data collection and report preparation. Our coders and interviewers were as capable a group to work with as we have ever known. All of them deserve our gratitude: Chris Bradford, Terry Colgren, Suzanne Craig, Dorris Elam, Ken Hanson, Pam Horoda, Chris Laing, Rob Moran, Mike Newman, Tim Stack, John Watts, and Robert Utz.

A number of people at the Workshop in Political Theory and Policy analysis at Indiana University contributed to the success of our efforts. Elinor Ostrom and Roger B. Parks assisted in the development of our ideas and our research design. John P. McIver commented on an earlier version of this report. Rida Young not only helped in instrument design, but supervised data-entry staff and created a data base management procedure that smoothly and efficiently transformed raw data into analyzeable format in record time. Carol Lambert also provided helpful computer expertise. Kate Jackson assisted with data cleaning and preparation, while Darryl Crockett helped with the maps and graphics.

The Workshop support staff has done their usual expert job in preparing the manuscript. Patty Smith was primarily responsible for word processing and editing the volume; she deserves special thanks for putting up with innumerable last-minute changes and impossible requests. She has been ably assisted by Teresa Therrien, who also helped in editing and proofing. Marsha Ellis has been an ideal secretary; she has our particular gratitude.

Without the assistance of all of these people the project would not have been possible; we want to thank them all for a job well done. All responsibility for the contents of the report, however, rests with the authors.

PREFACE

A large number of research studies have examined elements of police service delivery in American communities during the past quarter century. Among the most prominent elements of these studies have been patrol deployment, response time, equity in service delivery, officer treatment of minorities, and citizen satisfaction with police services. Relatively less attention has been focused on citizen demands for police service and their processing by police personnel. Recently, however, there has been an upswing in interest in and research on patterns of citizen demands as articulated through calls for service. Citizen demands for police services have been growing in both scope and volume at the same time that departmental resources have been constrained by budgetary belt-tightening. Faced with handling a burgeoning demand level with fewer patrol personnel, police agencies have been forced to seek alternative means to the traditional patrol unit response to calls for service.

Unfortunately, in the rush to develop response alternatives, the patterns of demands on police and the manner in which they are processed from receipt through dispatch have received little attention. Most analyses of citizen demands continue to ignore the full range of calls received and, perhaps more importantly, fail to explore the variety of response options provided by police call takers. Police telephone operators have considerable discretion in determining which calls are judged eligible for police service, the nature of the service provided, the extent to which information is relayed to callers, and the complaint code and response priority assigned to dispatched calls. Similarly, police dispatchers are largely autonomous in their decisions on queuing calls for dispatch.

This volume is a comprehensive exploration of the issues of citizen demand and initial police response in the context of one medium-sized American city. The research underlying this report was initiated as part of the Police Communications Study (PCS) conducted by the Workshop in Political Theory and Policy Analysis at Indiana University. The Workshop has long been interested in issues of police organization and performance, especially as they affect the well-being of community residents. Specific interest in citizen demand patterns and police call processing originated as an outgrowth of two companion studies conducted in the mid-1970s. One study, "Evaluating the Organization of Service Delivery: The Police," was sponsored by the National Science Foundation. It was a two-stage effort aimed at describing and evaluating patterns of police service delivery in several metropolitan areas. The study described and assessed police organization for providing patrol services, officer activities during police-citizen encounters, and citizen evaluation of those activites.

Another Workshop project related to citizen demand was the Law Enforcement Assistance Administration-sponsored study, "Police Referral Systems in Metropolitan America." This project examined the referral behavior of both police officers on patrol and police call takers (Scott and Moore, 1981). From this study emerged a comprehensive picture of the service demands of citizens in jurisdictions of varying size and population composition (Scott, 1981). Also, call taker referral was examined as only one of several response alternatives open to operators at the initial stage of call processing.

As part of these companion studies, Workshop researchers monitored citizen calls for service in 21 police departments in three metropolitan areas. Although their primary focus was on the patrol function, it became clear that most patrol officer activity stemmed directly from calls for service. During the process of gathering demand data, it also became apparent that initial call processing was an important determinant of subsequent dispatcher and patrol officer activities as well as of citizen evaluations of police response to service requests. Police call takers were able to handle a substantial proportion of calls by means other than dispatch, including referral of callers to other agencies and direct provision of requested information. Realization of the potential importance of citizen demands and their initial processing by police operators generated interest in undertaking a follow-up study that focused solely on citizen calls for service and their initial handling by police.

A grant from the National Institute of Justice enabled the Workshop to conduct such an investigation, the Police Communications Study. Citizen demand and initial police response data were collected during a 3-month period in early 1981; the Fort Worth (TX) Police Department served as the research site. The principal data collection strategy of the project involved listening to and coding information about calls for service that had been tape recorded by the department. Our primary research objective has been to study police processing of citizen demands for service, with specific attention given to two major topics. The first concerns an effort to assess patterns of citizen demands in terms of both demographic and geographic variations

in the community. We hope to provide a comprehensive description of citizen demand patterns and to analyze the characteristics of individuals and areas of the community that stimulate different types of demands. The second research topic focuses on the roles and problems associated with the flow of demand related information from call receipt to dispatch.

The data analysis in this volume relates primarily to the first topic. It assesses demand patterns for police services, although reference is also made to the role of police demand information processing and flow. This report presents a detailed description of citizen demands for police service in Fort Worth based on monitored calls for service. Chapters will explore variations in citizen demand patterns associated with selected time periods, caller attributes, and neighborhood characteristics. The disposition of calls for service and citizen evaluations of their exchange with call takers will also be considered. The final chapter examines implications for police policy and management that arise from analysis of citizen demands and their processing.

The overall purpose of this volume is to supplement the literature on citizen demand and initial call disposition as well as to address policy questions related to personnel deployment and alternative modes of police response. It is possible that police managers have moved too fast from concentration solely on officer activities to development of alternatives to traditional patrol unit response. Instead of searching for new alternatives, there currently may exist several strategies involving police call takers and dispatchers which, if implemented, can help remove the burden of call

answering from field officers so that citizen requests will still be answered efficiently, but without hopelessly strapping police department budgets.

CHAPTER 1

WHY STUDY CITIZEN DEMANDS FOR POLICE SERVICE: A RATIONALE AND REVIEW

Government agencies established for the provision of human services have a pervasive impact in American society. Such agencies warn us of health hazards, educate our children, treat our illnesses and injuries, provide low-cost housing, and support our unemployed. Many of these agencies are established to provide services upon receipt of direct demands from citizens who consume the services they provide. A service demand is simply a request for an agency to take some action about a specified problem.

The present volume represents a comprehensive analysis of citizen demands for police service. This chapter discusses the impetus behind the study of demand for police service, drawing on the broad spectrum of research in the area. It then reviews the methodology and findings of various studies of citizen service demands on police, identifying some lessons that have (hopefully) been learned from this analysis, and pointing out areas that have not been fully researched. The chapter concludes with an overview of topics to be addressed in the remainder of the volume.

Five Reasons for Studying Citizen Demand Patterns

Among all government service agencies, municipal police departments receive perhaps the highest volume of service demands. There have been numerous studies of the form and content of citizen demands for police service. In fact, several have suggested that the

content of citizen demand is a major influence on the organization and activities of police agencies. Others have disagreed, suggesting that police response to demand is shaped by the delivery system itself. They argue that incoming inputs are hopelessly vague and ambiguous and must of necessity be transformed so that they may be recognized and acted upon by service delivery agents, notably officers on the street.

While the reasons for studying citizen demand for police service are varied, they can be subsumed under five general justifications, as discussed below. The following discussion, and indeed this volume, is limited to demand as manifested through citizen calls for service. There are, of course, other forms of demand for police services including walk-in complaints and flagging down passing officers.

Citizen Demand Shapes Police Practice

Several analysts have suggested, either implicitly or explicitly, that citizen demand is the principal factor shaping both police organization and activities. They consider the police as a reactive agency, one that responds to demands placed upon it. This view "posits tight coupling between the organization and the environment such that a given level of 'inputs' of citizen cooperation, information, equipment, personnel, and money will produce a given level of 'outputs' such as arrests" (Manning, 1980: 99-100). This was the impetus behind Reiss' (1971) pioneering study of police officer activities while on patrol. Reiss argued that since the patrol division of any police department must organize to react to citizen service requests, the form and content of those requests define what is considered a "police matter." Citizens frequently request police

intervention in situations which they think require mediation, perhaps because they view themselves as victims, because they perceive a breach of moral order, or because they want assistance or information. The police may determine that these matters involve no crime, yet because the public considers it police duty to handle them, the police often respond. Since the earliest studies of demand patterns, researchers have been struck by the volume and diversity of noncriminal demands placed on the police. In fact, this is one of the few consistent findings to emerge from these studies. Police departments have had to structure themselves to respond to this diversity. Thus, not only do many departments maintain a large patrol force, but they have established sources of information and referral, special units to take reports by telephone or at the scene, crisis intervention units, juvenile officers, and many other specialized bureaus or offices.

While numerous studies have suggested the link between demand patterns and police structure and activity, none have determined the extent to which demand has shaped police practice. One reason this determination is difficult is the discretion maintained by lower level police personnel, including officers, dispatchers, and complaint operators (Lipsky, 1980; Manning, 1980; Percy and Scott, 1982a). Another is because most studies making the demand-police activity link have not had data on the full range of citizen calls for service. Many studies have examined police records, which include only dispatched calls, and have ignored the frequent information requests police receive.

Citizen Demand as a Determinant of the Police Role

Trying to define the present and proper role of the police has been a popular topic since the turmoil of the 1960s brought the police into focus as an issue of national concern. Studies of citizen demand have been used to address this issue. Although the police role is incredibly complex and has been a topic of major concern to a number of analysts (see the discussions of the police role in Goldstein, 1977; Manning, 1977; Reiss, 1971; Reiss and Bordua, 1967; Rumbaut and Bittner, 1979; Silberman, 1978; Wilson, 1968; and American Bar Association, 1972), simply stated it involves two divergent perceptions: one of the police as crime fighters, the other of the police as service providers (with many noncriminal services included).

Studies of citizen demand patterns, following the reactive view of policing discussed above, have helped to clarify the police role as one of multiple service provider. These studies have attempted to answer the question of precisely what it is that the police are being asked to do, assuming that what they are requested to do correlates strongly with what they actually do. Demand studies have argued that calls for service initiate the majority of encounters between the police and the public. Reiss (1971) and Bercal (1970) were among the first to make the link between citizen demand and police role; the latter, in fact, argued that his study of demand would illuminate "the roles played by the police as defined by the public's requests for assistance" (Bercal, 1970: 690). Previous research by Cumming, Cumming, and Edell (1965) also linked demand patterns to the "latent side" of the police role, i.e., noncriminal service provision.

These early studies gave rise in the 1970s to several analyses of the service role of the police, a role that for many years the police generally refused to acknowledge. Meyer (1976) focused solely on citizen demands for service (noncriminal requests). Lilly (1978) established that police are now expected to perform more than law enforcement tasks. Partly due to differences in methodology, discussed later in this chapter, findings about the extent to which police perform noncriminal services vary. Suffice to say that the police do maintain a significant role as provider of information, assistance, and noncriminal services in addition to their traditionally recognized functions of law enforcement, order maintenance, and crime prevention. Studies of citizen demand have helped give the police service role proper recognition.

Citizen Demand Studies as a Tool for Police Management and Planning

Police departments also use citizen demand data as the basis for resource allocation decisions. Departments first determine geographically distributed patterns of call volume. They then develop administrative artifacts, such as patrol districts and beat areas, that attempt to distribute patrol manpower across the jurisdiction on the basis of call volume; areas generating large numbers of calls may be assigned more officers, or beat sizes in high volume areas may be made smaller to equalize workload. Periodic review allows districts and beats to be adjusted for factors that might alter call volume, such as population change, or construction of new commercial or industrial property.

Some departments have used demand data as the basis of management planning; others have preferred to use measures such as the number of crimes committed. With the continuing spread of computer-aided dispatching (CAD), more departments will have easier access to data on demand patterns and volume. Many CADs have features that allow relatively simple calculation of demand patterns and volume by area or type of call. CADs may stimulate the preparation of even more studies of citizen demand than have thus far appeared.

Citizen Demand Studies and Call Processing

Despite the considerable interest in citizen demand patterns, few would argue that more attention has been given to patterns of calls for service than to officer behavior during police-citizen encounters. In fact, even some well-known studies of calls for service have had as their principal goal the description and analysis of interaction patterns between citizens and police officers during on-scene encounters (Reiss, 1971; Cumming, Cumming, and Edell, 1965). How the police receive, process, and dispatch calls was ignored in favor of officer activities. As Shearing noted,

> While considerable attention has been given to the highly visible question of police/citizen encounters and while there has been some interest in the question of why citizens call the police the crucial question of the processing of these calls has been more or less ignored (1974: 78-79).

Recently, however, there have been signs of a growing awareness of the importance of examining the manner in which police receive and process calls for service. Indeed, call processing may affect the manner and speed of field unit response and, ultimately, officer decisions and actions at the scene. In this sense, studies that identify the types of demand on police are closely linked to call handling.

Call processing involves three major functions: call receipt by police telephone operators, message transfer from operators to dispatchers, and unit dispatch. Each stage of police call processing can affect the content and meaning of demand messages; at each stage there are decision points at which the level of information can change considerably (Manning, 1980). Concern about patterns of citizen demand has led to increasing awareness of this fact, and to the importance of discretionary actions of police call processors, namely call takers and dispatchers (Percy and Scott, 1982b). In a separate volume produced by the authors as part of the Police Communications Study (Percy and Scott, forthcoming), the roles of call takers and dispatchers are discussed at length. Call takers act as gatekeepers, determining which calls are eligible for police response, the initial nature of that response, and, if the call is to be dispatched, what the complaint and priority codes of the call will be. This information is then forwarded to dispatchers, who determine precisely when a call will be dispatched, who will handle the call, and how many units will be sent. Decisions of police call processors can influence police response and officer activities at the scene; they can significantly influence overall police performance. This fact is only beginning to be recognized, and initial police call processing, including handling service demands, should be an area of increasing interest in the future.

Citizen Demand Studies and the Development of Alternative Police Responses

A major impetus behind several recent analyses of citizen demand patterns has been the growing realization among police observers and

administrators that constrained budgets and tight manpower situations no longer permit most departments to dispatch a police unit to handle every citizen service request. For years, unit dispatch has been the expected response for both the police and the public. Now alternative response methods must be developed that are less costly, yet which maintain service quality and citizen satisfaction with the police. To identify and evaluate various alternative modes of response, it is first necessary to determine precisely what the police are being asked to do. "What is needed is a completely new approach -- a system for classifying various types of calls and rationally matching police response alternatives to the particular needs generated by those calls" (Sumrall, et al., 1981). An evaluation of various police response alternatives has been conducted in Wilmington, Delaware (Cahn and Tien, 1981). Alternatives include formally prioritizing calls and delaying patrol unit response, telephone report-taking, walk-in report taking, and scheduling an appointment with a specialized patrol unit to meet the complainant. Results were generally positive in that citizens did not seem to mind if they received a nonpatrol unit response and were told how the police were going to handle the call. An ongoing study sponsored by the National Institute of Justice (1980) is in the process of devising a call classification scheme based on information critical to subsequent response assignment decisions. All of these attempts to devise appropriate response alternatives are based on first determining precisely what the patterns of citizen demand on police are, and then developing acceptable, and effective, means of nontraditional police response.

Our reasons for undertaking this study of citizen demand patterns stem from a combination of all of the factors discussed above. Despite the growing interest in demand processing, most of the work that has appeared has been piecemeal. Few, if any, studies have considered the full range of issues that can be raised by a comprehensive analysis of citizen demand patterns, internal call processing, police response, and their cumulative effects on police performance. We hope to fill the gap with this volume and our companion work on initial police call processing.

Alternative Methodologies for Studying Demand: Strengths and Weaknesses

Although studies of citizen demand have adopted several different specific methodologies, they can generally be classified as studies of patrol officer activities or studies of calls for service distribution. Research adopting the officer activities approach takes the position that citizen demands are manifested in the work tasks of patrol officers, that activities are indicative of the police role. Studies following the calls for service approach take the traditional position that the pattern of demands generally reflects what the police do. Both approaches are thus ultimately interested in demand as reflecting activities; both have strengths and weaknesses as indicators of demand.

Officer Activity Studies

Most studies of officer activities discuss what police are asked to do at a very general level. Wilson's (1968) analysis of dispatched

calls divided activities into four general categories, but included a relatively small number of cases. Bercal's (1980) examination of complaint operator responses to calls for service included a large number of cases, but provided a description of content only for dispatched calls. Again, the categories were quite general and provided little detail.

Other studies have adopted methods closely related to dispatch analysis. Meyer (1976), for example, examined entries in one department's daily report log to determine officer activities. Apparently not all calls for service were entered into this log, making it impossible to determine the link between demand and activity. Another approach is that taken by Webster (1970) who analyzed police records to determine the length of time officers on patrol spent handling different types of assignments; similar efforts were conducted by Misner (1967) and Reiss (1971). None of the activity studies provides a comprehensive picture of what the police do in relation to what citizens ask them to do. Yet, they are frequently, and mistakenly, interpreted as indicators of citizen demand and police response in prepared departmental reports. Often data on dispatched calls are gathered from summary data in prepared departmental reports rather than from the "raw" dispatch tapes or records maintained by many departments. Coding procedures are rarely explained in published reports, rendering comparison across studies difficult. Manning (1980) suggests several reasons why "calls dispatched" is not a uniform category:

1. Some studies have taken data from activity logs completed <u>after</u> an incident has been handled; this data may or may not reflect dispatch content.

2. Record keeping in some departments requires gathering data from dispatch records, officer activity logs, and call records in order to determine the way calls were dispatched and disposed of.

3. Not all calls dispatched are answered by units.

4. Not all dispositions are recorded officially.

Calls for Service Studies

Studies that have examined calls for service are also frought with methodological difficulties. First, many of them do not precisely explain the source of their data. Cumming, Cumming, and Edell's (1965) early study used direct observation of calls for service. That is, they used observers to listen to and record information about calls for service as they were received by the department. Another form of direct observation is listening to tape recordings of citizen calls; many departments record all call taker conversations with callers. Later studies apparently relied on police records of calls for their data (Reiss, 1971; Bercal, 1970; Sumrall, et al., 1981; Cahn and Tien, 1981). Still others have used direct observation and recording of demand information (Shearing, 1974; Lilly, 1978; Antunes and Scott, 1981; Levens and Dutton, 1980). Methods used in data collection can obviously influence the tenor of the results.

Second, the period of observation varies greatly from study to study. Some rely on calls from a single day, others have assigned observers to monitor calls over a period of weeks or months, and some have used police records of calls for an entire year. Not all shifts are represented in the data, or that various peak periods (Christmas, July 4) do not bias the results. There are likely to be many more

calls about criminal incidents during the evening hours; similarly, calls for information are likely to be more frequent during the daytime. No study has attempted to control for situational factors influencing demand, such as major holidays or significant events (sporting events, disasters), that might result in an atypical pattern of citizen calls.

Third, studies that have examined patterns of citizen calls for service have varied in their approach to analyzing demand, with most of the variety concentrated in the degree of specificity of the call categories. Much of the literature has focused on whether citizen calls concerned criminal or noncriminal incidents. As a result, categorization of calls has been rather general, seeking to make only macro distinctions. Although it has shown that police do handle a large volume of noncriminal incidents, this approach has not been very productive in determining the precise nature of citizen demand. From the yearly two-category generalization developed by Cumming, Cumming, and Edell (1965), which discussed calls about "things" (property) and calls for "support," studies have moved to much more detailed breakdowns. Scott (1981) listed calls received in 12 major categories with 75 subcategories. While the more specific breakdowns provide considerable insight into the demand received by a single department (although Scott's analysis included data from 21 departments), comparison across studies is impossible. This is the result of classification systems that are dissimilar except for the crime-noncrime distinction. Additionally, the categories are infrequently defined, even by examples of the types of calls included.

One can only conclude from the diversity of classification schemes involved that they are based on different orderings of demands. Some classification schemes reflect department incident coding in that they tend to follow a legalistic, crime-based orientation while clustering service calls into a small number of categories. Others are merely observers' groupings based on common sense approaches. Recently, call classifications appearing in the literature have been criticized for their unsuitability for use by departments in dispatching calls. There is currently an attempt being sponsored by the National Institute of Justice (NIJ, 1980) to create a call classification scheme that not only describes the nature of the demand, but also the proper response priority.

Other Sources of Demand Information

Indicators of citizen demand levels as described in the literature, and as portrayed in this study, provide only one view of environmental influences on the police. We are examining calls for service data as indicators of direct citizen demands. Other measures of demand might include crime report data, victimization levels as determined through survey research, or officer (both patrol and nonpatrol) time allocations. These data have occasionally been used as demand surrogates. There are still other demand indicators that are not considered in this report:

> It would be useful to have full data on the nature of the demand that police receive, including citizen calls, planned demand that the police respond to as a result of anticipated needs in the community such as scheduled events, and the demand that is created in a sense by police definition of problems in the community that need their attention. Under this category are such things as a series of burglaries or robberies in an area, citizen concern about rape or drug use

> which police attempt to control by special task forces, concentration of personnel or the like. However, these data are not presently available for social science researchers (Manning, 1980: 101).

Our data, like those of many other researchers, represent one of the clearest and most accessible indicators of citizen demand. Readers should keep in mind, however, that the police must do more than respond to calls for service.

Empirical Results of Analyses of Citizen Demand Patterns

Because of the problems stated earlier, namely that call classification schemes are not comparable across studies nor do they usually provide details about how they were constructed, making sense of the results of the empirical analyses of citizen demand patterns is difficult. Some studies have found that calls related to criminal incidents are more frequent than calls related to service, assistance, or information provision (Cahn and Tien, 1981; Reiss, 1971; Levens and Dutton, 1980). Other studies have determined that service calls are more frequent than crime-related calls (Antunes and Scott, 1981; Sumrall, et al., 1981; Lilly, 1978). Studies of dispatched runs have generally found that a high proportion, although not necessarily the majority, of dispatches are crime related (Wilson, 1968; Bercal, 1970; Webster, 1970); others note that smaller proportions of dispatches are crime related (Reiss, 1971; Shearing, 1974). The disparity among findings may be due in part to methodological decisions such as assignment of different categories of calls or dispatches to the crime category, or relying on entirely different data sources.

From these demand studies, two general findings can be identified. First, regardless of whether they represent the majority of demands, noncriminal calls for service constitute a significant segment of citizen demand on the police. If information calls are included (and often they are not because few departments keep records of their frequency), then noncriminal calls represent an even larger segment of total calls (Lilly, 1978; Antunes and Scott, 1981). Also frequently considered noncriminal are calls for assistance or for the police to provide general services. The definition of a service call has never been standardized.

A second general finding from demand studies is that although many calls, and sometimes the majority of calls, are dispatched, a considerable proportion of calls for service received by police are not dispatched. Many calls are handled by call takers alone, or referred or transferred elsewhere. This becomes significant in light of current interest in alternative responses to citizen demand that involve savings in time and money, mainly by developing alternatives to patrol car response. Cahn and Tien (1981) estimated that about 20 percent of calls in Wilmington were not dispatched. Shearing's (1974) and Meyer's (1976) results were similar. Other estimates place the proportion of nondispatched calls at about 50-70 percent of all calls received (Scott, 1981; Lilly, 1978). The latter two studies included a large number of information calls that were normally handled without dispatching a unit, thereby increasing the percentage of nondispatched calls. Although the actual proportion of dispatches is again influenced by methodological considerations, it is clear that while patrol unit dispatch remains the most common police response to citizen demand, other responses are often invoked.

Where Do We Go From Here?

The future of analysis of citizen demand patterns rests on the continuing belief that calls for service exert significant influence on police activities. If one accepts that examination of citizen demand patterns is useful as one means of measuring demand on the police, then there are several areas not yet considered by most empirical studies that may prove insightful. For example, there has been no careful analysis of calling patterns by neighborhood characteristics. What are the differences in patterns of service requests in primarily residential versus commercial or industrial areas? What implications do these differences have for police resource allocation? Do residents of areas inhabited primarily by minority groups call about different problems than white residents; are there variations by income as well as race? Significant, patterned variation may reflect a deliberate bias on the part of the police in delivering services.

Variation in patterns of demand by neighborhood characteristics may also help police departments structure their response capacity. Programs of directed response might be established to handle particular problems. For example, repeated complaints from residents about speeding cars in the neighborhood might be handled by assigning an extra patrol or traffic car to the area to watch for violators. Most departments currently engaged in directed response programs have relied on crime data as an indicator of problems; calls for service data may also be useful in this regard.

Other topics of potential utility to police departments involve demand patterns over periods such as time of day, day of week, or month. Minimal research has focused on this topic. Demand information by time period might be useful in allocating patrol resources such that the highest concentration of personnel are on the street during periods of peak demand. Another area of interest related to demand that has not been systematically addressed is the characteristics of callers who request police service. Can the police expect different demand patterns from black than from white callers? What about callers' emotional states? Are most people who call the police upset or frightened? If so, this may indicate a need for special call taker training programs to calm callers and extract relevant information so that the proper response may be determined.

Another area of inquiry related to citizen demand is the nature of call taker response. This topic has received increased attention in the literature, but, much like call classifications, response categories vary tremendously across studies. A standard set of categories is needed to be able to assess initial police response to demand. Current NIJ-supported research is in part concerned with this issue (National Institute of Justice, 1980). In addition to examining police call response patterns, it is necessary to determine citizen evaluations of the response they receive to their calls for service. In light of current concern with developing alternatives to patrol car response, evaluation becomes even more critical. If callers are willing to accept a response other than patrol unit dispatch, departments may want to investigate various less costly alternatives.

Of course, effective analysis of citizen demand patterns depends largely upon the development of a consistent means of call classification. At present there is no widely accepted standard set of call classifications; each observer creates his own, much the same way as each police department establishes its own set of complaint codes. This is not likely to change on a large-scale basis in the near future. What then becomes critical is for observers to clearly state the manner in which their classification scheme was created, to be as detailed as feasible in their explanation, and to give examples of the types of calls subsumed within each category. In this way at least some degree of comparability across studies should be achieved, and a more accurate picture of demand patterns obtained.

Content of This Volume

In this volume we hope to address many of the issues raised above. Our primary goal is to provide a comprehensive examination of patterns of citizen demand on the police, including aspects heretofore discussed only in a cursory fashion or not at all. Chapters 2 and 3 provide an overview of the methodology of the study and a description of the research site: the city of Fort Worth, Texas, and its police department. Chapter 4 offers a detailed discussion of demand patterns in Fort Worth, comparing data from our observation with that gathered by the Fort Worth Police Department. To our knowledge, this is the first time this comparison has been systematically attempted; it should shed some light on Manning's assertion regarding the relationship between citizen demand and police activity.

Chapters 5 and 6 examine variations in citizen demands by time periods and caller characteristics, respectively. Demand variations by neighborhood characteristics such as racial composition, median family income, and land use patterns are discussed in Chapter 7. Here we identify several factors that influence the proportion of calls of a particular type emanating from various neighborhoods in Fort Worth. Chapters 8 and 9 address police responses to calls for service and citizen evaluations of those responses, respectively. The final chapter sums up our results, discussing their implications for future research and especially for police policy making.

CHAPTER 2

OVERVIEW OF THE POLICE COMMUNICATIONS STUDY

This chapter provides an overview of the research methodology and data collection strategies employed in the Police Communications Study (PCS). The PCS was conducted by the Workshop in Political Theory and Policy Analysis at Indiana University and was designed to determine patterns of citizen demands on the police and strategies for processing those demands. This discussion of research methodology -- which includes descriptions of site selection, research instruments, and data collection activities -- introduces a background for understanding and evaluating the data analysis presented in subsequent chapters.

Selection of Research Site

Since the PCS was attempting a comprehensive description of patterns of citizen demands for police service, requiring detailed knowledge of and familiarity with communications technology, we decided that gathering data in a single police agency would be an appropriate research strategy. Since the communications systems and equipment utilized by American police agencies are so varied, it would have been very difficult and costly to conduct a study requiring in-depth knowledge of communications technology in multiple research sites. Focusing on one department also permitted researchers to investigate and comprehend one system in detail. Unless a large number of sites were included, which was impossible due to cost constraints, it was felt that no significant gain in the

generalizability of findings would be achieved by studying more than one site.

Another reason for limiting the study to one research site was the difficulty and cost of obtaining equipment to monitor calls for service. The project's research strategy required acquisition of equipment with which to monitor police department tape recordings of calls for service and radio dispatches. While most departments maintain such tapes, several different types of taping equipment are used. In order to conduct the study it was necessary for the project to obtain playback equipment compatible with the study department. Obtaining this equipment is difficult because there is no rental market for it and purchase costs are prohibitive. Since acquiring compatible equipment was both difficult and expensive, the project had further incentive to limit its scope to comprehensive research in a single site.

In selecting a police agency to serve as a research site, several criteria were used. For multiple reasons the project desired to study a department with a computer-aided dispatch (CAD) system. Since an increasing number of medium- and large-size departments either currently use or plan to install some form of CAD system in the near future, it seemed appropriate to focus the study in an agency using modern technology to process and dispatch calls for service. Also, computerized systems can efficiently provide researchers with data from police records. A second site selection guide concerned department size. We did not consider the larger departments since they have been more extensively studied than other police agencies. At the same time, we were interested in locating a department serving

a sufficiently large population to generate a sizeable volume and variety of calls for service, including violent crimes. A third selection criterion required heterogeneity in demographic characteristics of the jurisdiction population, such as income and race. This socioeconomic variety would allow the project to determine whether demographic factors significantly influence patterns of citizen demands for police services.

After reviewing several possible sites, the Fort Worth, Texas, Police Department (FWPD) was selected as the research site for the PCS. The department presented a good fit with most site selection criteria. First, FWPD uses a computer-aided dispatching system with an attendant ability to generate useful data on police calls for service records. This CAD system could also assist in triangulating different elements of the demand processing function, which was important to our research methodology. Second, the population of Fort Worth provides a social and economic diversity well suited to a comprehensive study of demand patterns. Third, crime patterns in Fort Worth are sufficiently varied to allow for examination of many types of service demands, including those related to violent crimes, property crimes, and general assistance. Another reason why Fort Worth seemed an appropriate research site was its location in the Sunbelt, a region of the country less often studied, but which is currently experiencing dramatic population and economic growth, and a concomitant increase in demands on local police agencies.

Research Methods

To study the research issues of demand processing and information flow, data were gathered through a variety of methods. The principal research effort of the PCS was to trace individual calls for service through the stages of initial police response: call receipt, call handling, and unit dispatch. Other data gathering strategies included interviewing citizens who had recently contacted the police, and questioning patrol officers who regularly receive demand information after it has been channeled through police communications. The project also obtained computerized copies of FWPD calls for service records for the calendar year preceding fieldwork (1980) as well as for the 3-month research period (February-April 1981). The following sections explain each of these research methods.

Monitoring and Coding Information on Calls for Service

In order to comprehensively assess demand processing in police agencies, the PCS followed individual demands, or calls for service, through the steps in initial police response. The main effort of the study focused on monitoring the communications between citizen callers and police telephone operators, between police operators and dispatchers, and between dispatchers and officers in the field. A three-step data collection strategy was designed to obtain information on each of the three communication linkages associated with processing calls for service.

Step 1: The Caller-Police Operator Exchange

Data were gathered on citizen-police operator interactions by listening to and coding their tape-recorded conversations. Most

police agencies, including the FWPD, tape all incoming calls for service, both to serve as a back up if information is garbled or confused and as evidence for cases of citizen complaints about police response. Using specialized equipment, the FWPD continually tape records all incoming calls for service and all dispatch transmissions on 24-hour, reel-to-reel tapes. These tapes are kept by the department for about 3 months, after which they are recycled. In order to monitor tapes, the study rented three tape play-back machines that were compatible with the FWPD equipment. During the course of fieldwork, tapes were regularly borrowed from the department, monitored, and returned within a few days.

The calls monitored in fieldwork were selected to be as representative as possible of calls for service received by the FWPD. The project began monitoring calls originally received by the FWPD in early February 1981. Tapes for each successive day were monitored, meaning that calls received during all days of the week were included, with some biasing toward weekend periods when call volume is at its peak. For a given day, calls were chosen first by randomly selecting one of the three daily 8-hour dispatch shifts and then by randomly monitoring different tape channels during that shift. Each channel corresponded to a separate call taker position; for each shift we knew which positions were operative and listened only to those channels. By listening to one channel for an hour and then moving to another, the project maximized the number of different call takers monitored. Through this strategy, the PCS monitored a large number of calls that should be representative of the full set of calls received by the department during the period of fieldwork.

While listening to individual calls for service, researchers took notes on the following information items exchanged during the phone conversation:

- Caller name, address, phone number, and current location;
- Street address and other description of the problem/crime location;
- Nature of the problem or crime reported to police;
- Description of participants, weapons, or vehicles involved in the incident;
- Perceived caller characteristics (age, race, sex, emotional status); and
- Police operator response to the call.

All of these items were recorded on the first part of a detailed coding instrument, the Calls for Service Coding Form (see Appendix 1). Not only did coders note individual information items, but also the context in which information was exchanged, that is, whether the caller volunteered or refused information and whether the operator asked for information. A set of acquisition codes was used to describe the context through which information was exchanged: (1) information neither given by the caller nor received by the operator, (2) information given at caller initiative, (3) information given by caller when requested by the operator, (4) information given through both caller initiative and operator request, (5) information requested by the operator and overtly refused or otherwise not given by the caller.

Step 2: Gathering Data from CAD Records

The next step in tracing the flow of calls for service was to match monitored calls for service with police records of these calls.

That is, monitored calls were matched with those that police call takers entered into the CAD system. (The CAD system used by FWPD will be described in more detail in the next chapter.) Matching was done on the basis of date, time of call, and address. Since police operators only enter information into the CAD system for calls they feel require dispatch of a police unit, we were unable to match a significant portion of monitored calls with police records. Calls that concerned requests for assistance or information where the operator decided police response was not appropriate thus could not be matched with CAD records.

For those calls for service that were matched, researchers examined departmental records and coded information about the service request. These records were daily computer printouts of calls for service information recorded in the CAD system. Again, they noted whether any of the set of information items previously described were included. They recorded the beat location of the call, the police units that were assigned, key times related to call processing, and other information included in the record. Also, they noted verbatim any explanatory remarks that the operator entered into the record in addition to the complaint (signal) code describing the problem.

Step 3: Monitoring Dispatch Transmissions

The third research step involved listening to and coding information on dispatch transmissions relevant to calls monitored in step 1 and traced through police records in step 2. Once again matching was required, this time on the basis of time of day and units assigned to the call, information gathered from CAD records in step 2.

Researchers again reviewed the FWPD voice tapes and monitored the channels on which dispatch transmissions were recorded. Based on the beat location of the call, researchers could determine on which channel of the tape they were likely to find the matching dispatch.

When the appropriate dispatch was found, researchers took verbatim notes on the exchange between the dispatcher and the responding officer. Unlike citizen-police telephone conversations, dispatch transmissions tended to be relatively brief, usually lasting less than 30 seconds. After transcribing the dispatch, researchers noted on the coding form which information items were exchanged, and once again, used acquisition codes to describe the context in which information was exchanged. Practically all information contained in dispatches was provided at the initiative of the dispatcher, although on occasion, the responding officer asked for additional or clarifying information.

Fieldwork research was conducted in the Fort Worth Police Department from February through April 1981. During the course of research, more than 1,000 hours of taped calls for service were monitored. Data were collected on more than 5,700 calls received by the FWPD. Of these calls, about 2,300 or 40 percent were matched with CAD records and taped dispatches. Most of the remaining calls did not involve a police dispatch, and as such, were never entered into police records.

Police Records of Calls for Service

In addition to monitoring voice tapes of calls for service, the project obtained copies of the computerized records of calls for

service maintained by the FWPD. These were the same records used in step 2 above to obtain relevant data on monitored calls. Included in these records were complainant name, address, and phone number; signal (complaint) and priority codes; beat location, units assigned, relevant times (e.g., time dispatched, time back in service), and explanatory remarks. The PCS obtained computerized records of all calls for service received by the FWPD during the 1980 calendar year, yielding data on slightly less than 200,000 calls. Also, the project gathered the same records for the 3-month period of fieldwork. Examination of the 1980 calls for service records provides a description of the annual pattern of demands to which a unit was dispatched by the FWPD and allows for analysis of seasonal demand/dispatch patterns. Analysis of police records for the period of fieldwork allows the project to test for research bias and to compare the total set of calls for service received by the department with the smaller set that was entered into police records and eventually dispatched.

Interviews with Persons Calling the Police

Since a major research question of the study focused on demand processing, the project was interested in how citizens rated their interaction with police operators during their initial call for service. To assess citizen perceptions and evaluations of operator treatment and response, a citizen interview form was developed. The interview, included as Appendix 2 to this volume, contained questions concerning the following items:

- The problem or crime reported by the respondent;
- Respondent's relationship to the incident (e.g., victim, witness);
- Location of the incident;
- Information provided by the call taker about police response (e.g., was a unit promised, was response time information given, was other relevant information provided);
- Respondent evaluation of the response provided by the operator and assessment of treatment by the operator; and
- Evaluation of police response time to the call for service.

The pool of interviews was drawn from those individuals whose calls were monitored by the PCS staff and who provided a phone number or sufficient information so that a phone number could be found. This set of individuals was then screened so that persons who called the police on a regular basis (e.g., alarm company representatives), who reported very sensitive incidents (e.g., rape, family arguments), who were police or city personnel, or who had already been interviewed by the project were eliminated from the pool. For those persons selected, project members attempted to verify address information through local directories. Where sufficient information was found, potential interviewees were sent a letter describing the project and informing them that they would be contacted by telephone for the interview. All interviews were conducted over the phone, and most persons contacted consented to be interviewed. During the course of fieldwork, more than 1,200 interviews were conducted.

Police Officer Interview

In order to assess patrol officer perceptions and evaluations of the information they receive from dispatchers about calls for service, the PCS developed a Police Officer Interview Form (Appendix 3). This

interview contained questions on the following topics related to police communications:

- Officer assessment of their own knowledge of police communications;
- Adequacy of information received about problems and incident location;
- Radio congestion and discipline;
- Utility of different types of information in responding to calls for service of different urgency;
- Officer evaluation of the computer-aided dispatch system; and
- Officer characteristics (e.g., years on the force, age, sex, race).

The interviews were distributed to all patrol officers and supervisors through mailboxes in the FWPD patrol deployment headquarters. Included with the survey was a letter from the project director describing the PCS research effort and assuring confidentiality, a letter from the chief of the FWPD verifying the study and urging participation, and a stamped, self-addressed envelope. The surveys were distributed near the end of the study; a brief reminder to complete and return the questionnaire was distributed to improve the response rate. Approximately 40 percent were returned to the project via the mail.

Conclusion

The purpose of this chapter has been to outline the research design and data collection efforts of the Police Communications Study. While subsequent chapters will explain particular aspects of the project in more detail, it is hoped that this chapter provides a general overview of the research strategy of the project. Readers

interested in a more detailed description of project methodology, research instruments, and fieldwork procedures may wish to consult the PCS Report on Data Collection and Research Instruments (Scott, Percy, and Swarup, 1981).

CHAPTER 3

FORT WORTH AND ITS POLICE DEPARTMENT

The city of Fort Worth and its police department were considered ideal locales for conducting the Police Communications Study. This chapter briefly describes the character of the city and discusses the Fort Worth Police Department's organization for receiving and processing citizen calls for service. The chapter also discusses the computer-aided dispatch system which generated some of the data used by the study.

A Brief History -- Cowtown to Boomtown

Fort Worth was established as a frontier army post in 1849. It quickly became a stopping place along the Chisholm Trail and a shipping center for the tremendous herds of longhorn cattle being sent to northern markets. The stockyards still exist and continue to lend a distinctive character to modern Fort Worth, supporting its claim as the most typically Texan of all Texas cities. Fort Worth is much more than a cattle processing center, however. It has grown rapidly and has become a major center of oil finance, manufacturing, and aerospace development. The total civilian labor force in the Fort Worth metropolitan area increased more than 22 percent between 1975 and 1979.

Fort Worth's population has grown steadily throughout the twentieth century, although some leveling is now occurring within the city limits. From a population of slightly more than 25,000 in 1900, Fort Worth's current population is 385,141, a decrease of about 2

percent since 1970. Like many other major cities, Fort Worth has seen some residential movement to suburban areas. At the same time, minority population has grown considerably. In 1980, whites represented about two thirds of total city population (68.9 percent). Blacks are the largest minority group, comprising 22.8 percent of Fort Worth citizens. American Indians, Asians, and other minorities represent about 8.3 percent of Fort Worth residents. There is also a large Spanish-speaking population, comprising about 12.6 percent of all residents.[1]

Fort Worth's population is spread over a land area of approximately 245 square miles; more than 2,000 miles of streets traverse the city. Contained within this area are pockets of dense residential land use, large industrial parks, a major Air Force base, a considerable downtown business district, and many areas of strip development representing both residential and commercial use. Residential land use represents approximately 12 percent of total city land area.

Crime Rates in Fort Worth

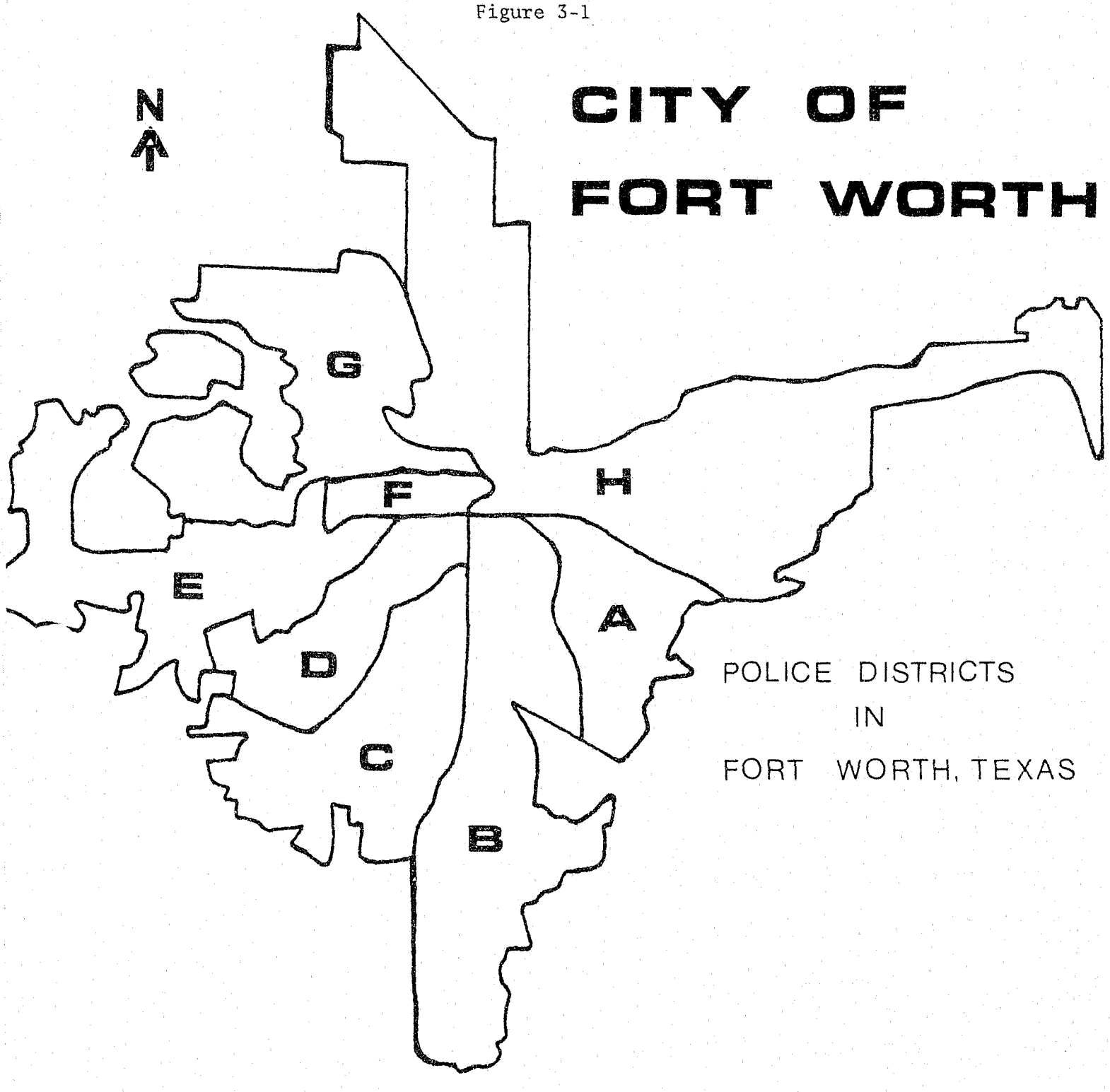
The rapid growth of the work force, an influx of lower income residents, and the large area of commercial and industrial development are all possible influences on Fort Worth's considerable crime rate. Crime in Fort Worth has risen sharply in recent years; the percentage increase in crime since 1978 was among the highest of any American city. In this regard, Fort Worth is representative of trends occurring throughout one of the largest areas of population growth in

the United States, the Sunbelt of the south and southwest. Crime in Fort Worth, as measured by the traditional indicator of Part I crimes reported to the FBI, increased 33 percent in 1980 over rates reported in 1978. Robberies and aggravated assaults increased more than 75 percent from 1978 to 1980, burglaries 37 percent, larcenies 28 percent, rape and murder more than 25 percent. These increases rank among the highest in the country for the past few years.

The Fort Worth Police Department

The Fort Worth Police Department served as the host agency for the Police Communications Study. It was selected on the basis of several criteria, including department size, present and projected city crime rates, and use of computerized call handling technology. During the study period, the FWPD employed 689 sworn officers and 215 civilians who were assigned to one of five general functional bureaus: police administration, administrative services, uniform services, investigative services, and technical services. The PCS was primarily concerned with the technical and uniform services bureaus. Technical services, which employed 60 sworn officers and 111 civilians, is responsible for receiving and processing citizen calls for service. Uniform services contains the patrol function. Patrol officers were assigned to one of eight districts, as shown in Figure 3-1. The city was also subdivided into 90 patrol beats.

Figure 3-1


N
CITY OF
FORT WORTH
G
H
F
E
A
D
C
B
POLICE DISTRICTS
IN
FORT WORTH, TEXAS

FWPD Organization for Call Processing

Processing of citizen calls for service in Fort Worth is handled by the communications division, a unit within the technical services bureau. Headed by a lieutenant, this division contains both sworn and civilian call takers and dispatchers, plus civilians who work in a telephone report writing section which takes crime reports directly from citizens (Direct Entry Computerized Offense Reporting, or DECOR). This division is also responsible for processing all data generated by the department's computer-aided dispatch (CAD) system.

When a citizen calls the FWPD, the call is routed through the automatic call director (a switching mechanism that automatically distributes incoming calls randomly) to 1 of 12 call taking positions. If no position is available, the call is automatically placed on hold. Depending on the particular shift, between 6 and 12 call taking positions will be operative. Each of the 12 call taker positions contains a computer terminal (CRT) and a keyboard. One position contains direct line emergency assistance phones connected to alarm companies and ambulance firms.

FWPD call taker positions are located in a single room; work stations are arranged such that two or three positions are clustered together. This arrangement facilitates access to sources of vital information, including lists of departmental and other often-called telephone numbers, telephone directories, city directories, maps, departmental procedures manuals, directories of social service agencies, and copies of state penal codes and local ordinances. It also facilitates communication among call takers, a necessity in times of high demand volume or when questions about a particular call arise and consultation is required. Call takers wear headsets that free

their hands for writing or referring to sources of information. When they are busy handling a call, the automatic call director will assign another incoming call to an open position. When call takers complete handling a request, they must flip a switch on their headset before they can receive the next call.

Calls are automatically routed to dispatchers when a call taker depresses a relay key on the CRT keyboard. FWPD has five dispatch stations, four of which are operative at any given time. Each station is responsible for a particular quadrant of the city. Each contains a printer on which is generated a dispatch ticket containing demand information forwarded from call takers, a CRT for monitoring unit status, and a radio console for broadcasting dispatch information to officers. Maps, directories, and other information sources are also present at each dispatch station.

Dispatchers are located in a room apart from call takers, separated by a glass partition. At the center of the dispatch room is a desk manned by the dispatch coordinator. This individual is responsible for coordinating all requests from officers. He maintains daily reports and logs necessary to communications division functions, including personnel work logs, computer and/or radio problem logs, and lists of available wreckers, ambulances, and funeral homes. All officer requests for tow trucks or paramedics are dispatched by phone by the dispatch coordinator. The coordinator also assists dispatchers in verifying complainant address information, and notifies supervisors of any situation developing in the field that requires their attention.

Of course, not all calls to the police are dispatched. Callers reporting minor thefts, stolen cars, criminal mischief, or other incidents not obviously requiring an officer's presence may be transferred to the department's direct entry crime reporting function, DECOR, and a report made by phone. DECOR operators are located in a facility apart from other call handling personnel. They sit at stations equipped with CRTs. They receive calls from citizens that are transferred to them by departmental complaint operators. When a call comes in, DECOR operators determine its nature (stolen car, burglary, etc.), depress a function key to call up the computer recording format corresponding to that type of call, and enter pertinent information. Once a report is complete, it can be sent via computer to various locales, according to which office will handle the report. Many go directly to the investigative services bureau for handling by detectives. DECOR also takes reports directly from field officers. Once an officer has completed gathering all relevant information at an incident scene, he proceeds to a nearby telephone and relays the information to the DECOR operator. The direct entry procedure is designed to speed the process by which reports are channeled and acted upon.

FWPD Computer-Aided Dispatch System

Computer-aided dispatch systems involve the computer in processing calls for service, determining which patrol units should be dispatched, and making adjustments in unit status. CAD systems do not completely automate call receipt and handling, but instead utilize the computer's ability to enhance call processing by police operators and

dispatchers. When a call is received and a call taker determines that a unit should be sent in response, a function, or format for information entry, is displayed on the CRT. This function is similar to the dispatch card used in more conventional police departments in that it has space for the call takers to enter certain information. To initiate call response in Fort Worth, operators must enter caller name, location, and a numerical code representing the nature of the problem. They can also enter such information as complainant phone number, address, call response priority, and descriptive or explanatory remarks concerning the nature of the problem. Usually these remarks are meant to supplement the nature of the problem as designated by the complaint code.

Once operators are satisfied that all pertinent information has been gathered from the caller, they depress a key that relays the information to the proper dispatcher. Calls are routed on the basis of beat location, which is automatically assigned by the computer. If the address information entered is incorrect (a street number out of range or a street name misspelled), the CAD system will refuse to route the information until either the error is corrected or the call taker hits an override key; the latter is used when a street name is new and has not yet been entered into the computer. Information as entered by the call taker appears on dispatch tickets printed at each dispatcher station.

When a call is routed to a dispatcher, not only is demand information printed in ticket form, but it appears on the dispatcher's CRT screen. Each dispatcher has several functions available on the CRT. One indicates a list of all pending, or unassigned, calls for a

particular sector. Another lists the status and availability of all patrol units under the dispatcher's control. Dispatchers check the information on the dispatch ticket, review the lists of pending calls and unit status, and determine when a call will be assigned and which patrol unit will be dispatched. Usually units are selected on the basis of their proximity to the scene. Calls are normally dispatched in order of priority, with emergency calls dispatched before routine calls. When several calls of equal priority are waiting in the dispatch queue, dispatchers use discretion in sequencing responses.

The CAD system in Fort Worth automatically determines certain information for every call and prints it on the dispatch ticket. For example, the CAD adds the beat in which a call is located and a unit or units that are available to handle the call. It also prints the time the call was entered into the system by the call taker and assigns each call a unique serial number. Some of this information is useful to dispatchers, while some is more relevant as a source for later performance review by department management. There are several different philosophies regarding CAD functions. Some departments view CADs as a tactical tool for patrol unit dispatch, some as a source of management data, and some only as one component of an integrated, computerized information system. Fort Worth has adopted some aspects of all three philosophies.

The FWPD CAD system can also assist call processing in ways indirectly related to unit dispatch. It can access several sources of computerized information. For example, call takers can reference local car registration and drivers license files, lists of stolen vehicles, previously reported criminal incidents, lists of outstanding

warrants, and other information that can assist call takers in answering citizen requests. Each list is accessed by a separate function code. Instead of telling a caller that the requested information must be obtained from another office, or that it requires a time consuming record check, operators can provide quick answers to many questions by accessing various information sources and displaying them on their CRTs.

FWPD Call Taker and Dispatcher Training

In Fort Worth, call taker and dispatcher training normally consists of a period of peer or supervisor instruction, a stint handling the phones or radio console in the presence of a veteran, and a period of on-the-job training. Two levels of call processing personnel are employed. Newly hired personnel enter with the rank of Public Safety Dispatcher I and work their way up to Public Safety Dispatcher II. Persons of the lower rank are limited to call taking duties only; persons with the higher rank can either answer phones or dispatch, and in fact do both depending on need during any given shift. Each newly hired call taker is assigned a training officer, placed at a call taking station, and instructed in proper equipment handling techniques. Unlike many departments, FWPD has developed a training manual for use by new employees. It contains a listing of duties performed by various departmental personnel, a listing of the component parts of the department, a section on the philosophy of the communications division, and a brief section on the philosophy of law enforcement. Discussion of proper call handling technique is covered only briefly in a section containing miscellaneous tips.

Most basic training for FWPD dispatchers is also conducted by peers in on-the-job situations. It concentrates on the technical aspects of operating complex radio and CAD equipment, on departmental policies governing call priority and radio traffic, and on the mechanics of monitoring unit status. Because most dispatchers work their way up by starting as call takers, or in fact still answer calls depending on the personnel needs for any given shift, they have been exposed to some techniques of interpersonal communication. Their training is essentially that given to call takers with additional concentration on handling dispatch equipment.

To augment the training manual, the FWPD developed a very detailed procedures manual containing instructions on using the CAD system. FWPD also periodically issues training bulletins dealing with specific topics. This series of bulletins is a major source of departmental instruction in telephone procedures. It gives examples of correct and incorrect call handling styles, encourages operators to obtain all relevant information as expeditiously as possible, and points out the value of correct information to responding officers. Still, the emphasis in training is on proficiency in the use of demand processing equipment rather than on techniques for effective interpersonal communication. This trend has probably increased with the technical sophistication required by the recent proliferation of CAD systems nationwide.

Call Processing Supervision

Police complaint operators and dispatchers act in a largely autonomous fashion, guided primarily by the constraints of prevailing

technology and their own common sense. They maintain a substantial degree of discretion in performing their job tasks despite the presence of communications supervisors. In the FWPD there is at least one sergeant assigned to communications supervision on each shift, more during the day shift. The majority of their time is taken up with administrative duties such as scheduling personnel, maintaining attendance records and statistical reports, or talking with other police officials or the public. Daily supervision is usually limited to a cursory check on current activities such as determining which call takers are busy with callers, which are waiting for a call, or which are "unplugged" and therefore unavailable to receive a call. Supervisors can also review the unassigned call list, but do so more as an indicator of departmental workload than as a check on dispatcher activities.

FWPD supervisors do, however, make a concentrated effort to conduct periodic performance reviews. These may consist of a supervisor or senior officer sitting with call takers or dispatchers and monitoring their activities and performance directly. Another form of performance review occurs when supervisors monitor departmental tape recordings of operator and dispatcher conversations. Many departments have this capability, but do not make much use of it unless they are reviewing a citizen complaint. In Fort Worth, supervisors spend considerable time reviewing tapes in an effort to identify problems that recur and to highlight areas in which individual performance could be improved. These review sessions have resulted in the preparation of several training bulletins designed to correct common mistakes and improve call handling procedures.

Even with constant supervision, however, it is difficult to standardize call taker or dispatcher response. While procedures may be established and utilized in given situations, the situation must first be identified before a standard response can be invoked. Calls to the police at times seem very similar, yet no two are exactly alike. Call takers must use their judgment in determining the nature of the caller's problem and the correct police response. Dispatchers must assign calls of equal priority according to their own assessment of the importance of placing an officer at the scene quickly. Supervision must of necessity be loose. The best that can be hoped for is that call processors will act within "acceptable standards," as defined by the department and the community, most of the time. Rapid reaction and choice is the nature of call taker and dispatcher tasks; no amount of technological improvement will change that fact.

Footnotes

[1]The 1980 Census did not include Spanish-speaking people as a separate race or ethnic group. Rather, respondents were asked to give their race and were then asked a separate question about the language spoken in their home. Thus, the 12.6 percent of Fort Worth residents that speak Spanish is comprised of persons who are white, American Indian, Asian, or "other."

CHAPTER 4

CITIZEN DEMANDS FOR POLICE SERVICE IN FORT WORTH

Patterns of problems and crimes reported to the Fort Worth Police Department are examined in this chapter. Different data sets are used to portray demand patterns from two perspectives. First, demands are analyzed using data collected by the Police Communications Study through monitoring departmental tape recordings of calls for service. Second, citizen demands are examined from the perspective of police records maintained by the FWPD's computer-aided dispatch system; the nature of the demand is determined by police call takers in their assignment of official complaint codes. These data sources present two related yet different perspectives on what citizens ask the police to do. We compare them in the following section.

Ways to Examine Citizen Demand Patterns

Previous studies of calls for service have used varied methodologies to analyze and gather data on citizen demands. Some studies have used police records to study calls for service (e.g., Wilson, 1968; Meyer, 1976; Webster, 1970; Bercal, 1970). Generally these studies have collected and examined data from complaint cards or records maintained and used by police agencies. Most departments use complaint cards to record data on only those calls for service that require some form of direct police assistance, such as unit dispatch. Therefore, these records do not describe the full set of calls for service received by a police department. Instead, they describe citizen requests that have been judged eligible to activate police dispatch.

Other studies of demands for police service have analyzed incoming calls for service as reported to call takers (Antunes and Scott, 1981; Scott, 1981; Levens and Dutton, 1980; Lilly, 1978; Cahn and Tien, 1981). Monitoring is done by listening to either live conversations or to tape recordings of incoming calls. By monitoring these calls, information is gathered on the types of problems initially being reported to police. This set of calls is broader than that found in police records, although there is substantial overlap. Analysis of incoming calls for service provides data on the number and types of citizen demands that generally do not result in police dispatch, including requests for general and police-related information, as well as data on requests that are dispatched. These data also document the extent of referral of callers to other police and social service agencies and call transfer to police units such as report writing stations, supervisors, detectives, and the chief's office.

Both data sources provide useful information on patterns of citizen demands for police service, even though the patterns they reflect are different. In this chapter, we begin by analyzing data collected by the PCS through monitoring incoming calls for service. Then, we will examine data from FWPD records on the calls that initially were judged eligible for police dispatch. The chapter concludes with a synthesis of these analyses and consideration of their cumulative findings on patterns of demand for police service.

Citizen Demands for Police Service: The Perspective from Monitoring Incoming Calls for Service

As described in the previous chapter, PCS researchers who monitored tapes of calls for service received by the FWPD noted the nature of the problem or crime reported by the caller. This written description was noted in an open-ended field on the Calls for Service Coding Form (Appendix 1). Subsequently, field supervisors translated this description into one or two "problem codes" developed by the PCS. The problem code list used by the study contained over 200 separate codes covering a wide range of possible service requests related to crimes, traffic problems, assistance, and information. These problem codes provide a description of the service request articulated to the police in the call for service.

Overview of Demand Patterns

This extensive set of codes has subsequently been grouped into 10 general problem categories developed to cluster similar types of service requests. Table 4-1 lists these 10 categories along with the frequency distribution for each within the calls monitored by the study. The pie diagram in Figure 4-1 compares the frequencies in each category.

Problems with persons and problems with property are types of demands that people most often associate with police. Problems with persons include crimes and other situations involving danger, injury, or harm to individuals. Serious problems with persons include assault, rape, robbery, and fights, while less serious problems with persons include disturbances, arguments, and other social problems.

Together these two categories represent about one fifth of all monitored calls for service, with serious problems accounting for 6 percent and less serious problems for 14 percent.

Table 4-1

Distribution of Monitored Calls for Service by General Problem Categories

(N = 5,092)

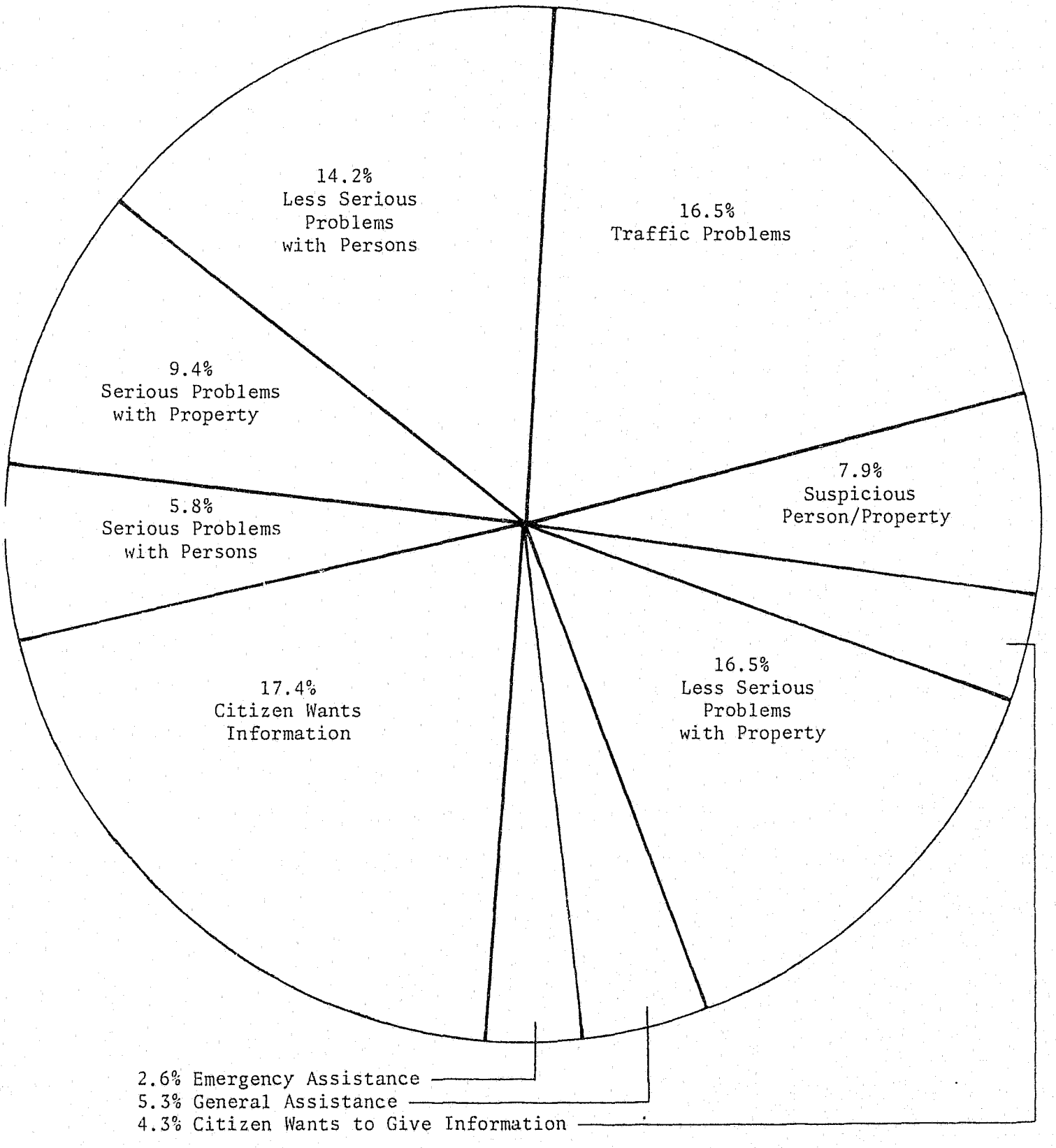
Problem Category:	Number of Calls	Percent of Calls
1. Serious Problems with Persons	295	5.8%
2. Less Serious Problems with Persons	721	14.2
3. Serious Problems with Property	477	9.4
4. Less Serious Problems with Property	838	16.5
5. General Assistance	272	5.3
6. Emergency Assistance	133	2.6
7. Suspicious Person or Property	404	7.9
8. Traffic Problems	838	16.5
9. Citizen Wants Information	886	17.4
10. Citizen Wants to Give Information	218	4.3
Total	5,092	100.0%

Problems with property represent instances of damage to or loss of property through crime or other circumstances. Serious problems with property include burglary, theft, break-in, and arson; together these account for 9 percent of monitored calls. Less serious problems with property, which include vandalism, attempted break-in, lost or missing property, and trespassing, account for over 16 percent of monitored calls for service.

In addition to problems and crimes involving property and persons, the FWPD also received several types of requests for police assistance. Requests for emergency assistance such as traffic

Figure 4-1

Distribution of Monitored Calls for Service by General Problem Categories



accidents with personal injury, medical assistance, and fires represent about 3 percent of calls. Requests for general, nonemergency services such as missing persons, animal problems, requests for surveillance, and others account for 5 percent of calls to the police.

Another frequent service request received by the FWPD relates to suspicious persons or circumstances. Usually no crime is being reported in these calls, yet callers perceive that some crime might be committed. In the calls monitored in Fort Worth, approximately 8 percent concerned suspicious persons or circumstances that callers felt deserved police attention, including open windows or doors and strangers in the neigborhood.

Police in most communities, including Fort Worth, are charged with a traffic function that includes monitoring and controlling traffic flow, investigating traffic accidents, and overseeing parking regulations. In Fort Worth, calls for service related to traffic problems represent a significant proportion of monitored calls for service, more than 16 percent of the total.

Still other types of demands made upon the police, ones which have been often ignored in studies of police demands, relate to the exchange and provision of information. In 17 percent of the calls monitored by the study, the caller's primary service request was for some form of information, often concerning laws, police policies, or particular cases. Another 4 percent of calls for service involved situations where callers wanted to give the operator information to pass on to other police offices or personnel, including tips, requests to cancel service, and complaints.

More Detailed Picture of Demand Patterns

A more detailed description of citizen demands for police service can be presented if we look at problem subcategories within the 10 general categories; Table 4-2 presents this distribution, created by PCS researchers. Readers are encouraged to study this table for it provides a comprehensive picture of the citizen demands received by the Fort Worth Police Department. The diversity portrayed in the table is similar to that received by other American police agencies.

The first general category, serious problems with persons, represents about 6 percent of monitored calls for service. This percentage may seem low, given the widespread perception that the principal role of police is to handle serious crimes. The most frequent problems within this category are fights (39 percent of the category), assaults (26 percent), and robberies (16 percent). Less serious problems with persons include a variety of problems, some of which are noncriminal in nature, including drunk and disorderly persons (13 percent), obscene activity (11 percent), family trouble (8 percent), keeping the peace (5 percent), and juvenile problems (5 percent). Although some of these problems may later escalate into crimes, at their initial report, many of them are social problems or disagreements that police are called upon to mediate.

About 10 percent of all citizen demands concerned serious problems with property, including thefts, burglary, break-ins, shoplifting, and arson. Thefts and burglaries were the most frequently reported problems of this type, each representing about one fourth of the calls in the category. Less serious problems with property were reported more often than serious ones and involved

Table 4-2

Distribution of Monitored Calls for Service
by Detailed Problem Categories

(N = 5,092)

Problem Category:	Percent of All Calls	Number of Calls	Percent of Calls in Category
Serious Problems with Persons	(5.8%)	(295)	(100.0%)
Fight	2.2	114	38.6
Simple Assault	1.5	77	26.1
Robbery	0.9	47	15.9
Aggravated Assault	0.5	24	8.1
Child Abuse	0.3	14	4.7
Sexual Attack-Rape	0.1	7	2.4
Suicide-Attempted Suicide	0.1	6	2.0
Kidnapping	0.1	6	2.0
Less Serious Problems with Persons	(14.2)	(721)	(100.0)
Drunk/Disorderly	1.9	97	13.5
Obscene Activity	1.6	82	11.4
Family Trouble	1.2	59	8.2
Argument	1.1	55	7.6
Keeping the Peace	0.7	38	5.3
Juvenile Problem	0.7	37	5.1
Subject of Police Concern	0.7	34	4.7
Harassment	3.1	159	22.1
Neighbor Trouble	0.4	21	2.9
Gambling, Prostitution	0.2	8	1.1
Vagrancy	0.1	4	.6
Other	2.5	127	17.6
Serious Problems with Property	(9.4)	(477)	(100.0)
Theft	2.5	126	26.4
Burglary	2.3	118	24.7
Break-In	2.0	104	21.8
Motor Vehicle Theft	1.4	72	15.1
Shoplifting	0.7	34	7.1
Purse Snatched	0.4	20	4.2
Arson	0.1	3	.6

Table 4-2 (Continued)

Problem Category:	Percent of All Calls	Number of Calls	Percent of Calls in Category
Less Serious Problems with Property	(16.5)	(838)	(100.0)
Attempted Break-In	7.1	362	43.2
Vandalism	2.8	142	16.9
Attempted Theft	2.5	128	15.3
Missing/Lost Property	1.2	61	7.3
Refuse to Pay	0.9	44	5.3
Trespassing	0.8	40	4.8
Dangerous Property/ Substance	0.1	7	.8
Other	1.1	54	6.4
General Assistance	(5.3)	(272)	(100.0)
Missing Person	1.4	71	26.1
Animal Problem	0.7	36	13.2
Request Surveillance	0.7	34	12.5
Request Transport	0.6	30	11.0
Request Assistance	0.5	25	9.2
Man Down	0.4	23	8.5
Other	1.0	53	19.5
Emergency Assistance	(2.6)	(133)	(100.0)
Traffic Accident with Injury	1.2	62	46.6
Medical Assistance	0.8	41	30.8
Mental Disorder	0.3	13	9.8
Fire	0.1	5	3.8
Other	0.2	12	9.0
Suspicious Person or Property	(7.9)	(404)	(100.0)
Suspicious Person	3.7	188	46.5
Suspicious Property Condition	1.9	95	23.5
Suspected Violator	0.8	41	10.1
Prowler	0.8	40	9.9
Gunshot	0.8	40	9.9

Table 4-2 (Continued)

Problem Category:	Percent of All Calls	Number of Calls	Percent of Calls in Category
Traffic Problem	(16.5)	(838)	(100.0)
Accident, No Injury	10.0	507	60.5
Parking Violation	1.4	72	8.6
Moving Violation	1.3	68	8.1
Obstruction	1.2	61	7.3
Abandoned Vehicle	1.0	50	6.0
Assist Motorist	0.8	39	4.7
Signal Disorder	0.3	13	1.6
Other	0.5	28	3.3
Citizen Wants Information	(17.4)	(886)	(100.0)
Police-Related Information	10.5	534	60.3
Contact Police Unit	2.7	139	15.7
Contact Individual	2.0	102	11.5
Nonpolice Information	1.4	71	8.0
Directions	0.8	40	4.5
Citizen Gives Information	(4.3)	(218)	(100.0)
Information on a Case	2.1	107	46.9
Hospital Reports	0.8	40	17.5
Cancel Request for Service	0.9	45	19.7
Complaints	0.4	21	9.2
Other	0.3	15	6.6

attempted crimes (e.g., break-in, theft), vandalism, missing or lost property, refusal to pay for goods, and trespassing. Attempted break-ins of residential or commercial buildings were the most frequently reported calls in this category (43 percent).

Citizen requests for general assistance account for a smaller proportion of demands for police service, about 5 percent of total demands. Calls in this category include reports of missing persons, animal problems, requests for surveillance (e.g., vacation checks), and other forms of assistance. Requests for assistance in emergency

situations include traffic accidents with injuries, medical assistance, and fires.

Of the monitored calls reporting suspicious circumstances, about half involved suspicious persons whom callers perceived represented a danger to themselves, others, or property. Other calls in this category concerned reports of suspicious property conditions (e.g., a door or window is unexpectedly open), persons suspected of being wanted by the police, prowlers, and gunshots.

Traffic problems represent a substantial set of demands received by the FWPD. The most frequent problems in this category were reports of traffic accidents involving only property damage (61 percent of category); police are expected to investigate these and reestablish traffic flow where it has been interrupted. Other service requests related to traffic were parking violations (9 percent), moving violations (8 percent), road obstructions (7 percent), abandoned vehicles (6 percent), requests to assist motorists (5 percent), and reports of signal disorders (2 percent).

The last two general problem categories in Table 4-2 list service demands related to information. Some were made by persons requesting information while others came from individuals wanting to give some type of information to the police. Of the calls involving requests for information, about 60 percent were made by persons wanting police related information on such matters as the status of persons taken into police custody, parking regulations, and police policies and procedures. Other information calls concerned requests to speak to or be connected with specific individuals or offices, for general information (e.g., what time is the parade today), and for street directions.

The last general problem category concerns calls where individuals want to provide the police with some sort of information. In about half of these calls, citizens wanted to provide additional information about a case previously reported to police. For example, callers might report more information on stolen property or that a missing child has returned home. Other cases involved citizens requesting that a previous service request be cancelled (20 percent of category), hospitals reporting crime-related injuries (18 percent), and individuals relaying complaints or other information to the police.

Requests for Specific Police Service

When contacting the police, callers most often report a problem or crime situation to the call taker. They may or may not request that specific police actions be taken in response; often they expect the operator to decide what actions police should take. In addition to noting the general problem or crime reported by callers, PCS coders also listed information on any specific actions that callers requested regarding police response. The frequency distribution of these specific service requests are listed in Table 4-3. In 23 percent of the calls monitored by the PCS, the individuals contacting the police not only reported a problem situation, but also asked that some specific action be taken by police.

Table 4-3

Frequency of Specific Service Requests Made to the FWPD

(N = 1,164)

Type of Specific Service Request:	Number of Calls	Percent of All Calls	Percent of Requests
Send the "Police" or "Patrol Unit"	705	13.8%	60.6%
Send "Someone"	191	3.7	16.4
Send Other Police Unit	4	0.1	0.0
Send Ambulance	40	0.8	3.4
Speak to "Police," Police Unit, Named Individual	10	0.2	0.9
Report be Taken on Scene	18	0.4	1.5
Report be Taken on Phone	17	0.3	1.5
Investigate an Incident	10	0.2	0.9
Remove a Person from the Scene	24	0.5	2.1
Arrest a Person	21	0.4	1.8
Warn or Question a Person	12	0.2	1.0
Cancel Service Request/Pass on Message	15	0.3	1.3
Request that Police Hurry to Scene	19	0.4	1.6
Request How Long Until Police Arrive	8	0.2	0.7
Other Specific Request	68	1.3	5.8
Total	1,164	22.8%	100.0%

By far the most frequent specific service requests made of the police were to send "someone," "the police," or a "patrol unit." In about 18 percent of monitored calls, those individuals contacting the police reported some problem or crime, but also clearly asked that police personnel be sent to the scene. Examination of these requests for police presence in terms of general problem categories indicates that callers making those requests were often reporting problems with persons, problems with property, suspicious persons, and traffic problems. Not only did callers ask that police be dispatched, but they also on occasion asked that a specific police unit (e.g., detectives), ambulance, or other agency/company representative (e.g., tow truck) be sent to the problem scene. Not surprisingly, ambulances were most often requested in cases involving emergency assistance.

In a few cases callers made other types of specific service requests, although none of these requests were very frequent. Some callers asked that a report be taken either at the scene or over the phone, while others asked for an investigation. A limited number of callers requested police to take actions against specific persons, including removing them from the scene, making an arrest, and warning/questioning persons. Also, some callers asked police to hurry to the scene or asked for an estimate of response time.

Thus, while some callers asked that police take specified actions in response to their report of a problem or crime, they seldom asked more than that police personnel be sent to the scene. This suggests that the demands received by police are often more general than those of other urban service agencies. A key task of police operators is thus not only to ascertain the nature of the problem or crime involved in the call, but also to determine the appropriate police response. It seems likely that most callers requesting police action expect that a unit will be sent to the scene, whether they specifically request one or not. This assumption is undoubtedly bolstered by the fact that the police do answer most eligible requests with the dispatch of a patrol unit (Cahn and Tien, 1981). If police agencies wish to develop viable and less costly alternatives to unit dispatch, they are also likely faced with the task of educating the public to the point where expectations of receiving a car are no longer automatic. The data in Table 4-3 suggest that at least in Fort Worth, individuals contacting the police are not likely to request specific actions other than that the police send someone to the problem location.

Citizen Demands for Police Service: The Perspective from Police Agency Records

Given this view of monitored calls for service, we now examine citizen demands from the perspective of police agency records. Most police agencies, including the Fort Worth Police Department, maintain calls for service records for only those calls that operators decide merit police dispatch. Calls that are referred to internal units or other agencies, transferred internally, or disposed of by operators are not included in these records. Therefore, requests for information or other calls judged ineligible for police dispatch are not entered in police records by call takers. Other calls excluded from this analysis are those transferred to the department's report writing section, DECOR. These calls, comprising less than 8 percent of all calls received, often involve reports of problems or crimes that would have been dispatched had no alternative response existed. Most of the calls judged appropriate for police action are dispatched, although a limited set will be screened out by dispatchers as inappropriate or because of subsequent calls asking that service requests be cancelled.

As part of the Police Communications Study, copies of computerized records of police calls for service were obtained for the 3-month period of field research, February through April 1981. During this time, 46,662 calls were received by the department and recorded in police records. These call records include all of the information originally entered into the CAD system by call takers, data added by the dispatcher, and data automatically generated by the system itself. As explained in the last chapter, one type of information entered by

call takers is a complaint or signal code that describes the nature of the problem or crime being reported in the call. The FWPD uses a list of approximately 60 signal codes to classify calls for service judged appropriate for police response. This set of signal codes is listed in Table 4-4. The signal codes obtained from police records provide a description of the problem or crime involved in the service request.

Table 4-4

Signal Codes Used by the Fort Worth Police Department

1	Accident - minor
2	Accident - major
3	Accident - hit & run
4	Assault
5	Assault - criminal rape
6	Abandonned bicycle
7	Burglar alarm - silent
8	Burglar alarm - at scene or audible
9	Burglar in a building
10	Burglar investigation
11	Cutting
12	Deceased person
13	Demented person
14	Disturbance
15	Disturbance - domestic
16	Dog bite victim
17	Mad dog
18	Dog ordinance violation
19	Drunk
20	Drunk - down
21	Drunk - in a car
22	Drunk - driving (DWI)
23	Fight
24	Fight - gang
25	Fire call
26	Hospital call
27	Injured person
28	(Meet) ambulance
29	Meet complainant
30	Parked car or parking violation
31	Officer-initiated traffic stop
32	Person with a gun
33	Prisoner pick up
34	Prowler
35	Prowler in yard
36	Robbery
37	Shooting
38	Suspicious person
39	Suspicious person in car
40	Theft investigation
41	Abandoned car
42	Abandoned property
45	Cancelled call
47	Escort
50	Information
51	Investigation
52	Loose stock (cattle)
53	Malicious mischief
54	Meet
55	Missing person
56	Open door
57	Open window
60	Stolen car
61	Others
63	Assist (back-up)
64	Serve subpoena
65	Vacation check
66	Business house check
67	Possible burglar in building

Overview of Service Requests

The set of 60 signal codes can be clustered into general problem categories similar to those used to describe monitored calls for service. The set of problem categories is somewhat different, however, for two reasons. First, the two information categories used in Table 4-1 to describe incoming calls are not appropriate in this analysis of police records since these calls are not entered into the CAD system (i.e., they do not necessitate police dispatch). Second, the set of signal codes used by the FWPD include some quite general descriptions that cannot be easily included in one of the PCS general problem categories. For example, signal code categories for "meet complainant" and "investigation" are not specific enough for inclusion in other general problem categories. Thus, in this analysis of police records, information categories have been eliminated and a general response category added.

The frequency distribution of police records of calls for service is arrayed in Table 4-5 according to the revised general problem categories. Further comparison of categories is provided by Figure 4-2. Problems with persons, both serious and less serious, together account for about 23 percent of service requests included in police records. Serious and less serious problems with property represent about one fourth of service requests, both types being reported about equally. As with monitored calls, requests for general and emergency assistance were less frequent than other types of requests, with general assistance accounting for 6 percent and emergency assistance for 3 percent. Six percent of the calls for service judged eligible for police response concerned suspicious

persons or property conditions, while 15 percent involved some form of traffic problem.

Table 4-5

Distribution of Service Requests from Perspective of Police Records
(Based on Calls for Service Received by the FWPD During February-April 1981)

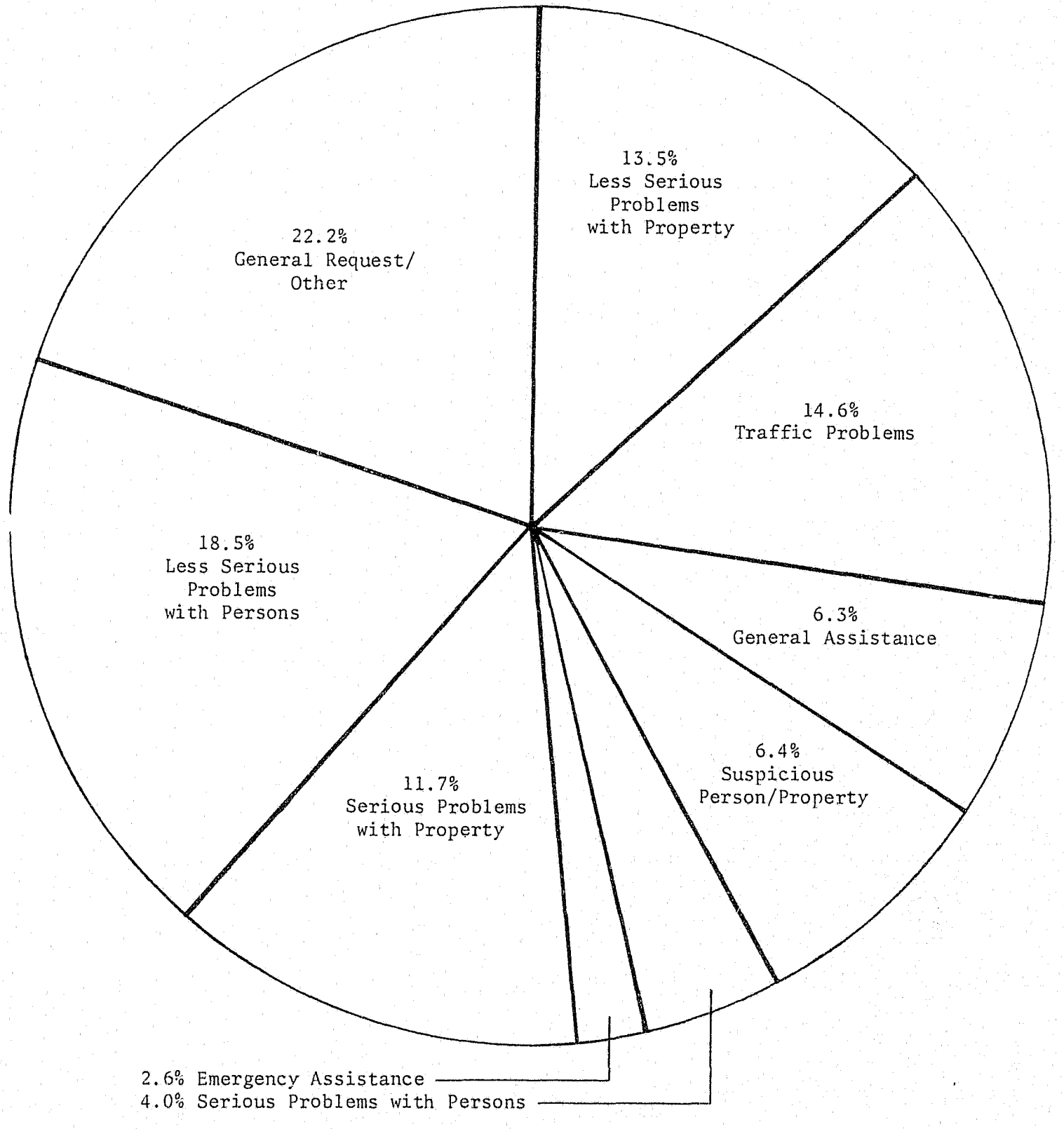
(N = 46,662)

Problem Category:	Number of Requests	Percent of Requests
1. Serious Problems with Persons	1,870	4.0%
2. Less Serious Problems with Persons	8,627	18.5
3. Serious Problems with Property	5,458	11.7
4. Less Serious Problems with Property	6,320	13.5
5. General Assistance	2,956	6.3
6. Emergency Assistance	1,199	2.6
7. Suspicious Person or Property	2,970	6.4
8. Traffic Problems	6,791	14.6
9. General Request/Other	10,377	22.2
Total	46,662	100.0%

An interesting category in Table 4-5 is that which includes general or unspecified service requests (category 9). Of all the service requests included in police records, 22 percent were classified with one of the general or nonspecific signal codes (i.e., coded as investigation, meet complainant, broadcast information, "meet," or others). These codes are used to classify service requests that do not fit into any of the other signal codes. Most police agencies use one or more of these nonspecific complaint codes in processing calls for service. No matter how comprehensive the set of complaint codes developed by police agencies, there are always some demands that defy neat and easy classification. Unfortunately, for

Figure 4-2

Distribution of Service Requests from Police Records by General Problem Categories



the efficient processing of service requsts, human beings and their problems are of practically infinite variety and complexity, factors that often preclude easy categorization. These nonspecific categories are often used to classify service requests that are vague or unclearly articulated by individuals seeking services.

There is likely some tradeoff between the extensiveness of the complaint codes used by police to categorize calls for service and the ease and efficiency in which they can be used. The more comprehensive the set of codes, the more difficult it is to memorize and correctly apply codes as rapidly as required in high demand situations. Yet the shorter the set, the more difficult to apply codes that concisely describe service requests. The categorization of calls can have important consequences, given the fact that subsequent actions taken by dispatchers and responding officers are heavily influenced by complaint code descriptions. What most police agencies have sought is a set of codes that balances the efficiency and clear description dimensions. The fact that American police agencies use so many coding systems, varying significantly in extensiveness, suggests that an ideal set of codes has yet to be developed.

Detailed View of Service Requests

A more detailed picture of calls for service entered into police records is provided in Table 4-6, which lists subcategories of the nine general problem categories included in Table 4-5. Some calls identified by infrequently occurring signal codes are clustered together to simplify the table. The most frequent serious problems with persons received by FWPD and which activated police response

concerned robbery (26 percent of category), fights and gang fights (32 percent together), and assault (17 percent). Shootings, cuttings, and criminal rapes were reported less often. Most of the less serious problems with persons reported concerned general or domestic disturbances, which together account for 89 percent of the category and 17 percent of all service requests.

Burglaries and thefts, usually not in progress, were the serious property problems most often found in police records. Of the less serious problems with property, reports of activated burglar alarms were most prevalent. These alarm calls are included in the less serious property category because they often did not involve burglaries in-progress, but instead were mostly false or accidentally triggered alarms.

Table 4-6

Detailed Distribution of Service Requests from Police Records Data, Fort Worth, Texas

(N = 46,662)

Problem Category/Subcategory:	N	Percent of Category	Percent of All Calls
Serious Problems With Persons	(1,870)	(100.0%)	(4.0%)
Robbery	493	26.4	1.1
Assault	328	17.5	0.7
Fight	322	17.2	0.7
Gang Fight	192	10.3	0.4
Person with Gun	170	9.1	0.4
Cutting	139	7.4	0.3
Shooting	134	7.2	0.3
Criminal Rape	92	4.9	0.2
Less Serious Problems with Persons	(8,627)	(100.0)	(18.5)
Disturbance - General	5,214	60.4	11.2
Disturbance - Domestic	2,522	29.2	5.4
Problem with Drunk	828	9.7	0.7
Demented Person	63	0.7	0.1

Table 4-6 (Continued)

Problem Category/Subcategory:	N	Percent of Category	Percent of All Calls
Serious Problems with Property	(5,458)	(100.0)	(11.7)
Burglary Investigation	3,673	67.3	7.9
Theft Investigation	916	16.8	2.0
Stolen Car	605	11.1	1.3
Burglar in Building	264	4.8	0.6
Less Serious Problems with Property	(6,320)	(100.0)	(13.5)
Burglar Alarm	5,141	81.3	11.0
Abandoned/Lost Property	633	9.9	1.4
Malicious Mischief	546	8.6	1.2
General Assistance	(3,050)	(100.0)	(6.5)
Prisoner Pick-Up	1,387	45.5	3.0
Hospital Report	1,152	37.8	2.5
Missing Person	358	11.7	0.8
Deceased Person	94	3.1	0.2
Animal Problem	41	1.6	0.1
Other	8	0.2	0.0
Emergency Assistance	(1,199)	(100.0)	(2.6)
Traffic Accident with Injuries	865	62.1	1.8
Meet Ambulance	262	21.9	0.6
Fire Call	59	4.9	0.1
Injured Person	13	1.1	0.0
Suspicious Person or Property	(2,970)	(100.0)	(6.4)
Suspicious Person	1,746	58.8	3.7
Prowler	1,113	37.5	2.4
Open Door or Window	111	3.7	0.2
Traffic Problems	(6,791)	(100.0)	(14.5)
Traffic Accident - Property Damage	5,020	73.9	10.8
Traffic Accident - Hit and Run	1,245	18.3	2.7
Parking Problem Violation	526	7.7	1.1
General Request/Other	(10,377)	(100.0)	(22.2)
Investigation	4,997	48.2	10.7
Others	2,924	28.2	6.3
Meet Complainant	1,609	15.5	3.4
Broadcast Information	586	5.5	1.3
Meet	261	2.5	0.6

Of the general assistance calls, about half concerned requests for prisoner pick-up and transport; often these requests originated from other law enforcement agencies in the Dallas-Fort Worth area. Reports from hospitals of inflicted injuries requiring police investigation and missing persons were also called in to the FWPD. Of all the general categories, calls involving emergency assistance were least frequent, accounting for only 2 percent of calls in police records. Most of these concerned reports of traffic accidents involving personal injuries.

Traffic problems represent 14 percent of all calls. Most of the requests in this category concerned property-damage traffic accidents, while a few involved parking violations or complaints. Suspicious persons and/or property conditions also activated police response. Of these, most involved reports of suspicious persons or prowlers. As noted above, 22 percent of service requests included in police records were classified as general or nonspecific problems.

Comparison of Perspectives

The views of citizen demands for police service from monitored calls and from agency records together provide interesting perspectives. The data gathered through monitoring incoming calls for service testify to the diversity of problems and crimes reported to the police on a daily basis. These data also document the extent of calls that police receive that are not dispatched, and as such, have often been ignored in studies of citizen demand. Almost one fourth of all monitored calls were requests for information or requests that

information be forwarded internally. Practically none of these calls results in the dispatch of a police unit. The data from monitored calls for service regarding specific service requests indicate that callers often do not request police to take any specific actions, and when they do, they generally only ask that the police send someone.

The data obtained through police records of calls originally judged by call takers as appropriate for police dispatch provide a somewhat different perspective of citizen demand. Here we see no indication of information calls, which means that the FWPD, like most other police agencies, has no record of those incoming calls for service that are handled without dispatch of a police unit. These data provide a picture of the problems and crimes that activated police dispatch; most frequent among these were general/unspecified problems, problems with property and persons, and traffic.

We can compare these perspectives by examining the proportionate frequency of general problem categories in the two data sets; this is done in Table 4-7. In many ways the two data sets are similar, except that the data from monitored calls include service requests about information that the police record data exclude. The latter include a general/unspecified category, however. The rank order for the first eight problem categories is similar when the information and general/unspecified categories are ignored. Of course, there is no easy way to determine whether any of the calls that received an unspecified complaint code could have been included in one of the other eight general categories. One could conceivably examine officer case reports, but these indicate the nature of the problem as determined by the officer at the conclusion of the encounter, not its nature as reported by callers.

Table 4-7

Comparison of Citizen Demand from Monitored Calls and Police Records Perspectives

Problem Category:	Percent of Monitored Calls	Percent of Police Records
1. Serious Problems with Persons	5.8%	4.0%
2. Less Serious Problems with Persons	14.2	18.5
3. Serious Problems with Property	9.4	11.7
4. Less Serious Problems with Property	16.5	13.5
5. General Assistance	5.3	6.3
6. Emergency Assistance	2.6	2.6
7. Suspicious Person or Property	7.9	6.4
8. Traffic Problem	16.5	14.6
9. Caller Wants Information	17.4	—
10. Caller Wants to Give Information	4.3	—
11. General/Unspecified Request	—	22.2
Total	5,092	46,662

It appears that the police are indeed reactive to citizen calls for service. This does not mean that no reformulation of initial demand occurs during call processing. We agree with Manning (1980: 118) about the importance of careful analysis of internal police information processing and of the need for "caution with regard to making deterministic statements about the environment-organization interchange role of the citizen in shaping the police response." We do attribute to citizen demand, however, a significant role in influencing the shape of police response and the nature of police organization for carrying out that response.

CHAPTER 5

VARIATION IN CITIZEN DEMANDS BY TIME PERIODS

Despite interest in patterns of citizen demand on the police, only scant attention has been paid to variation in demands across different time periods, including day of week, time of day, or month. Certain "accepted truths" seem to have developed among police officials and interested observers, however. Among them are that the highest volume of demand on police occurs during weekends, particularly on Friday and Saturday evenings; that daily volume is highest between 6 pm and midnight; that more serious crimes are reported during the evening than during the daytime; and that crime patterns vary considerably by time of year (i.e., vandalism and interpersonal disputes are usually higher during the summer months). One source of these "truths" is undoubtedly analyses of crime incident data such as that produced from the National Crime Survey (U.S. Department of Justice, 1980). These data indicate that crimes such as larceny, burglary, and motor vehicle theft peak during the summer and reach their lowest levels during the winter. These assumptions remain largely untested by empirical examination of call records, however, perhaps because of the difficulty in obtaining sufficient demand data to permit time comparisons. Data collected during the Police Communications Study are well-suited to analyzing demand by various time dimensions.

Demand Patterns by Day of Week

One of the first empirical analyses of citizen demand for police service examined the distribution of demands across days of the week.

Cumming, Cumming, and Edell (1965: 278) found that call volume was greater in the latter part of the week than in the early part. They suggested that:

> In general, the high rate of calls in the evening and on weekends suggests that problems arise when the social pulse is beating fast -- when people are coming and going, regrouping, and, of course, engaging in informal rather than formal activities.

Unfortunately, this analysis was based on limited observation and did not include all days or time periods.

Table 5-1 shows the distribution of all calls judged eligible for dispatch by the Fort Worth Police Department during the 3 months of PCS observation. Readers should keep in mind that these data are taken from police records and reflect only calls selected by operators as eligible for police dispatch. Excluded are calls for information, referred or transferred calls, and all other calls handled without unit dispatch. As explained in Chapter 4, most but not all calls judged appropriate for dispatch are actually dispatched; some are screened out of the queue by dispatchers, sometimes because subsequent calls ask that the dispatch be cancelled. Table 5-1 indicates that there is an increase in calls received during weekends, especially on Saturday, the busiest day of the week. Call volume is relatively steady from Monday through Thursday, but increases by as much as 3.5 percent on Saturday. Changes in call volume over the course of the week can be easily determined by reviewing Figure 5-1.

Table 5-1

Calls for Service from Fort Worth Police Department Records, February-April 1981, by Day of Week

Day of Week:	Number of Calls	Percent of Calls
Sunday	6,729	14.4%
Monday	6,377	13.7
Tuesday	6,209	13.3
Wednesday	6,188	13.3
Thursday	6,259	13.4
Friday	6,987	15.0
Saturday	7,845	16.8
Total	46,662	100.0%

Table 5-2 shows the types of calls judged eligible for dispatch during the 3-month study period, by day of week. The percentage of these calls increases on the weekend (Friday through Sunday) except for those related to serious problems with property. For six of the nine general problem groupings (all except serious and less serious problems with property and emergency assistance), the highest frequency of calls was received on Saturday. Property problems may be reported more frequently on Sunday or Monday when persons return home from weekend trips to find property stolen or damaged, or when businesses re-open on Monday to find they had been victimized over the weekend. For most problems, call frequency changes only slightly between Monday and Thursday.

Figure 5-1

Calls for Service from Fort Worth Police Department Records, February-April 1981, by Day of Week

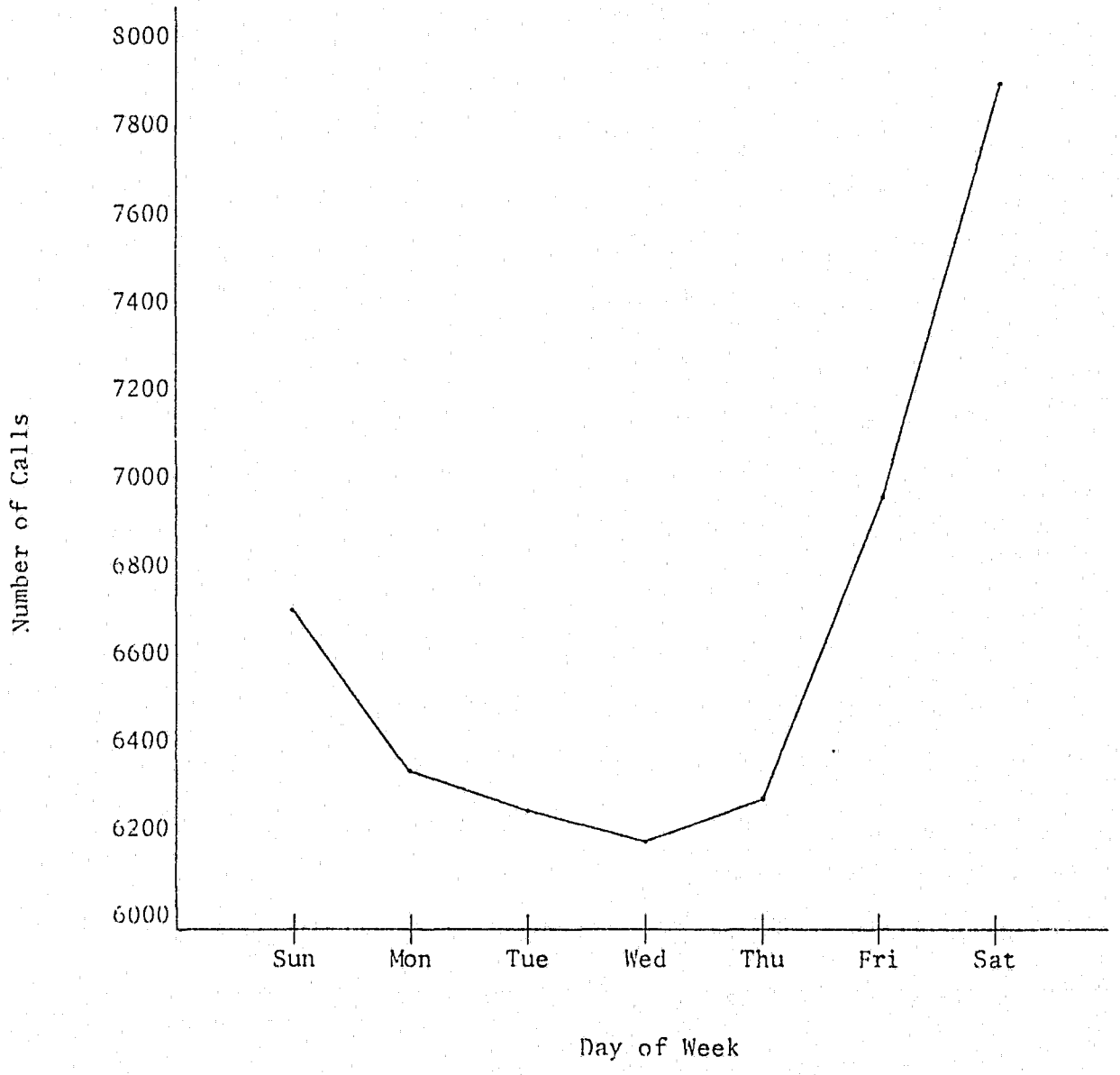


Table 5-2

Calls for Service from Fort Worth Police Department Records, February-April 1981, by Day of Week and Type of Problem

Type of Problem:	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Serious Problems with Persons	16.7%	11.4%	9.7%	13.0%	12.0%	17.0%	20.0%	1,870
Less Serious Problems with Persons	15.3	12.4	12.4	11.9	13.1	15.5	19.2	8,627
Serious Problems with Property	13.1	17.0	14.6	14.5	14.5	14.2	12.1	5,458
Less Serious Problems with Property	16.6	12.4	14.6	14.4	13.1	12.6	16.3	6,320
General Assistance	15.2	13.1	12.2	12.7	13.0	16.1	17.6	3,050
Emergency Assistance	13.7	12.8	12.1	11.5	13.3	19.3	17.3	1,199
Suspicious Person or Property	13.5	14.2	14.1	13.2	14.8	13.4	16.3	2,970
Traffic Problems	11.0	13.7	13.1	13.7	13.6	16.2	18.7	6,791
General Request/Other	15.0	14.2	13.6	13.2	13.2	14.9	15.6	10,377
Total								46,662

Thus far, we have considered only data from police records of calls deemed eligible for dispatch. Table 5-3 presents a breakdown of types of calls received by FWPD, by day, as monitored by PCS researchers. These data represent both dispatched and nondispatched calls, unlike data from police records. The patterns displayed are similar to those of Tables 5-1 and 5-2 in that for all but serious property problems, more calls were received on Friday, Saturday, and Sunday than on other days. Table 5-3 includes calls in which persons request or offer information. These calls, too, generally increased on the weekend. One reason for this increase may be that many nonpolice information sources, including government offices, are usually closed on weekends, leaving the police as the sole source of information for many questions.[1] This finding is similar to that of Cumming, Cumming, and Edell (1965).

Table 5-3

Calls for Service Received by Fort Worth Police Department and Monitored by PCS, by Day of Week and Type of Problem

Type of Problem:	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Serious Problems with Persons	14.7%	9.2%	12.5%	10.2%	11.2%	20.0%	17.3%	295
Less Serious Problems with Persons	15.8	9.7	11.5	11.4	10.7	20.1	20.8	721
Serious Problems with Property	13.4	11.9	16.6	13.2	14.7	13.8	16.4	477
Less Serious Problems with Property	17.9	9.1	12.6	11.8	12.5	16.0	20.0	838
General Assistance	22.1	10.7	15.4	9.6	12.1	15.4	14.7	272
Emergency Assistance	13.5	7.5	10.5	12.0	11.3	21.8	23.3	133
Suspicious Person or Property	15.8	10.9	15.1	9.2	15.6	20.5	12.9	404
Traffic Problem	13.6	10.1	14.2	13.5	10.3	18.5	19.8	838
Caller Wants Information	17.3	10.8	10.6	13.9	16.6	16.4	14.4	886
Caller Offers Information	17.1	6.1	14.5	14.0	11.8	16.7	19.7	228
Total	834	508	668	621	656	896	900	5,092
Percent by Day	16.4	10.0	13.1	12.2	12.9	17.6	17.9	

Demand Patterns by Time of Day

As with day of week, analysis of demand patterns by time of day has been scant. Cumming, Cumming, and Edell (1965) found that nearly half of the calls they observed occurred between 6 pm and midnight, about 30 percent between noon and 6 pm, about 14 percent between midnight and 5 am, and about 8 percent between 5 am and noon. Again, their findings may reflect their methodology as much as any true pattern. Meyer (1976) examined variation by patrol shifts in service calls handled by one department for a month. His source was the daily report log completed by a desk sergeant from a combination of calls for service and officer activity reports. Meyer found that the majority (79 percent) of service-related calls to the police were

generally handled by the 4 pm to midnight and 8 am to 4 pm shifts. He suggested that his results simply reflected the pattern of everyday life.

The Police Communications Study attempted a more systematic analysis of demand patterns, by time of day, as reported in Table 5-4. We considered a day as eight 3-hour periods. FWPD call records from February through April 1981 indicate that the largest number of calls were received between 9 pm and midnight, closely followed by the 6 pm to 9 pm and 3 pm to 6 pm periods. The fewest calls were received between 3 am and 6 am. Figure 5-2 clearly shows how the number of calls generally increases from 6 am to midnight before falling off. These data generally confirm widespread beliefs about demand patterns.

Table 5-4

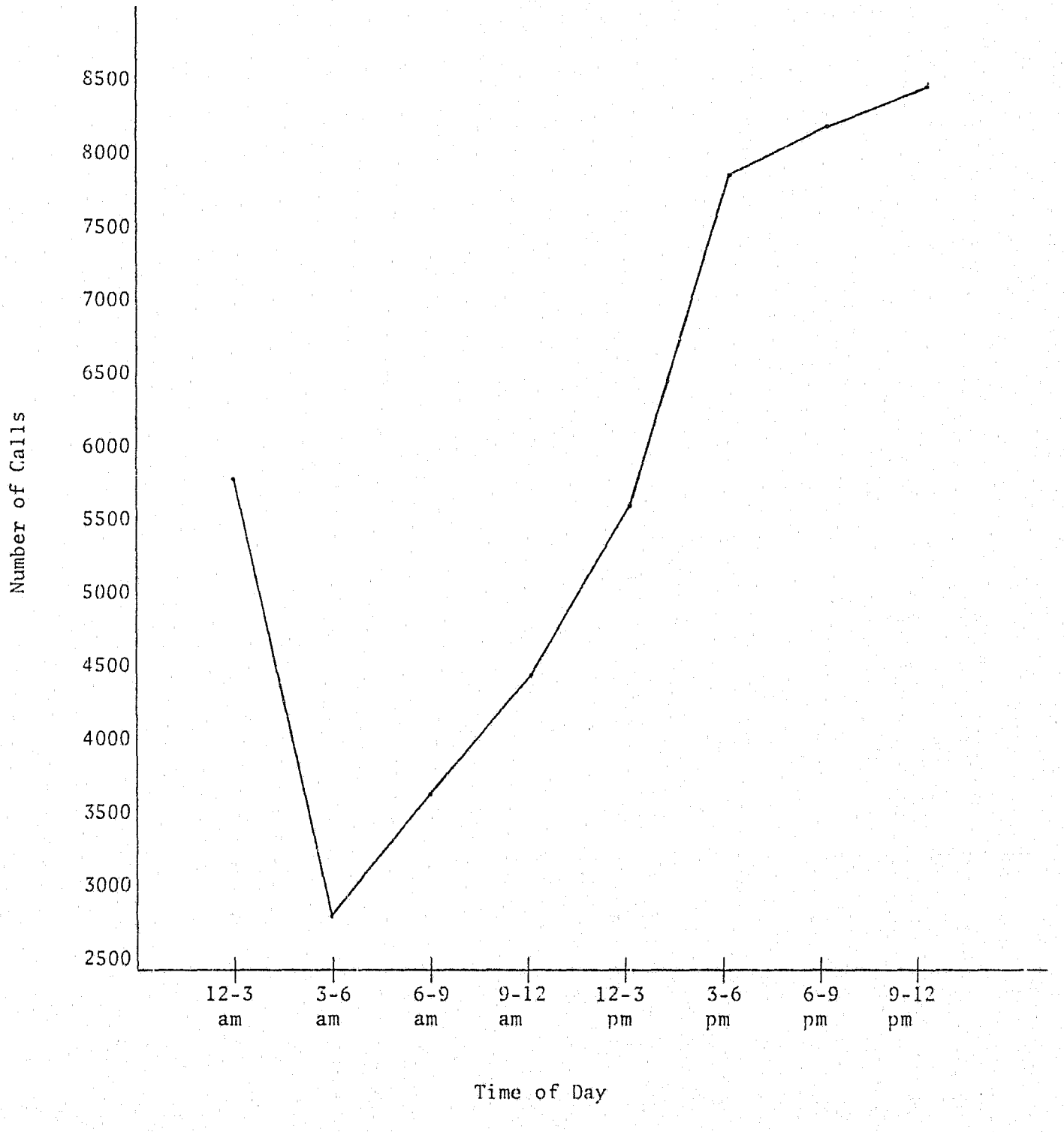
Calls for Service from Fort Worth Police Department Records, February-April 1981, by Time of Day Call Received

Time of Day:	Number of Calls	Percent of Calls
Midnight - 3 am	5,798	12.4%
3 am - 6 am	2,757	5.9
6 am - 9 am	3,557	7.6
9 am - 12 noon	4,470	9.6
12 noon - 3 pm	5,504	11.8
3 pm - 6 pm	7,891	16.9
6 pm - 9 pm	8,186	17.5
9 pm - Midnight	8,499	18.2
Total	46,662	100.0%

Table 5-5 shows the distribution of calls deemed eligible for dispatch, by type, across the eight designated time periods. Two thirds of all calls about problems with persons, both serious and less serious, occur between 6 pm and 3 am. Calls about property problems are received rather steadily from 6 am until midnight and even into

Figure 5-2

Calls for Service from Fort Worth Police Department Records, February-April 1981, by Time of Day



the early morning hours. Again, many calls about property problems come from businesses that are open throughout the daytime hours. Calls for both general and emergency assistance begin to increase around noon, peaking between 6 pm and 9 pm and dropping off considerably during the predawn hours. Calls about suspicious persons are more common beginning during the early darkness hours, increasing considerably toward midnight, then decreasing gradually toward dawn. Calls in this category are usually about prowlers or suspicious property conditions, such as open doors or windows. Traffic problem calls begin to increase from noon on, peaking during the evening rush hours (3 pm to 6 pm), then dropping off to a very low volume during the early morning hours. Even general or unspecified requests follow the pattern of increasing from noon through about midnight,then decreasing toward dawn before picking up slightly during the morning business hours. Table 5-5 provides few surprising findings, but confirms general beliefs and common sense notions of patterns of citizen demand and police response.

In looking at the data on calls monitored by PCS researchers (table not shown), patterns similar to those in Table 5-5 emerge. Isolating information calls, that are not included in FWPD records, we find that calls requesting both police and nonpolice-related information are heavy from about 9 am to 9 pm, when they drop off considerably. Calls from citizens volunteering information begin to increase even earlier, about 6 am, and continue quite steadily until around midnight, when they decrease. Information calls tend to follow the normal pattern of everyday living, beginning when people arise in the morning and ending when they retire at night.

Table 5-5

Calls for Service from Fort Worth Police Department Records, February-April 1981, by Time of Day and Type of Problem

Type of Problem:	Midnight-3 am	3 am-6 am	6 am-9 am	9 am-12 noon	12 noon-3 pm	3 pm-6 pm	6 pm-9 pm	9 pm-Midnight	Total
Serious Problems with Persons	20.1%	5.7%	2.6%	4.7%	7.4%	13.0%	20.7%	25.8%	1,870
Less Serious Problems with Persons	15.6	4.9	3.4	5.6	8.6	16.2	22.3	23.6	8,627
Serious Problems with Property	7.5	3.7	13.6	15.1	15.0	19.1	13.2	12.9	5,458
Less Serious Problems with Property	12.9	9.4	13.4	9.6	9.3	12.7	17.2	15.6	6,320
General Assistance	12.3	6.6	4.6	8.6	11.5	18.7	21.2	16.6	3,050
Emergency Assistance	14.1	4.3	7.1	8.1	11.2	19.8	18.8	16.8	1,199
Suspicious Person or Property	20.3	10.5	5.4	6.6	7.4	6.1	14.8	28.8	2,970
Traffic Problems	7.2	2.1	9.6	12.9	18.4	25.7	14.0	10.1	6,791
General Request/Other	11.7	7.1	5.7	10.0	12.3	16.1	17.4	19.8	10,377
Total									46,662

Demand Patterns by Month

Monthly demand patterns, when calculated, have normally been prepared by police agencies with access to year-long data; we know of no research study that has looked systematically at monthly variation in citizen demand patterns. Lilly (1978) did review changes in call volume for a 4-month period in Newport (Kentucky), finding very little variation (less than 7 percent from the busiest to the slowest month). In addition, he found only minor changes from month to month in the relative frequency of types of calls to which the police were asked to respond.

In order to examine variation in monthly call volume, PCS researchers examined department computer-aided dispatch (CAD) records for the entire year 1980, nearly 200,000 calls for service. We found only minimal monthly variation (Table 5-6). January was the lowest month in call volume, August the highest, but the variation was less than 1.5 percent. Figure 5-3 charts the month-by-month volume of calls judged eligible for dispatch by the FWPD in 1980.

Table 5-7 presents the variation in types of requests received by month. The monthly variation within problem types is extremely small, with no significant trends evident. General belief holds that during the oppressive summer heat, interpersonal conflicts and violent crimes against persons increase as tempers flare. This appears to hold true in Fort Worth, as the percent of calls about problems with persons is higher during the May-August period.

Table 5-6

Calls for Service from Fort Worth Police Department Records, 1980, by Month

Month:	Number of Calls	Percent of Calls
January	14,894	7.6%
February	15,049	7.7
March	16,236	8.3
April	16,224	8.3
May	17,128	8.8
June	17,387	8.9
July	17,484	8.9
August	17,589	9.0
September	16,435	8.4
October	16,038	8.2
November	15,090	7.7
December	15,999	8.2
Total	195,553	100.0%

The 3.6 percent variation in serious problems with persons between February and August is the largest single percentage difference between any 2 months for any of the problem categories examined. The small variation may be a function of Fort Worth's relatively moderate climate throughout the year. It is subject to fewer temmperature or weather extremes than many northern cities where, for example, a crime such as malicious mischief may increase during warm weather, then drop dramatically as vandals avoid the cold by staying inside. In fact, in Fort Worth calls related to malicious mischief are high in January, then gradually decrease throughout the year. Reports of criminal assaults, on the other hand, gradually increase between January and August, then decrease slightly for the remainder of the year. Disturbances, however, are reported more frequently between May and August than at any other time of the year. Figure 5-4 charts the monthly variation in selected calls for 1980.

Figure 5-3

Calls for Service from Fort Worth Police Department Records, 1980, by Month

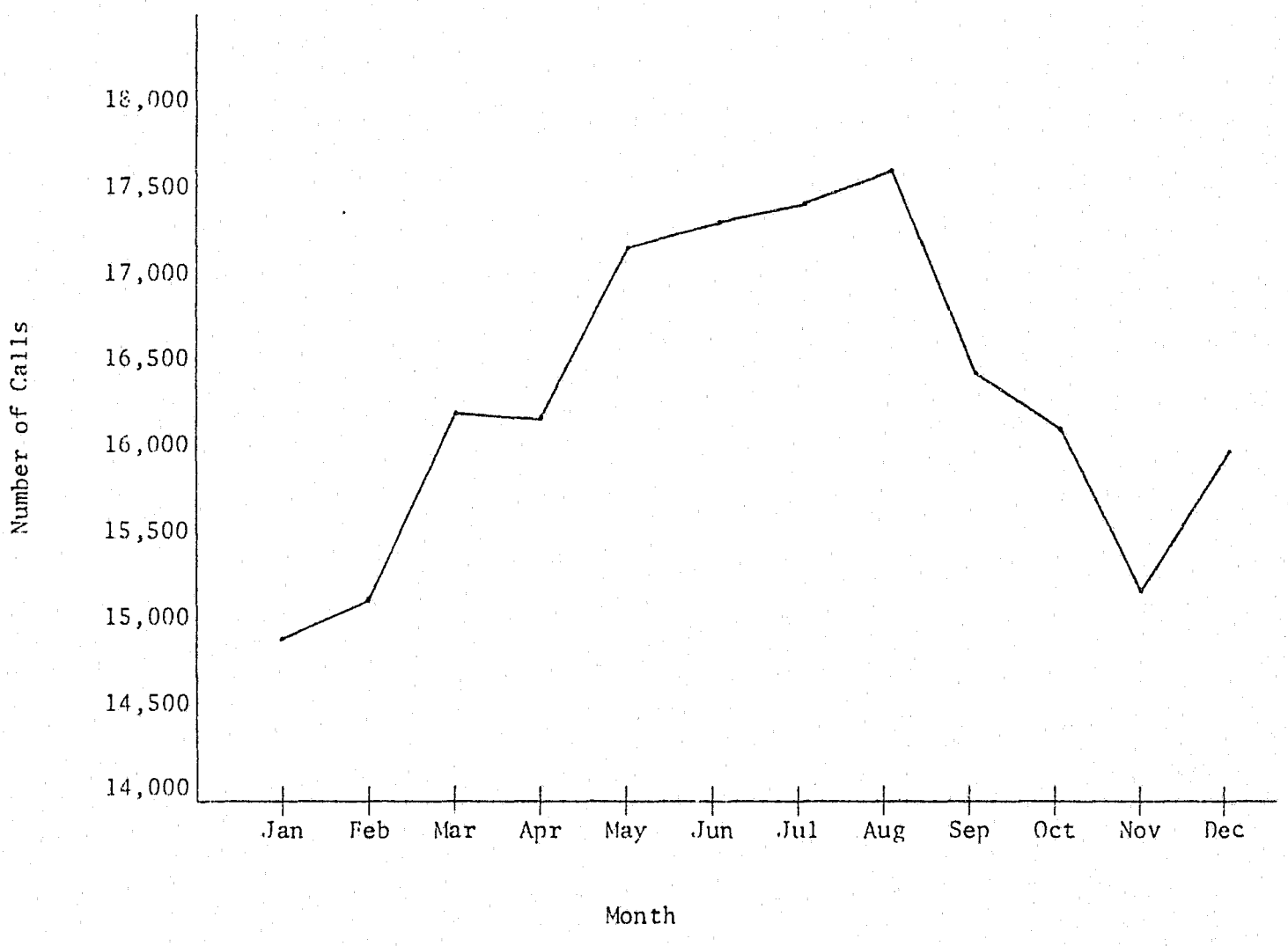


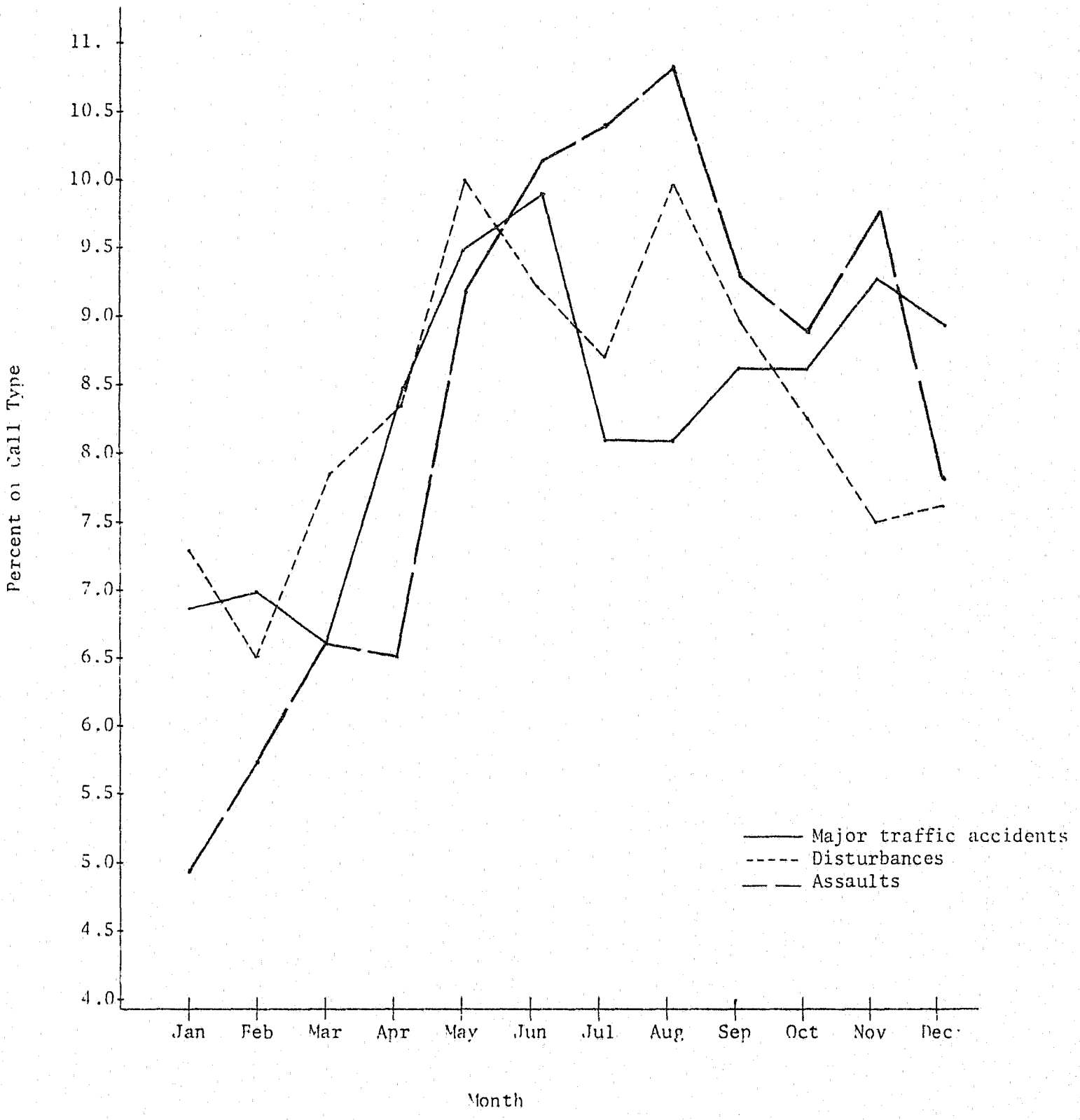
Table 5-7

Calls for Service from Fort Worth Police Department Records, 1980, by Month and Type of Problem

Type of Problem:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Serious Problems with Persons	7.6%	6.7%	7.4%	7.3%	8.3%	8.9%	9.2%	10.3%	8.9%	8.5%	8.6%	8.5%	7,705
Less Serious Problems with Persons	7.5	7.0	8.1	8.6	9.8	9.4	9.1	9.9	8.6	7.5	7.1	7.4	36,801
Serious Problems with Property	8.8	9.2	9.4	8.2	7.7	8.3	8.9	8.6	8.0	7.6	7.2	8.2	26,414
Less Serious Problems with Property	7.8	7.2	8.2	7.9	8.2	8.9	8.5	8.6	8.7	9.0	8.5	9.2	25,259
General Assistance	7.0	7.8	8.7	8.3	8.7	8.7	8.5	8.3	8.2	8.4	8.7	8.6	11,889
Emergency Assistance	7.2	6.9	6.6	8.6	9.0	9.3	8.7	8.6	9.1	8.3	8.4	9.4	4,942
Suspicious Person or Property	8.2	8.1	8.5	8.2	8.3	8.5	8.1	8.7	8.7	8.8	7.8	8.1	11,709
Traffic Problems	8.6	8.2	8.0	8.7	9.0	8.4	7.7	8.3	8.9	8.1	7.9	8.1	27,870
General Request/Other	6.9	7.5	8.2	8.2	8.8	9.3	10.2	9.2	7.9	8.4	7.5	7.9	42,964
Total													195,553

Figure 5-4

Selected Types of Calls for Service from Fort Worth Police Department Records, 1980, by Month



Conclusion

Analysis of citizen demand patterns by various time periods shows no surprising results. Call volume, measured by both FWPD records and PCS call monitoring, increased during the weekend for most types of calls; serious problems with property were the exception, largely because of the delay in reporting these types of crimes. Call volume generally began to increase around 6 am, and continued to increase for most types of calls until around midnight, then dropped off during the early morning hours. Monthly call variation was very small, regardless of call type. Whether these patterns represent general trends nationwide or are symptomatic of Fort Worth is uncertain. It seems likely that observed patterns by day of week and time of day are universal, while monthly variation may be subject to climate conditions and other factors. The dearth of reported research in this area may indicate the lack of significant findings as much as any oversight on the part of observers.

Footnotes

[1]Another reason that call volume increases on the weekend is the sampling design of the Police Communications Study. To reduce staff time spent monitoring "dead air" on the police tapes, weekend shifts were oversampled in comparison to weekday shifts. Of the 125 shifts monitored, 40 (32 percent) were from 11 pm Friday through 11 pm Sunday.

CHAPTER 6

VARIATION IN CITIZEN DEMANDS BY CALLER CHARACTERISTICS

Another way of analyzing patterns of citizen demands for police service is to consider the characteristics of those individuals who call the police. In this chapter monitored calls for service are examined in terms of the following caller characteristics: position as private citizen or business representative, role in the incident as participant or third party, race, sex, and emotional state. PCS observers recorded perceived caller attributes in combination with information either volunteered by the caller or elicited by the operator. Coding of race and emotional state was conservative in order to minimize errors in perception. Aside from a study by Antunes and Scott (1981), this is one of the first attempts at assessing demand patterns in terms of caller characteristics.

Caller Position and Role in the Incident

Based on the exchange between callers and police operators, researchers determined and coded the position of the caller. That is, they identified whether callers were contacting the police on their own behalf or as representatives of a business or other agency. About three fourths of monitored callers contacted the police as private citizens while the remainder called on the behalf of businesses or other agencies. Table 6-1 shows the distribution of general problem types by caller position.

Table 6-1

Variations in Demands by Caller Position

(N = 5,075)

Problem Type:	Percent of Calls by Position: Private Citizen	Business/Agency Representative
Serious Problems with Persons	6.2%	4.5%
Less Serious Problems with Persons	15.0	11.6
Serious Problems with Property	9.4	9.4
Less Serious Problems with Property	12.1	30.1
General Assistance	5.1	5.6
Emergency Assistance	2.8	2.2
Suspicious Person/Property	8.4	6.7
Traffic Problems	17.9	12.1
Caller Wants Information	19.8	10.1
Caller Wants to Give Information	3.5	7.5
Total	100.0%	100.0%
Number of Cases	(3,853)	(1,222)

The findings in Table 6-1 show that private citizens were more likely (in percentage terms) to report problems with persons, suspicious persons or property, and traffic problems. They were also more likely to request information from the police. On the other hand, business or agency representatives were more likely than private citizens to report less serious problems with property and to provide police with information. Business callers frequently reported that an alarm had been triggered; many of these alarm calls were counted as less serious problems with property since they often turned out to be false alarms. This finding parallels that of Antunes and Scott (1981), who determined that business callers were more than twice as likely as private citizens to report nonviolent crimes that usually involved property problems.

At the same time that coders noted position, they also determined whether the caller's role in the reported incident was as an involved party or a third party/witness. Callers were classified as involved parties if they were crime victims or persons needing assistance or information. Callers were categorized as third parties or witnesses if they were aware of but not directly involved in the incident being reported. Someone who saw a traffic accident take place but who was not directly involved would be an example of a third party/witness. Of all the persons who called the police and were monitored by the study, 81 percent were involved parties, while 19 percent were third parties or witnesses. Table 6-2 presents a breakdown of callers on the basis of their role in the incident or problem being reported to the police.

Table 6-2

Variations in Demands by Caller Role in Incident/Problem

(N = 5,075)

	Percent of Callers by Role:	
Problem Type:	Involved Party	Third Party/ Witness
Serious Problem with Persons	4.2%	13.0%
Less Serious Problems with Persons	15.0	10.5
Serious Problems with Property	10.4	4.9
Less Serious Problems with Property	17.0	13.7
General Assistance	5.6	3.6
Emergency Assistance	1.9	6.0
Suspicious Person/Property	6.9	12.8
Traffic Problems	12.8	33.0
Caller Wants Information	21.2	1.2
Caller Wants to Give Information	5.2	1.4
Total	100.0%	100.0%
Number of Cases	(4,135)	(940)

The data reported in this table indicate that persons directly involved in incidents called the police most often about less serious problems with persons, problems with property (both serious and less serious), general assistance, and requests for or provision of information. Individuals who were third parties or witnesses to incidents most often reported dangerous or harmful situations, such as serious problems with persons and emergency assistance, where those directly involved may be unable to report the incident themselves because of its seriousness. Third parties were also more likely than those directly involved to report minor traffic accidents, which are easily witnessed by passersby.

Caller Sex and Race

While listening to the taped calls for service, researchers noted the sex and the race of the caller. This determination was based on listening to callers' voices, speech patterns, and accents. It was generally quite easy to determine caller sex on the basis of voices. However, it was more difficult to assess caller race or ethnic background. Researchers were instructed to code persons as "white" if no identifiable accents or dialects were present in the caller's speech. Where accents were identifiable, researchers were instructed to code the caller as "black," "Mexican/Spanish" (Hispanic), or "other."

About 78 percent of monitored callers were coded as white, 16 percent as black, and 6 percent as Hispanic. This compares with a race distribution in the general population of 69 percent white, 23

percent black, and 13 percent Spanish-speaking residents. The percentage distributions are roughly congruent when one considers that the method of coding caller race in this study was fairly conservative and likely undercounts minority callers. The distribution of caller race by problem type is reported in Table 6-3.

Table 6-3

Variations in Demands by Caller Race

(N = 5,020)

	Percent of Callers by Race:		
Problem Type:	White	Black	Hispanic
Serious Problems with Persons	4.2%	11.1%	11.9%
Less Serious Problems with Persons	12.0	20.6	24.8
Serious Problems with Property	8.7	12.8	9.2
Less Serious Problems with Property	18.1	10.1	9.9
General Assistance	5.3	5.4	5.1
Emergency Assistance	2.7	2.3	2.4
Suspicious Person/Property	8.2	7.4	7.1
Traffic Problems	18.3	9.2	11.6
Citizen Wants Information	17.6	17.4	14.3
Citizen Wants to Give Information	4.8	3.7	3.7
Total	100.0%	100.0%	100.0%
Number of Cases	(3,934)	(792)	(294)

The data displayed in Table 6-3 indicate that there is some variation in the types of problems reported by whites, blacks, and Hispanics. Blacks and Hispanics were more likely to report serious and less serious problems with persons and serious problems with property. This finding may reflect the higher crime neighborhoods in which many blacks and Hispanics reside. It coincides with findings reported by Antunes and Scott (1981). As we shall see in Chapter 7, neighborhoods with the highest proportion of nonwhite residents reported the highest level of serious person- and property-related

crimes to the Fort Worth police. White callers were more likely than other citizens to report less serious problems with property (e.g., vandalism and attempted break-ins) and traffic problems. The other problem categories show little variation by racial groups.

The breakdown of callers by sex demonstrates almost an even split: 52 percent of callers were female and 48 pecent were male. The distribution of problems reported to the police by caller sex is reported in Table 6-4. There are few dramatic differences between males and females in reporting problems to police. Females were slightly more likely to report problems with persons and to request general assistance. Males, on the other hand, more often reported problems with property and traffic problems. Both males and females were about equally likely to call the police to provide or request information.

Table 6-4

Variations in Demands by Caller Sex

(N = 5,085)

	Percent of Callers by Sex:	
Problem Type:	Male	Female
Serious Problems with Persons	4.5%	7.1%
Less Serious Problems with Persons	12.1	16.0
Serious Problems with Property	11.1	7.8
Less Serious Problems with Property	17.3	15.5
General Assistance	4.7	6.0
Emergency Assistance	2.3	2.9
Suspicious Person/Property	7.3	8.6
Traffic Problems	18.5	14.6
Citizen Wants Information	17.9	16.9
Citizen Wants to Give Information	4.2	4.7
Total	100.0%	100.0%
Number of Cases	(2,448)	(2,637)

Emotional State of the Caller

Still another way of studying variations in patterns of citizen demands for police service is to consider the emotional state of those who contact the police. As with other caller characteristics, determination of emotional state is sometimes difficult from listening to calls for service. Researchers were required to classify each caller according to one of the following emotional states: calm, excited, frightened, angry, upset, or confused. Again, a conservative coding plan was used. Callers were classified as "calm" unless their voice and speech patterns indicated that they were excited, angry, upset, frightened, or confused. Given the generally conservative coding scheme, it is not surprising that 91 percent of monitored callers were considered calm. Of the remaining 9 percent, 3 percent were excited, 2 percent were upset or angry, and 1 percent were confused or frightened. Table 6-5 shows the distribution of problem types by the designated emotional state of the caller.

The results in Table 6-5 suggest that emotional state reflects the nature of the problem. Calm callers were proportionately more likely to report less serious problems with property, traffic problems, and requests for information. Compared to calm callers, excited, frightened, and angry callers were far more likely to report problems with persons. Confused persons were more likely to request general assistance and frightened persons were more likely than other callers to report suspicious persons or property conditions. As with most of the variables considered in this chapter, there is little significant variation in demand patterns by the caller's emotional state.

Table 6-5

Variation in Citizen Demands by Caller Emotional State

(N = 5,075)

Problem Type:	Percent of Callers by Emotional State:					
	Calm	Excited	Frightened	Angry	Upset	Confused
Serious Problems with Persons	4.8%	15.6%	23.0%	11.2%	22.6%	6.9%
Less Serious Problems with Persons	12.9	24.4	42.6	32.5	27.0	10.3
Serious Problems with Property	9.4	9.6	0.0	8.8	10.4	15.5
Less Serious Problems with Property	17.3	11.9	3.3	7.5	5.2	6.9
General Assistance	5.0	7.4	4.9	5.0	6.1	25.9
Emergency Assistance	2.5	7.4	3.3	1.2	0.9	1.7
Suspicious Person/Property	8.1	6.7	16.4	2.5	4.3	3.4
Traffic Problems	17.2	13.3	1.6	12.5	7.0	5.2
Caller Wants Information	18.2	3.0	4.9	7.5	12.2	19.0
Caller Gives Information	4.5	0.7	0.0	11.2	4.3	5.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Cases	(4,632)	(135)	(61)	(80)	(115)	(58)

CHAPTER 7

VARIATIONS IN CITIZEN DEMAND BY NEIGHBORHOOD CONTEXT

Little previous research on calls for service has examined citizen demands in terms of the community areas from which they originate. The area of origination can be considered a contextual influence on both the volume and types of demands for police service. Previous research on the distribution of crime, based primarily on police crime report data, has shown that different community areas generally experience different types and amounts of crime. Many serious crimes such as assault, rape, and homicide occur more often in inner-city neighborhoods while burglaries and vandalism are often associated with more affluent residential areas.

The purpose of this chapter is to examine variations in calls for service across areas in Fort Worth. We will determine whether factors such as land area, population density, racial composition, and land usage affect the types of service demands made upon the Fort Worth Police Department. Information on neighborhood contextual influences is important in that it might be used to inform the structuring of police beats and the deployment of police personnel.

Selection of Neighborhood Areas

One serious problem with undertaking a study of contextual influences is designating community areas for study. A second and related problem is acquiring demographic and land use data for selected study areas. Urban researchers have often used areas designated by the U.S. Census Bureau for analysis since population and

other relevant data are available for these areas. When studying police services, however, census areas such as tracts or blocks are not easily employed. Departments generally develop their own geographic designations for the purposes of patrol deployment and planning, and these areas are rarely coterminous with census areas. Most large departments divide their jurisdiction into a small number of districts, then subdivide these into a larger number of beats. Districts and beats are assigned numeric codes that are generally included on calls for service records and crime reports. Although researchers can determine the geographic location of calls and incidents from these records, there is little demograhic or land use data gathered for these police designated areas. The police researcher, therefore, must either choose census areas and attempt to match police records with them or use police records and estimate demographic and land use data.

In order to study the distribution of calls for service across the city of Fort Worth, the project selected police beat areas as the geographic unit for analysis. The Fort Worth Police Department has divided its jurisdiction into 8 districts (see Figure 3-1) and 90 police beats. The department has endeavored through previous realignments to structure beats so as to roughly equalize the volume of calls for service originating from each. This beat designation strategy, used in many American police agencies, represents an effort to match patrol resources with citizen demands. Throughout this report, the terms "beat" and "neighborhood" will be used interchangeably.

Once the decision was made to designate beat areas as the primary unit of analysis, the next task was to gather population, land area, and land use data for beats. This proved to be very difficult since beats are not used by other agencies for aggregating demographic or land use data. The project gathered such information from multiple sources and translated data from other aggregating units (e.g., census blocks and tracts) to police beats. For this reason, much of the neighborhood-level data on population and land use are estimates rather than precise measurements. The sources and estimation of the neigborhood-level background data are described in Appendix 7-1 to this chapter.

Demographic and Land Use Characteristics of Neighborhoods

There is substantial demographic and land use variation among Fort Worth neighborhoods. Table 7-1 presents data on neighborhood population and size. Population varies from less than 100 residents in two downtown area beats to over 13,000 persons in some densely settled residential areas. Police beats in Fort Worth also vary in racial and ethnic composition. The proportion of black residents ranges from 1 to 99 percent and the proportion of Hispanic residents from 1 to 88 percent.[1] Neighborhoods with heavy concentrations of black and Hispanic residents tend to cluster together, as shown in Figure 7-1. The neighborhoods that are composed primarily of blacks cluster together in an area just south and east of the city center known as Polytechnic. Most of the beats where Spanish-speaking residents predominate cluster in an area northwest of the central downtown area, near the city's historic stockyard area.

Table 7-1

Population, Income, and Land Area Data for Fort Worth Neighborhoods

(N = 90 Beats)

	Range	Median
Total Population	32 - 13,452	3,813
Percent Black	1 - 99%	7.9%
Percent Spanish-Speaking	1 - 88%	6.6%
Median Family Income	$5,930 - $28,281	$12,411
Land Area	0.2 - 76 sq. mile	7.5 sq. mile
Population Density	12 - 1,811/sq. mile	565/sq. mile

Median family income also manifests significant variation within the community. The poorest neighborhoods had a median family income of less than $6,000 while the most affluent ones had median incomes in excess of $28,000. Figure 7-2 shows the distribution of median family income across city neighborhoods. The figure depicts a pattern roughly similar to many other American cities. The poorest areas are those surrounding the central business district, the wealthiest neighborhoods are situated at the city outskirts, and the middle-income areas exist within the two extremes.

The land area of beats ranges widely from less than 1 square mile to more than 50 square miles for some outlying areas. The smallest beats, by police design, are those in a district which covers the downtown area. Although there are few residents here, the beats are small due to the heavy concentration of people who work and shop there during the daytime hours. The largest beats are located at the city outskirts. Population density in the neighborhoods ranges from 12 to

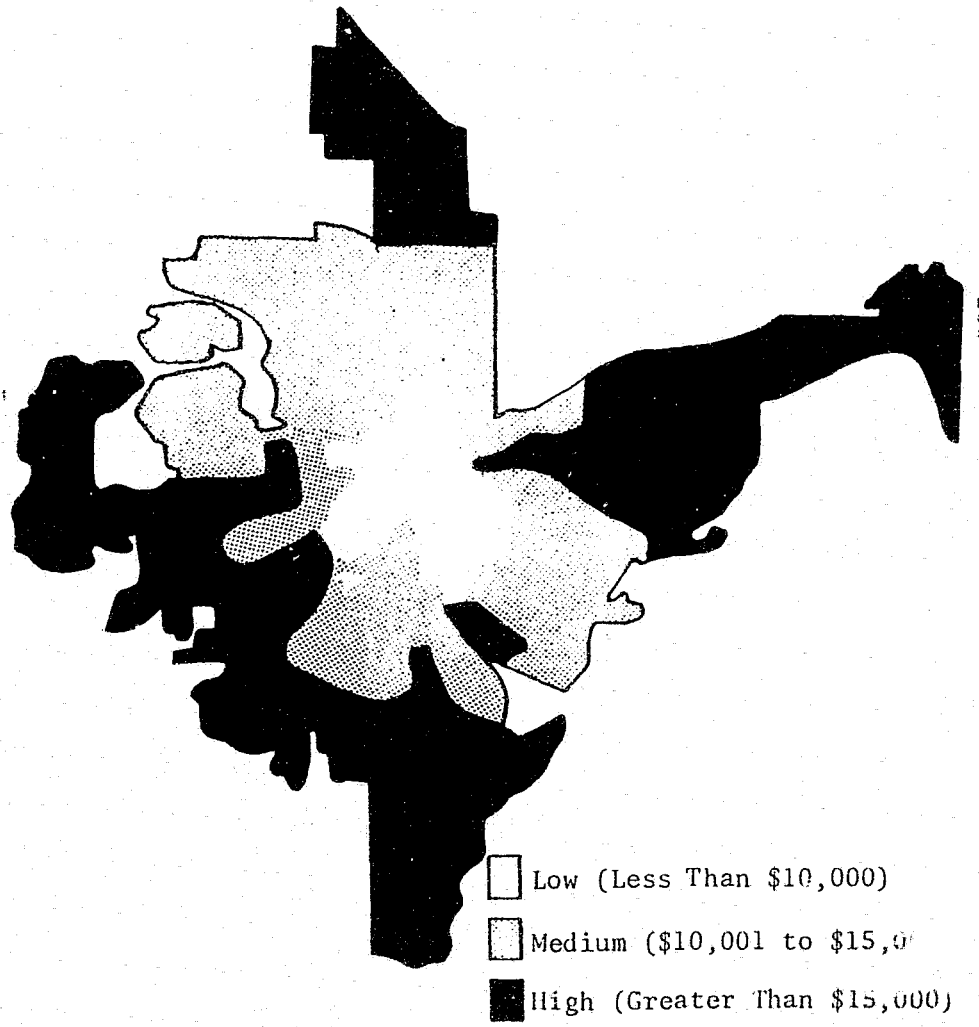
Racial/Ethnic and Family Income Composition of Fort Worth Neighborhoods

Figure 7-1

Race

Figure 7-2

Median Family Income



over 1,800 persons per square mile. These findings attest to the diversity of social conditions in Fort Worth neighborhoods, a diversity well suited to a study of the neighborhood context from which calls for police service originate.

Land usage also varies across police beat areas in Fort Worth. Table 7-2 presents data on the percentage of beat land area utilized for different purposes. The proportion of neighborhood area used for residential purposes ranges from 0 to 90 percent with a mean of 48 percent. The proportion of land area used for other purposes such as commerce, industry, and recreation is generally less than that used for residences, although there is substantial variation across beats.

Table 7-2

Land Use in Fort Worth Neighborhoods By Type

Land Use Type:	Range	Mean
Residential	0 - 90%	48%
Commercial	0 - 70%	12%
Industrial	0 - 60%	8%
Recreational	0 - 60%	9%
Governmental	0 - 60%	7%
Vacant/Undeveloped	0 - 90%	15%

The facilities constructed in Fort Worth neighborhoods vary considerably, as shown in Table 7-3. Most beats have at least one church, school, park, and apartment complex; many have more than one. About two thirds of the beats contain at least one major commercial area, such as a shopping center or mall. Industrial parks and

hospitals are fewer and are distributed across a smaller number of beats. These factors, when related to demographic characteristics, might be expected to influence the volume and types of demands originating from different neighborhoods.

Table 7-3

Extent of Facilities by Type in Fort Worth Neighborhoods

Facility Type:	Range	Mean	Number of Beats with One or More Facility
Private Apartment Complex	0 - 18	2.9	68
Church/Religious Facility	0 - 13	3.5	79
School	0 - 7	1.8	71
Park/Recreational Area	0 - 6	1.6	72
Major Thoroughfare	0 - 5	1.9	85
Major Commercial Area	0 - 4	1.1	59
Industrial Park	0 - 6	0.8	33
Hospital	0 - 4	0.2	11

Distribution of Problems Across Fort Worth Neighborhoods

Calls for service records of the Fort Worth Police Department will be used to consider the distribution of service requests across neighborhoods. Although use of Police Communications Study data on monitored calls would allow consideration of the full range of problems reported to police, there is an insufficient number of calls with specified beat location to permit this. Of the more than 5,600 calls monitored by the project, about 67 percent had sufficient

location information to ascertain beat location.[2] Distributing this smaller set of calls with beat designation across 90 neighborhoods and several problem categories results in an insufficient number of cases for reliable analysis.

Calls for service included in police records, on the other hand, provide an ample number of calls for analysis. Data from police records for the period corresponding to field research include more than 46,000 service requests. It is important to note, however, that the demands included in police records are not completely congruent with those registered in monitored calls, since police records contain only those calls which operators initially judged as appropriate for dispatch. Thus, calls for service involving provision of or requests for information are excluded, as are requests for assistance that do not require that a police unit be sent. Also excluded are calls judged ineligible for police service (e.g., those originating from outside the jurisdiction), calls referred to internal units or other agencies, and calls transferred to the department's report writing station. The picture of demand from police records, then, is more accurately interpreted as demand judged appropriate for immediate police response by dispatched units. For analyzing beat structure and deployment, however, this picture is relevant.

In order to study the distribution of demands for police service in Fort Worth, calls for service were identified by beat area and the proportions of neighborhood calls were calculated by eight problem types: serious and less serious problems with persons, serious and less serious problems with property, emergency and general assistance, suspicious persons or property, and traffic problems. Readers may

review the composition of these categories by referring to Table 4-5 in Chapter 4. Table 7-4 lists data on the number and types of neighborhood service requests included in police records.

Table 7-4

Distribution of Problems Across Fort Worth Neighborhoods

	Number of Calls		Percent of Calls	
Problem Type:	Range	Mean	Range	Mean
Serious Problems with Persons	1 - 65	19.1	1 - 10%	4.0%
Less Serious Problems with Persons	6 - 223	88.0	2 - 36%	18.5%
Serious Problems with Property	5 - 124	58.9	3 - 21%	12.5%
Less Serious Problems with Property	4 - 178	60.9	2 - 42%	13.6%
General Assistance	0 - 524	30.6	1 - 56%	6.3%
Emergency Assistance	1 - 26	11.8	1 - 8%	2.7%
Suspicious Person/Property	3 - 86	30.5	1 - 14%	2.9%
Traffic Problems	13 - 161	65.5	3 - 25%	14.4%

The proportion of neighborhood calls concerned with serious problems with persons ranged from 1 to 10 percent with a mean of 4 percent. The distribution of these serious problems with persons across Fort Worth neighborhoods is depicted in Figure 7-3. Areas with the largest percentage of calls of this type tend to cluster in the northwest and southeast quadrants of the city, overlapping many neighborhoods with high proportions of black and Hispanic residents.

Distribution of Problems with Persons Across Fort Worth Neighborhoods

Figure 7-3

Serious Problems with Persons

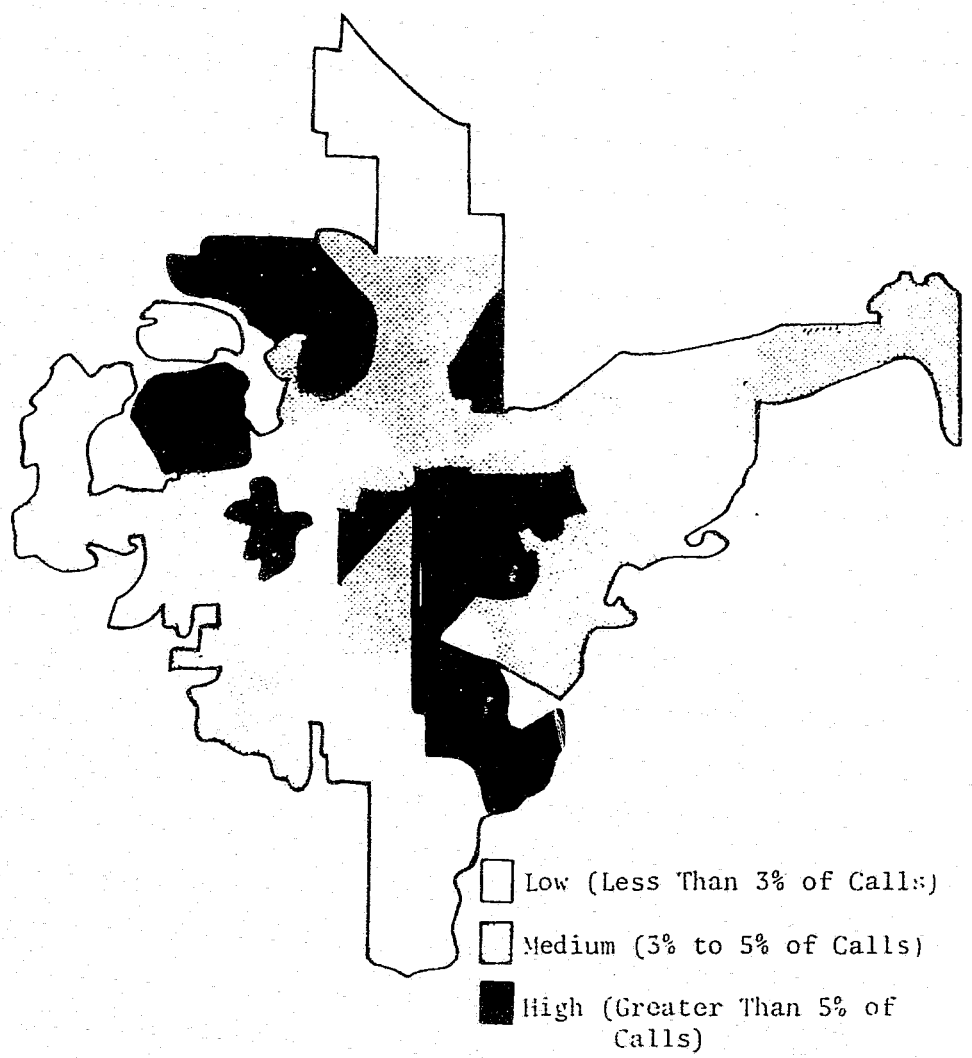
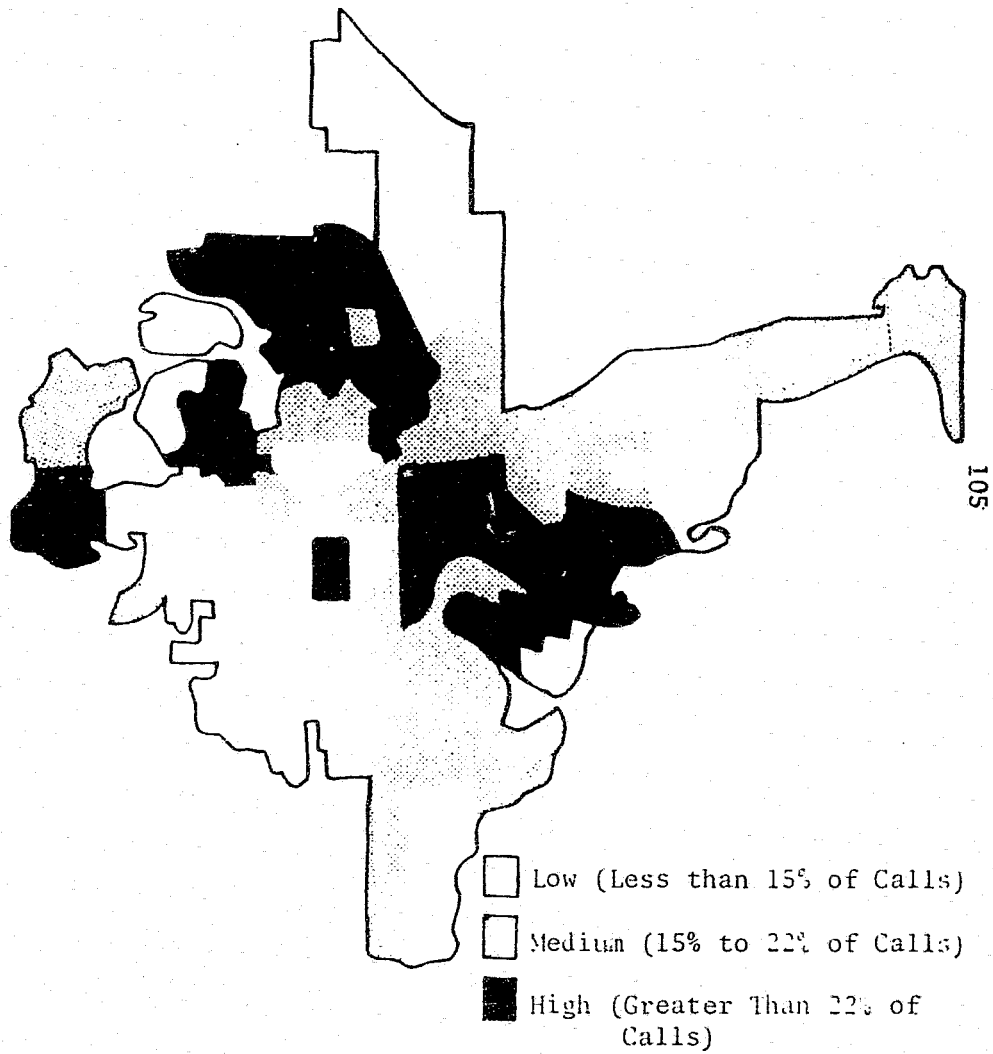


Figure 7-4

Less Serious Problems with Persons



The proportion of neighborhood calls concerning less serious problems with persons ranged from 2 to 36 percent across Fort Worth neighborhoods with a mean of 18 percent. The distribution of these calls, arrayed in Figure 7-4, is very similar to that for serious problems with persons (Figure 7-3).

Serious problems with property -- which include stolen vehicles, other thefts, and burglaries -- ranged from 3 to 21 percent of the calls in Fort Worth neighborhoods. Less serious property problems such as vandalism, lost property, and burglar alarms ranged from 2 to 42 percent of calls. The distribution of property problems are shown in Figures 7-5 and 7-6. Neighborhoods with the highest proportion of serious property calls are located in the southeast quandrant, an area that also experienced high levels of person-related problems. The pattern for less serious problems with property is quite different from that of serious property problems. Neighborhoods which reported a high proportion of less serious problems with property were scattered across the city, but generally were not those neighborhoods with high levels of serious problems with persons or property. Together these four maps suggest some clustering of problems with persons and serious property problems in lower-income areas, while less serious property problems tend to be reported proportionately more often in more affluent neighborhoods.

Distribution of Problems with Property Across Fort Worth Neighborhoods

Figure 7-5

Serious Problems with Property

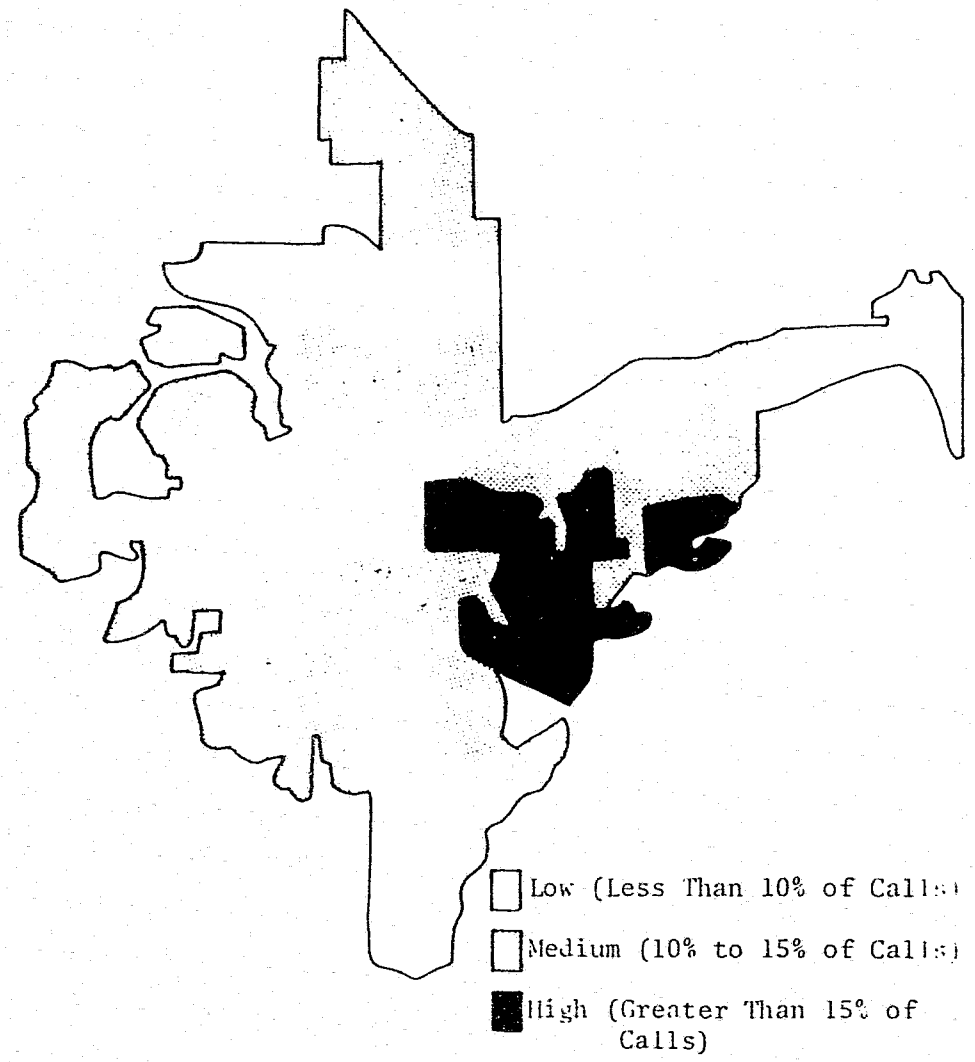
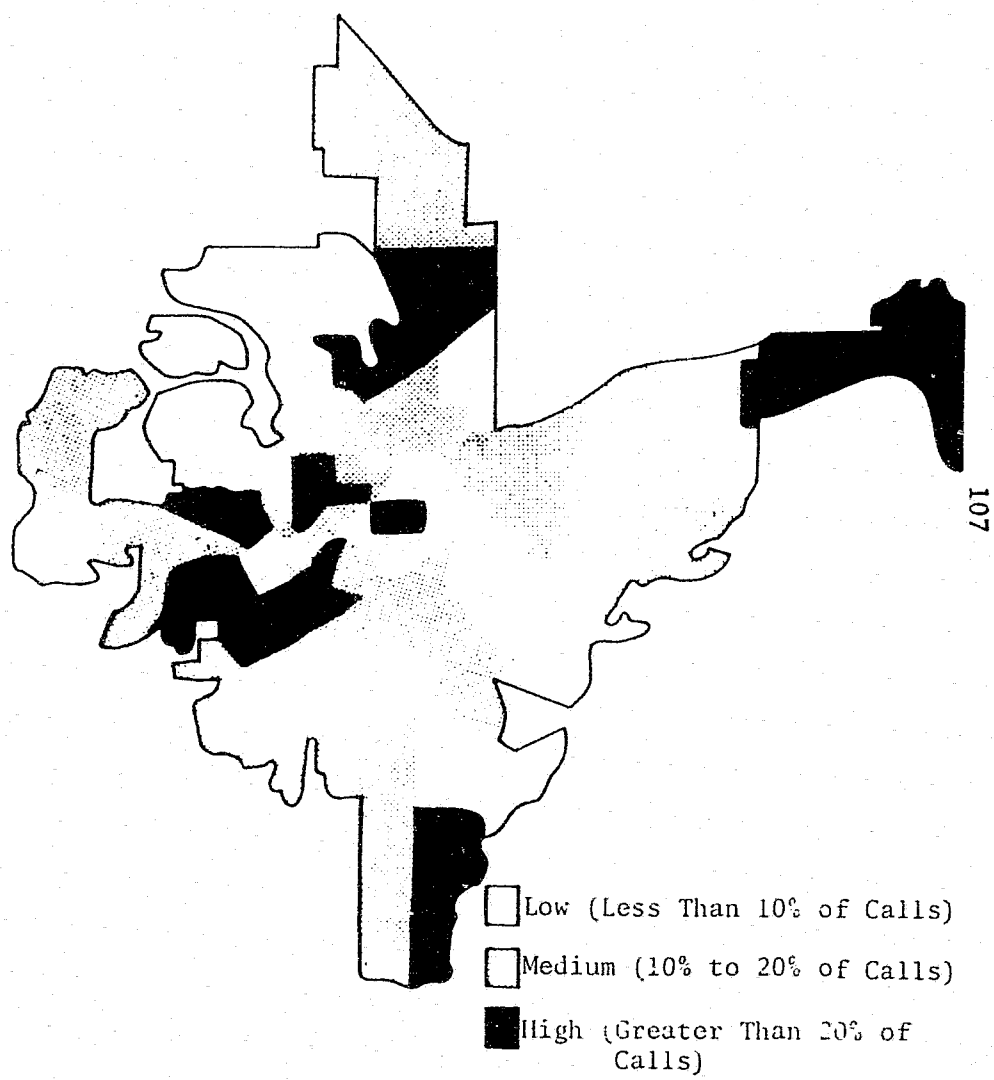


Figure 7-6

Less Serious Problems with Property



Across most neighborhoods, the percentage of calls concerning general assistance was greater than that for emergency assistance. The proportion of calls about general assistance ranged from 1 to 56 percent of calls per neighborhood, although most had less than 10 percent of calls concerned with general assistance. Since hospital calls (i.e., reports to police of inflicted injuries) were counted as general assistances, neighborhoods containing hospitals reported an unusually high level of calls of this type. The percentage of calls concerning emergency assistance, most often traffic accidents with personal injuries, ranged from 1 to 8 percent of reported calls. These emergency assistance requests were scattered across many areas of the city.

Calls about suspicious persons or property represented on the average about 6 percent of calls to police per neighborhood. Those with the highest percentage of calls about supicious persons or property were located in more affluent areas away from the city's center (Figure 7-7). Traffic problems ranged from 3 to 25 percent of a neighborhood's calls to police with a mean of 14 percent. Areas with the greatest proportion of traffic problem calls, most involving property damage accidents, were located in a band that runs east to west across the city's center (Figure 7-8). Contained within this band is interstate highway I-30 and U.S. Highway 80. Much of the east-west traffic flows through this corridor, which is highly travelled, especially during rush hour periods.

Distribution of Suspicious Persons or Property and Traffic Problems
Across Fort Worth Neighborhoods

Figure 7-7

Suspicious Persons or Property

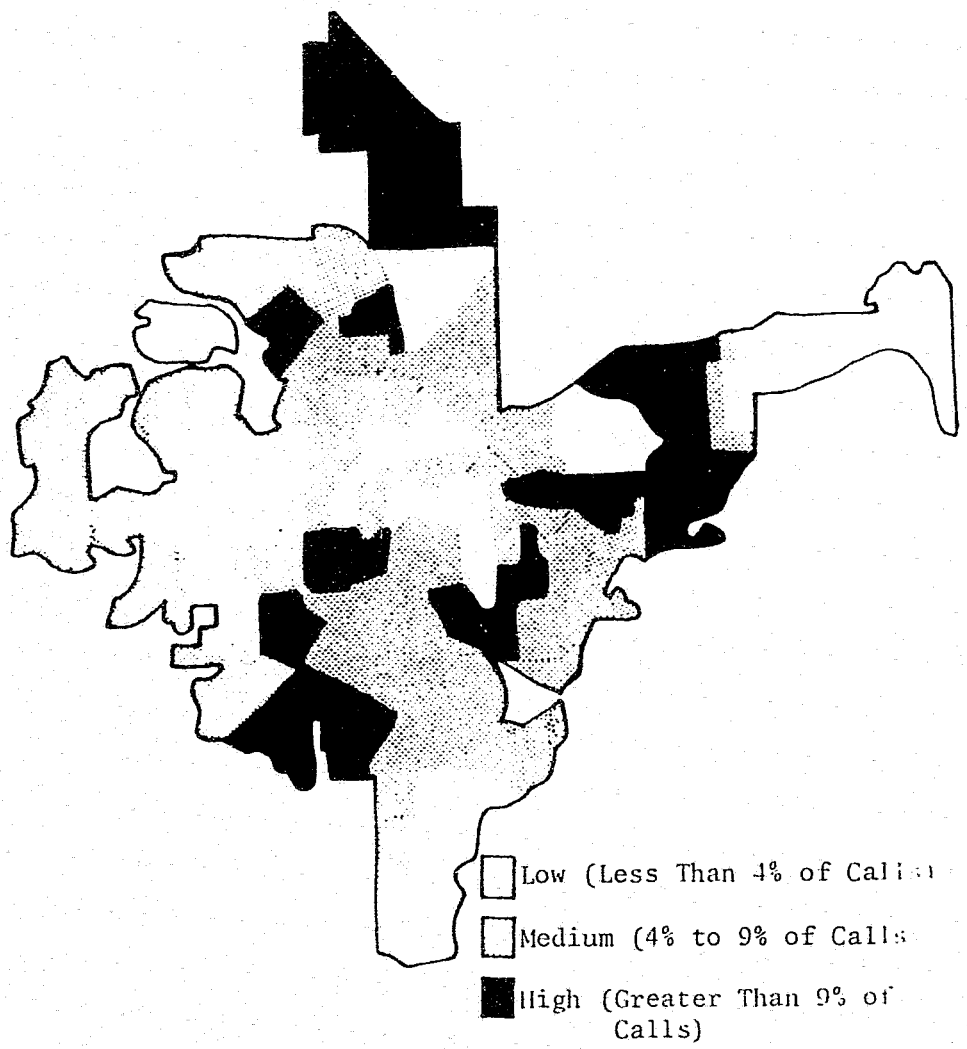
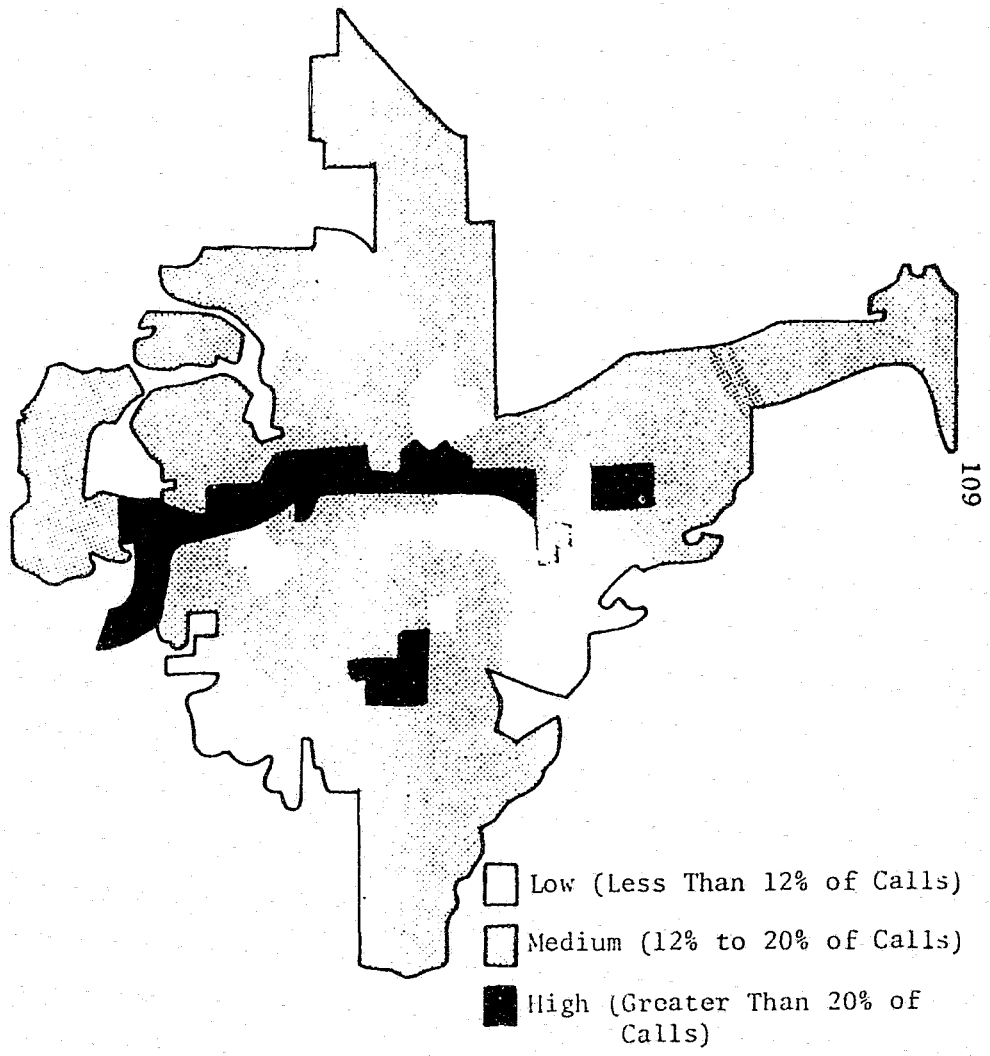


Figure 7-8

Traffic Problems



Clustering of Problems in Neighborhoods

Comparison of the figures displaying the distribution of problems across neighborhoods suggests that certain problems -- namely serious and less serious problems with persons and serious problems with property -- tend to cluster in the same neighborhoods. Another means of analyzing the clustering of neighborhood service requests is to examine the correlation matrix of the variables measuring the proportion of neighborhood calls by types. This matrix is presented in Table 7-5.

The correlation of serious and less serious problems with persons (SERPERS and LSERPERS) is relatively strong and positive (0.61) indicating that both types of problems with persons tend to cluster in the same neighborhoods. In addition, less serious problems with persons and serious problems with property (SERPROP) are positively correlated. These findings confirm preliminary findings from Figures 7-3 through 7-5.

Table 7-5

Correlations of Variables Measuring the Proportion of Neighborhood Calls by Problem Types*

(N = 90 Beats)

	SERPERS	LSERPERS	SERPROP	LSERPROP	GENASST	EMASST	SUSPP	TRAFF
SERPERS	—	.61	NS	-.39	-.26	NS	-.42	-.24
LSERPERS	—	—	.34	-.49	-.23	-.43	-.46	NS
SERPROP	—	—	—	-.36	-.29	-.42	-.51	.56
LSERPROP	—	—	—	—	NS	NS	.43	NS
GENASST	—	—	—	—	—	NS	-.42	NS
EMASST	—	—	—	—	—	—	NS	.34
SUSPP	—	—	—	—	—	—	—	NS

*The correlations in this table are Pearson Product-Moment Correlations; they are significant at the 0.05 confidence level unless marked with an NS. The variable abbreviations in the table are defined as follows:

SERPERS = Serious Problems with Persons
LSERPERS = Less Serious Problems with Persons
SERPROP = Serious Problems with Property
LSERPROP = Less Serious Problems with Property
GENASST = General Assistance
EMASST = Emergency Assistance
SUSPP = Suspicious Person or Property
TRAFF = Traffic Problem

In contrast, less serious problems with property (LSERPROP), such as reports of vandalism or burglar alarms, are negatively correlated with problems with persons and serious problems with property. Figure 7-6 indicates that less serious property problems were reported proportionately most often in neighborhoods near city boundaries, which are generally more affluent than the inner city areas reporting the most serious problems. It is interesting to note that reports of suspicious persons and property (SUSPP) are also negatively related to

calls about problems with persons and serious problems with property, but at the same time are positively related to less serious property problems. This suggests that neighborhoods that report proportionately more minor property problems, such as vandalism, are also more likely to report suspicious persons, such as prowlers.

The proportion of neighborhood requests for general assistance (GENASST) ruled eligible for police dispatch -- including hospital reports of inflicted injuries and requests for prisoner pickup -- is negatively related to serious problems with persons and property. Traffic problems (TRAFF), on the other hand, are positively related to serious problems with property and emergency assistance (EMASST).

Variations in Problems by Neighborhood Race/Ethnic Background, Income, and Population Density

Given the distribution of problems reported to the Fort Worth Police across neighborhoods, this section considers possible neighborhood influences on these distributions.[3] Table 7-6 presents correlations between variables measuring the proportion of neighborhood calls by type with measures of racial/ethnic composition, median family income, and population density. Correlations in this table indicate that the proportion of black residents in the neighborhood (PBLACK) is positively related to the proportion of problems with persons originating in the neighborhood. That is, predominantly black areas were more likely than other neighborhoods to report serious and less serious problems with persons. These areas were also more likely to report serious problems with property including burglary and theft. Conversely, the proportion of black

residents is negatively related to the percentage of neighborhood calls involving less serious problems with property, suspicious persons and circumstances, and traffic problems.

Table 7-6

Correlation of Neighborhood Calls by Race/Ethnic Background, Income, and Population Density*

(N = 90 Beats)

Problem Type:	PBLACK	PSPAN	MEDINC	DENSITY
Serious Problems with Persons	.55	NS	-.51	.33
Less Serious Problems with Persons	.54	.23	-.56	.39
Serious Problems with Property	.31	-.19	NS	.31
Less Serious Problems with Property	-.30	NS	.48	-.24
General Assistance	NS	NS	NS	NS
Emergency Assistance	NS	-.23	.24	-.46
Suspicious Person/Property	-.26	NS	.42	NS
Traffic Problems	-.33	NS	.26	-.31

*The correlations in this table are Pearson Product-Moment Correlations; they are significant at the 0.05 confidence level unless marked with an NS. The variable abbreviations in the table are defined as follows:

PBLACK = proportion of neighborhood residents who are black
PSPAN = proportion of neighborhood residents who are hispanic
MEDINC = estimated median family income
DENSITY = population density per square mile

The Hispanic composition of neighborhoods (PSPAN) shows little statistically significant relationship to the proportion of different problems reported to the police. The percentage of Hispanic residents was positively related to the proportion of less serious problems with

persons' calls and negatively related to serious property problems and emergency assistance calls.

The relationship of median family income (MEDINC) to the proportion of calls by type shows some interesting relationships. Citizens in neighborhoods with higher median family incomes tend, according to the correlations listed in Table 7-6, to report substantially fewer problems with persons, both serious and less serious. Thus, individuals residing in wealthier neighborhoods are proportionately less likely to call the police about relatively serious problems such as assault, rape, and robbery. On the other hand, persons in these more affluent areas are proportionately more likely to report less serious problems with property, such as vandalism and burglar alarms. It may well be that persons in poorer, higher crime neighborhoods, would not bother to report vandalism or suspicious persons to police since these problems may be relatively common here; they may not seem worthy of reporting. In these areas, citizens seem more likely to contact the police for more serious problems, especially those involving harm or injury to individuals.

Some analysts have speculated that population density may increase serious crimes by concentrating large groups of people, often poor, in relatively small areas. The correlations reported in the last column of Table 7-6 indicate that population density (DENSITY) in Fort Worth neighborhoods is moderately and postively related to both serious and less serious problems with persons and serious problems with property. Residents in areas with higher population density are more likely to report these more serious types of problems.

Conversely, density is negatively related to the proportion of less serious property problems, emergency assistance, and traffic problems reported.

To summarize the data in Table 7-6, many serious problems originate proportionately more often in neighborhoods that have lower family incomes, high population density, and high concentration of black residents. A different pattern is evident for less serious property problems; they are reported more often from areas with higher incomes and lower population density. Similar to the pattern of less serious property problems, both suspicious person and traffic problem calls originate more often from higher income, white neighborhoods.

Variations in Problems by Neighborhood Land Use and Facilities

Citizen service requests included in police records can also be examined in terms of land use and facilities, other contextual factors that might influence patterns of neighborhood demands. Table 7-7 presents correlations between problem type variables and estimates of the percentage of land use in Fort Worth neighborhoods.

Table 7-7

Variations in Problems by Neighborhood Land Use*

(N = 90 Beats)

	Percentage of Land Use by Type:					
Problem Type:	RESEST	COMEST	INDEST	RECEST	PUBEST	VACEST
Serious Problems with Persons	.32	NS	NS	-.27	NS	-.32
Less Serious Problems with Persons	.42	NS	NS	-.24	NS	-.39
Serious Problems with Property	.52	-.24	-.22	NS	-.26	-.26
Less Serious Problems with Property	NS	NS	.17	NS	-.23	.19
General Assistance	-.27	NS	NS	.17	NS	NS
Emergency Assistance	-.40	-.25	NS	NS	NS	.52
Suspicious Person/ Property	.34	-.38	-.18	NS	-.19	NS
Traffic Problems	-.37	.22	NS	.17	.18	NS

*The correlations listed in this table are Pearson Product-Moment Correlations and are significant at the 0.01 confidence level unless marked NS. The variable abbreviations in the table are as follows:

RESEST = estimated proportion of land used for residential purposes
COMEST = estimated proportion of land used for commercial purposes
INDEST = estimated proportion of land used for industrial purposes
RECEST = estimated proportion of land used for parks, recreational areas, and cemeteries
PUBEST = estimated proportion of land used for public facilities such as schools, city government, and military facilities
VACEST = estimated proportion of land that is vacant and undeveloped

The extent of land used for residential purposes is positively related to both types of problems with persons and serious problems with property, indicating that many serious types of problems reported to police originated in predominantly residential neighborhoods. The

proportion of calls concerned with suspicious persons is also positively associated with the extent of residential land use in the neighborhood. On the other hand, residential land usage is negatively related to requests for general and emergency assistance and reports of traffic problems.

The influence of commercial land use manifests a different pattern compared to residential land use. The percentage of neighborhood land used for commercial purposes is negatively related to serious problems with property such as burglary and theft. It is also negatively associated with the reporting of suspicious persons or property, but positively related to traffic problems. Thus it appears while problems with persons and serious problems with property are reported proportionately more often in more residential neighborhoods, traffic problems are reported proportionately more often in commercial areas.

Other land use variables have less significant influence on the problems reported to the Fort Worth Police Department. The proportion of problems with persons is negatively related to the percentage of neighborhood land area used for recreational purposes. Problems with property have a negative correlation with the percentage of land used for public facilities such as schools, universities, roads, and military facilities. The percentage of vacant and underdeveloped land is inversely related to the proportion of neighborhood problems concerning problems with persons and serious problems with property. At the same time, the extent of vacant land, often found in beats at the city's periphery, is positively related to requests for emergency assistance. Many of these requests concern personal injury traffic accidents on major highways that circle the city near its boundaries.

The proportionate distribution of problems reported to the police and initially accepted for unit dispatch may also vary in terms of facilities in the neighborhoods. Table 7-8 lists correlations between problem types and the number of different kinds of facilities located in the neighborhood. The proportion of neighborhood calls concerning serious problems with persons is negatively related to the number of parks, through-streets, and industrial areas in neighborhoods, further indication that problems, such as assaults, originate proportionately more often in heavily residential areas. Less serious problems with property calls have few statistically significant correlations with facility types; these problems are positively related to the number of churches and negatively related to number of industrial parks and areas.

Serious problems with property including burglary and theft are positively related to the number of churches, schools, and parks while inversely related to the number of major highways traversing the neighborhood. Less serious problems with property are positively related to the number of apartment complexes in the area and the number of major thoroughfares.

Table 7-8

Variations in Problems by Neighborhood Facilities*

(N = 90 Beats)

Problem Type:	Number of Facilities by Type: PRVAPT	CHRCH	SCHL	PARK	ROAD	THRUST	COMARA	INDUST	HOSP
SERPERS	NS	NS	NS	-.27	NS	-.18	NS	-.17	NS
LSERPERS	NS	.21	NS	NS	NS	NS	NS	-.21	NS
SERPROP	NS	.42	.23	.17	-.20	NS	NS	NS	-.28
LSERPROP	.17	-.23	NS	NS	.20	NS	NS	NS	NS
GENASST	NS	-.28	-.19	NS	NS	NS	NS	NS	.50
EMASST	NS	NS	-.20	NS	.43	NS	NS	.30	NS
SUSPP	.19	.37	.39	.35	NS	NS	NS	NS	-.20
TRAFF	NS	NS	NS	NS	.29	.24	.27	NS	NS

*The coefficients in the table are Pearson Product-Moment Correlations that are statistically significant at the 0.05 level unless marked NS. The variable abbreviations for the facility types are as follows:

PRVAPT = number of apartment complexes
CHRCH = number of churches and religious facilities
SCHL = number of private and public schools and universities
PARK = number of parks, recreational areas, and cemeteries
ROAD = number of major highways and interestates
THRUST = number of major through streets traversing the neighborhood
COMARA = number of shopping centers, malls, major commercial areas
INDUST = number of industrial parks/areas
HOSP = number of hospitals/medical facilities

Requests to police for general assistance were very positively related to the number of hospitals in the neighborhood, since a substantial proportion of general assistance calls concerned hospital reports of inflicted injuries to the police. Emergency assistance calls were positively related to the number of major roads and industrial areas. The relationship with roads is not surprising since

many of the emergency assistance calls involved traffic accidents with personal injuries where emergency medical assistance is needed.

Reports of suspicious persons or property are positively associated with the number of apartment complexes, churches, schools, and parks. All of these facilities tend to attract a large number of unacquainted individuals, which may account for these positive relationships. Finally, traffic calls, as might be expected, are positively related to the number of major thoroughfares and the number of streets which traverse the neighborhood. Traffic problems are also positively influenced by the number of commercial areas, such as shopping malls and centers.

Neighborhood Profiles by Problem Type

In order to summarize these findings on the relationships between the proportion of problems reported to police and neighborhood demographic and land use variables, this section attempts to sketch profiles of neighborhoods using the correlations presented above. Table 7-9 lists the variables that were sigificantly related to individual problem types, indicating the direction and magnitude of the relationship.

Table 7-9

Summary of Correlations Between Problem Type and Neighborhood Level Variables

(N = 90 Beats)

Problem Type:	Variables with Positive Influence	Variables with Negative Influence
Serious Problems with Persons	- % black residents (S)* - population density (M) - % residential land (M)	- median family income (S) - % recreational land (W) - % vacant land (M) - parks (W) - through-streets (W) - industrial areas (W)
Less Serious Problems with Persons	- % black residents (S) - % Hispanic residents (W) - population density (M) - % residential land (M) - churches (W)	- median family income (S) - % recreational land (W) - % vacant land (M) - % industrial land (W)
Serious Problems with Property	- % black residents (M) - population density (M) - % residential land (S) - churches (M) - schools (W) - parks (W)	- % hispanic residents (W) - % public land (W) - % commercial land (W) - % industrial land (W) - % vacant land (W) - major thoroughfares (W) - hospitals (W)
Less Serious Problems with Property	- median family income (M) - % industrial land (W) - % vacant land (W) - apartment complexes (W) - through-streets (W)	- % black residents (M) - population density (W) - % public land (W) - churches (W)
General Assistance	- % recreational land (W) - hospitals (S)	- % residential land (W) - churches (W) - schools (W)
Emergency Assistance	- median family income (W) - % vacant land (S) - major thoroughfares (M) - industrial areas (M)	- % hispanic residents (W) - population density (M) - % residential land (M) - commercial areas (W) - schools (W)

Table 7-9 (Continued)

Problem Type:	Variables with Positive Influence	Variables with Negative Influence
Suspicious Persons or Property	- median family income (M) - % residential land (M) - apartment complexes (W) - churches (M) - schools (M) - parks (M)	- % black residents (W) - % commercial land (M) - % industrial land (W) - % public land (W) - hospitals (W)
Traffic Problems	- median family income (W) - % commercial land (W) - % recreational land (W) - % public land (W) - major thoroughfares (W) - through-streets (W) - commercial areas (W)	- % black residents (M) - population density (M) - % residential land (M)

*The letters in parenthesis indicate the magnitude of the correlation defined as follows: S is a strong relationship (± 0.5 or greater), M is a moderate relationship (± 0.3 to 0.49), and W is a weak relationship (± 0.01 to 0.29). All correlations in the table are statistically significant at the 0.05 confidence level.

The relationships reported in Table 7-9 suggest that serious problems with persons often originate in neighborhoods with high concentrations of black residents, low family incomes, and relatively high population density and residential land use. Thus, problems such as assault, rape, and robbery were reported proportionately more often from areas that are heavily residential, poor, and black. Less serious problems with property including disturbances and drunks manifest a pattern similar to that for serious person-related problems; less serious problems with persons also frequently originate from areas that are characterized by high concentrations of minorities, low incomes, and predominantly residential land use.

Serious problems with property including burglary and theft also were reported proportionately more often in densely populated neighborhoods with relatively high concentrations of black residents. As discussed previously, less serious problems with property, such as vandalism and burglary alarms, show a quite different pattern from other property- and person-related problems. These less serious property problems tend to originate in areas with higher incomes, lower population density, and higher percentage of white residents.

General assistance calls are strongly related to the number of hospitals in the area; as explained above, this results from the fact that hospital reports of inflicted injuries are included in the general assistance category. Thus, where the law requires that inflicted injuries be reported to the police, hospitals may represent a major source of demand. Emergency assistance calls, which include traffic accidents where medical assistance is needed, originate in areas that are not densely populated, that have somewhat higher incomes, and that contain major thoroughfares, such as freeways or highways.

The distribution of calls concerning suspicious persons or property mirrors the pattern identified for less serious problems with persons. Reports of prowlers, suspicious persons, and open doors or windows originate in higher income areas that are predominantly white. This kind of service request also is related to the number of apartment complexes, churches, schools, and parks in the neighborhoods. These facilities attract groups of people, many of whom are unknown to each other. This may account in part for their impact on the proportion of suspicious person/property calls made to the police.

Finally, traffic problems including property damage accidents and parking violations are positively associated with neighborhoods containing major thoroughfares, the number of through-streets, and the extent of commercial and recreational areas.

Conclusion

Examination of service demands across neighborhood areas indicates that there are some identifiable distributional patterns. The findings concur with previous research concerning the location of serious problems with persons and property in poorer, inner-city neighborhoods populated heavily with minorities. These are areas where the social pathologies of urban America, including unemployment, poverty, and illiteracy tend to concentrate. On the other hand, less serious property problems and suspicious person calls originate from more affluent areas, which may be concerned with protecting household and personal property from harm or theft. Traffic problems and requests for assistance originate from many areas of the community, but also are related to facilities located in neighborhoods. These patterns suggest that problems are not randomly distributed across Fort Worth, but tend to cluster according to identifiable patterns. These patterns, once recognized, might be considered in decisions about structuring beat areas and deploying police personnel. We return to these considerations in the last chapter.

Footnotes

[1]In this report, Hispanics are those who identified themselves as having Spanish origin in the 1980 census. Spanish origin includes persons of Mexican, Puerto Rican, Cuban, and other Spanish descent.

[2]In many calls for service, including information calls, the caller does not provide the police operator with location information. Thus for a substantial set of calls, there is no way to determine where they originate.

[3]It should be noted that variations in neighborhood reporting patterns may be influenced not only by neighborhood social and physical characteristics, but also by differential willingness of individuals in different neighborhoods to report various problems to the police. While recognizing the possibility of reporting biases, we cannot include this factor in analysis because we lack measures of it.

Appendix 7-1

Sources of Neighborhood (Beat) Level Data

Population and Racial Composition data are derived from the first data released from the 1980 census. Total population counts and counts by racial groups were obtained for each census block in Fort Worth. Using large police beat and census block maps, a conversion table was constructed that located census blocks in individual beats. Population and racial composition data were then aggregated to the beat level.

Income data from the 1980 census were not available at the time this report was prepared. As a substitute, estimates of 1980 median family incomes by Fort Worth census tract were used. These estimates were prepared in 1977 by the North Central Texas Council of Governments and printed in a report "Uniform Data for the City of Fort Worth." In order to translate these income estimates from tracts to beats, census maps were compared with police beat maps and a conversion table computed; from this median family income of beats was estimated.

The land area of beats were estimated through careful scaled measurement of police beat maps.

Land usage estimates were made by carefully inspecting land use maps provided by the State of Texas Highway Department that showed land use by type in the City of Fort Worth.

The facilities constructed in Fort Worth neighborhoods were gathered from multiple sources. Detailed city maps were used to determine the number of schools, major thoroughfares, through-streets, and parks in neighborhoods. Current telephone directories were used to locate apartment complexes, hospitals, shopping centers and malls, and churches in beat areas.

Density was calculated by dividing total population in the beat by estimated land area.

CHAPTER 8

POLICE RESPONSE TO CALLS FOR SERVICE

Previous chapters have documented the volume, variety, and patterns of service requests received by the police. In this chapter we consider police response to calls for service, that is, what the call taker tells the caller that the police will do about the reported matter. Traditionally, most research on citizen demand patterns has largely ignored call taker response, focusing instead on the single issue of whether a unit was dispatched as a result of the call. Recently, however, phone operator response has become a topic of considerable interest, due largely to concern about developing more efficient response strategies than unit dispatch. Researchers have also become aware that for many callers, the only police representative with whom they interact is the call taker, and that call takers handle a significant proportion of citizen requests either by providing information themselves or connecting callers with other sources of information or assistance.

Alternative Means of Police Response

Prior to examining call taker responses to citizen requests for police service in Fort Worth, it is useful to consider more generally the potential forms of and constraints on police response. The traditional view has been that police will respond to most calls for service by dispatching one or more officers to the scene of the incident or problem. Historically, "urban police departments have viewed it as their duty to provide rapid and personal response to

citizen complaints or calls for service" (Cahn and Tien, 1981: 2-5). Citizens, too, have generally shared this conception that police will (or should) respond to all service requests by sending police personnel to the scene. Yet despite this common expectation, police ability to respond rapidly to calls for service with dispatched personnel has been eroded by an ever growing demand volume that has outstripped growth in police resources.

> As municipal allocations to police departments have diminished while the number of calls for service has risen, many police administrators have come to realize that, despite efforts to increase productivity, sophisticated computer planning, and schemes to return more officers to patrol duty, they may simply be unable to continue sending a police car to all citizen calls for service (Sumrall, Roberts, and Farmer, 1981: 2).

Given the well established practice of dispatching officers to most calls and the belief that this is the most appropriate form of police response, one might presume that departments have developed few means of alternative response. This, however, is not the case. This fact is documented by research showing that a substantial proportion of calls for service do <u>not</u> result in the dispatch of a police unit (Antunes and Scott, 1981; Cahn and Tien, 1981; Lilly, 1978; Bercal, 1970). After studying over 200 police agencies, Sumrall, Roberts, and Farmer (1981: 9) concluded that:

> Departments throughout the country are using a myriad of alternative responses. These include civilian response, telephone reporting, appointment scheduling, mail-in reporting, referral to other agencies, and no response at all. Surprisingly, 80 percent of the agencies surveyed for this project use some form of alternative response.

A variety of alternative means of police response adopted by urban police agencies are described in the sections that follow. Later sections examine patterns of call disposition in Fort Worth.

Eligibility Screening and Referral

One response alternative is to reduce demand levels, or at least the necessity to respond to demand with a dispatched unit, by making eligibility requirements more stringent. Police telephone operators perform the primary role in judging eligibility for police services. Common criteria used to evaluate eligibility include jurisdictional boundaries, the range of services provided by the department (service domain), and seriousness and urgency of service requests. For example, departments may decide that they will no longer provide certain nonemergency services or will not respond to very minor incidents. Faced with budgetary constraints, some police agencies have decided to no longer perform nonessential services such as vacation checks of residences, providing transportation in squad cars, or assisting motorists locked out of cars. Where police decide not to provide requested services, operators might still assist callers by referring them to other public or private agencies that may provide the desired response. Referral is common in calls where demands are judged ineligible for police response.

While making eligibility rules stricter may reduce demand somewhat, it seems doubtful that police can feasibly refuse to handle most calls for service. With the broad range of services that they provide and their 24-hour schedule of operation, police will continue to receive requests for many kinds of assistance that no other agencies offer on a continual, immediate basis. Given that police appear certain to face high demand loads in the future, other response alternatives are being contemplated and adopted.

Call Prioritization and Response Delays

A response alternative currently used in many police agencies is prioritization of service requests in terms of seriousness and the speed of patrol officer response. Given an inability to respond immediately to all calls for service, one alternative is to categorize calls according to their seriousness and then to delay dispatching police units to less serious incidents. Many police departments use a small set of codes to classify the seriousness of incoming service requests. A recent study by the Police Executive Research Forum found that 70 percent of the departments studied use some form of priority coding of calls for service (Sumrall, Roberts, and Farmer, 1981). Although prioritization schemes vary among departments, most have some means of identifying the most urgent or emergency calls, such as a robbery in progress. Some systems also attempt to identify service requests to which rapid police response is not necessary, including those involving nonemergency situations such as a burglary that occurred several days previously. The remainder of incoming calls for service are generally assigned an intermediate priority ranking.

The Report Writing Alternative

Transferring or referring callers to report writers, instead of dispatching a police unit, is another means of police response. The purpose of this alternative is to avoid dispatching units to the scene. For many types of crimes, including those that are "cold" (i.e., occurred several hours before being reported) and where evidence will not likely be obtained, all that responding officers can do is take a report. Once completed, this report may simply be filed

or forwarded to detectives for investigation. Faced with high demand loads, some departments have established report writing offices where police personnel complete crime or incident reports over the phone. This is seen as more efficient than sending an officer to the scene. Obviously, this response is inappropriate for situations where important evidence might be gathered or where callers might need some form of direct assistance. In calls such as the report of a missing person or a bicycle theft, however, police can gather necessary information and commence investigation without having to send a patrol officer to the scene. The report writing alternative frees responding units to handle more important matters, although less tangible benefits derived from face-to-face officer contact with the public may be forfeited. Some departments provide the report writing alternative as an option while offering to send a responding unit if the caller so prefers.

Other variations in this report writing function are possible. Some departments have established walk-in reporting facilities. Police operators request that persons reporting less serious matters where immediate response is unnecessary come into the police station and complete a report. Other departments mail report forms to those requesting service, asking that complainants complete the report and send it back to the police. These mail forms are used in cases such as minor thefts and traffic accidents.

Disposition of Calls for Service in Fort Worth

Examination of operator responses to callers provides one indicator of police disposition of calls for service. Another measure

of demand disposition is calls for service records maintained by police agencies. Both indicators of call disposition -- operator responses and police records -- pose difficulties for researchers. A major problem with analyzing operator responses is that for some calls no clear response is articulated. Responses such as "okay" or "we'll take care of it" are imprecise and tell neither the caller nor the researcher what police action will be taken. On the other hand, studying police records can also yield a biased view in that police generally keep data on only those calls judged eligible for unit dispatch; no record is kept of nondispatched calls.

In this section we examine operator responses to callers in Fort Worth. PCS fieldworkers recorded verbatim what, if anything, operators told callers the police would do about the reported matter. Examination of responses reflects only what the operator told the caller, although the verbal response usually but not always indicates what police actually did.

Assessing Eligibility for Police Services

In order to examine patterns of call disposition in Fort Worth, we first consider the eligibility decisions made by police operators. In about 9 percent of the calls to police, the caller was informed that the police would not respond to some aspect of the request. The reasons given for the refusal of police service are listed in Table 8-1. These data indicate that multiple reasons account for operators informing callers that their service requests were ineligible for police response. Some factors were related to the eligibility requirements previously outlined. Fourteen percent of the calls to

which police services were not provided involved a crime or problem located outside of the jurisdiction. Police response was also refused because service requests involved noncriminal problems located on private property. Calls in these two categories were ruled out on the basis of boundary criteria.

Table 8-1

Reasons Why Service Not Provided by Fort Worth Police Department to Some Calls for Service

(N = 488 calls which is 8.5% of all monitored calls for service)

Reasons Service Not Rendered:	N	Percent
Problem/Crime Not Currently Taking Place	93	19%
Police Can Do Nothing Until Citizen Takes Action	89	18
Problem/Crime Located Outside of Jurisdiction	67	14
Civil Matter, Not Appropriate for Police Response	53	11
Police Offices Closed; Officer Not on Duty	53	11
Requested Service Not Provided by Police	48*	10
Problem/Crime Located on Private Property	25	5
Operator Does Not Have Requested Information	18	4
No Crime or Problem Involved	12	2
Other Reason	30	6
Total	488	100%

*Service requests in this category include needing assistance because locked out of car (13), needing police to stand by for protection (12), requests for license registration information (6), escort/transportation (4), vacation checks (3), and other requests (10).

Call takers in the Fort Worth Police Department also employed service domain criteria when evaluating the eligibility of service requests. Domain criteria were invoked about 23 percent of the time in which service was refused. For example, operators sometimes refused service on the basis that the department had chosen not to provide various services (e.g., assistance to motorists locked out of vehicles, vacation checks) or that the incident involved a

noncriminal, civil matter appropriately dealt with by the courts. Domain criteria were also invoked in calls judged ineligible because no crime or problem was involved. These calls generally involved some sort of problem or dispute (e.g., neighborhood children playing in the yard) that was technically not a criminal incident. Although police might conceivably intervene and attempt to ameliorate the dispute, few police agencies define their domain so broadly as to include these types of problems.

Another reason for not initiating police response was that the problem or crime being reported was not occurring at the time of the call. Implicit in this rationale was the idea that the problem was not of great seriousness and that the caller lacked sufficient evidence about the matter. If the call was of a very serious nature -- for example, about a threatened robbery or homicide -- it is clear that the police would immediately investigate. But where the matter is less serious, police may not take action until such time as they can likely witness the problem/crime and gather evidence. A caller reporting that kids have been playing on his lawn or throwing trash in the yard, for example, will likely be told to call back when the offenders are present since immediate police response is apt to be fruitless. Here we see the seriousness criteria implicitly used for judging eligibility.

It is important to note that in a substantial proportion of the calls where operators said that police could not provide service, some assistance was given through referral, call transfer, or provision of information. Of the calls that were refused service by operators, 36 percent were referred to internal units or external agencies, 4

percent were transferred to other internal units, and 11 percent were provided with police-related information.

Activating Initial Police Response

After assessing eligibility, another key task of police operators is selecting a response alternative. As described above, operators have several alternative modes of call disposition. They can route the request to dispatchers (as well as noting call priority), transfer the caller to report writers, refer the caller to internal units or external agencies, and/or provide needed information to the caller. Examination of police operator responses to callers in Fort Worth provides evidence on the relative use of the various response alternatives. As noted previously, in about 9 percent of service requests, the caller was told that police would not provide direct services. Thus, 91 percent of calls were judged eligible for some form of police response. The distribution of operator responses to eligible calls is presented in Table 8-2.

Despite often limited patrol manpower, more than 40 percent of callers were told that a police unit would respond to their service request. The number of calls actually receiving a police unit in response may even be higher, since units may be dispatched even if callers were not specifically told that this would happen. For example, callers who requested a police unit were sometimes told "okay." Although some of these calls were not dispatched, others were. Previous studies of operator responses indicate considerable variation in the extent to which callers were promised that a unit would respond. Lilly (1978) reports that units were promised 30

percent of the time, compared to 49 percent reported by Antunes and Scott (1981) and 80 percent by Cahn and Tien (1981).

Calls judged appropriate for dispatch were assigned one of three priority codes designating incident seriousness. Priority code 1 was used for emergency calls requiring immediate response (e.g., robbery in-progress), code 2 for serious calls where quick but not immediate response is warranted (e.g., traffic accident), and code 3 for nonemergency calls where immediate response is not needed (e.g., bicycle theft). Of the more than 2,300 calls where a police unit was dispatched, only 5 percent were classified by operators as code 1, 74 percent as code 2, and 21 percent as code 3.

Table 8-2

The Distribution of FWPD Operator Responses to Calls for Service*

(N = 5,257)

Operator Role/Response Category:	Number of Cases	Percent of Cases
Police Unit Promised	2,241	42.6%
Call Transfer:	(680)	(13.0)
Transfer to Report Writer	392	7.5
Transfer to Internal Units	274	5.2
Transfer to Other Agencies	14	0.3
Referral of Caller:	(542)	(10.3)
Referral to Internal Units	320	6.1
Referral to Other Law Enforcement Agencies	52	1.0
Referral to Other Governmental Agencies	69	1.3
Referral to Community Social Service Agencies	48	0.9
Referral to Other Agencies	53	1.0
Information Taken/Provided:	(820)	(15.6)
Information Taken and Internally Relayed	284	5.4
General Information Provided	536	10.2

Table 8-2 (Continued)

Operator Role/Response Category:	Number of Cases	Percent of Cases
Other Responses:	(974)	(18.6)
Information Taken - No Action Promised	329	6.3
Other Response, Don't Know Response	645	12.3
Total	5,257	100.0%

*This table is based on those calls for service that were judged eligible for police response; calls where the operator said police would not handle the problem are not included.

By examining data on times automatically recorded by the FWPD's computer-aided dispatch system, it is possible to study the impact of priority classifications on the speed with which units were dispatched. Specifically, we are interested in dispatch queue time, that is, the amount of time from dispatcher receipt of a demand message until a unit is dispatched in response. Mean dispatch queue time was 3.3 minutes for priority 1 calls, 6.3 minutes for priority 2 calls, and 12.5 minutes for priority 3 calls. The use of priority classifications and the data on dispatch queue times indicate that call prioritization and response delay to less serious calls is an important response strategy used by the Fort Worth Police Department.

About 13 percent of callers were transferred, mostly to DECOR, the department's report writing station (7 percent), or to other internal units, such as detectives (5 percent). The calls handled by DECOR represent demands that would have been handled by patrol unit dispatch if an alternative had not been available. Another 10 percent of callers received a referral, that is, the call taker provided the citizen with information (including name and/or phone number) of other agencies that might offer needed services. Of these, 6 percent were

referred internally, and the remainder to other private and public agencies. Antunes and Scott (1981) found that only 4 percent of calls were transferred, but that 15 percent were referred. Lilly (1978) found that less than 4 percent of calls were referred and even fewer transferred. Both studies were conducted in departments of substantially different size and organization than in Fort Worth.

Police operators directly provided services in two contexts involving no other police intervention. First, they recorded information that citizens wanted to relay to the police and forwarded the information internally. For example, callers gave tips to police on the whereabouts of suspected felons, reported alarms accidentally triggered, requested previous calls be disregarded, or asked that a message be forwarded. Here the caller wanted only to relay information to police, and operators performed this service by taking the information and routing it to the appropriate location. Calls of this type account for 5 percent of the total. Secondly, call takers provided direct service by giving information sought by callers. In 10 percent of monitored calls, the operator disseminated police-related or other information to callers. Here again, service was provided without any further police action.

Still other responses are less easily classified. The information taken-no action promised category accounts for 12 percent of all monitored calls. Most of these calls involved operator responses that were vague and indeterminate. Simple phrases such as "okay" or "I've got it" are rather common; sometimes units were dispatched to these calls and sometimes not. It is possible that the caller might have presumed a unit was to be sent even though this was

not directly stated. These vague phrases not only make precise determination of ultimate police response difficult, but also suggest that call takers do not always clearly instruct callers about the response they are to receive.

Call Disposition by Nature of Problem Reported to Police

Examination of disposition of calls for service in terms of the problem or crime reported to the police provides further insight into disposition patterns. Table 8-3 is a cross-tabular presentation that arrays general problem categories (as described in Chapter 4) as rows and police response categories as columns. The findings in Table 8-3 suggest some interesting patterns in call disposition. Police units were promised proportionately most often in service requests involving serious problems with persons (73 percent) and suspicious persons/ circumstances (68 percent). Units were promised more often in calls about serious problems (both with persons and property) than in less serious ones. Predictably, operators told callers that police would be dispatched least often in cases concerning information or general assistance.

The report writing alternative was used most frequently for service requests related to serious and less serious property problems. In these cases, including theft and burglary, callers were generally given the option of making a report over the phone. Many callers took advantage of this option, especially in cases where the crime was committed some time prior to the report or involved small amounts of property damage or loss. Again, each time a citizen call was handled by DECOR, a patrol officer did not have to take the report at the scene, increasing available manpower for other duties.

" le 8-3

Crosstabulation of Operator Responses by Nature of Problem Reported to Fort Worth Police Department

(N = 5,257)

	Police Operator Response							
	Caller Transferred to:			Caller Referred to:				
Problem Type:	Unit Promised	Report Writer	Other Unit Agency	Internal Unit	External Agency	Information Taken	Information Given	Other Response*
Serious Problems with Persons	73.0% (216)	0.3% (1)	0.7% (2)	0.0% (0)	1.4% (4)	3.0% (9)	3.7% (11)	17.9% (53)
Less Serious Problems with Persons	60.3 (387)	3.0 (19)	3.9 (25)	2.0 (13)	4.8 (31)	4.5 (29)	7.9 (51)	13.6 (87)
Serious Problems with Property	59.4 (282)	26.3 (125)	1.9 (9)	0.6 (3)	1.1 (5)	1.7 (8)	1.5 (7)	7.6 (36)
Less Serious Problems with Property	44.5 (373)	21.0 (176)	0.7 (6)	1.4 (12)	1.1 (9)	1.7 (14)	3.8 (32)	25.8 (216)
General Assistance	27.1 (72)	1.1 (3)	9.8 (26)	8.3 (22)	5.3 (14)	10.2 (27)	7.9 (21)	30.5 (81)
Emergency Assistance	56.8 (75)	0.8 (1)	1.6 (2)	1.5 (2)	3.0 (4)	2.3 (3)	6.1 (8)	28.0 (37)
Suspicious Person/ Circumstance	68.5 (281)	0.5 (2)	0.5 (2)	1.2 (5)	0.0 (0)	6.3 (26)	6.8 (28)	16.1 (66)
Traffic Problem	58.5 (463)	0.0 (0)	1.1 (9)	0.9 (7)	3.8 (30)	6.2 (49)	7.8 (62)	21.7 (172)
Caller Wants Information	0.9 (8)	1.6 (14)	17.8 (157)	24.9 (219)	13.1 (115)	3.6 (32)	31.5 (277)	6.6 (58)
Caller Wants to Give Information	16.2 (82)	10.1 (51)	9.7 (49)	7.3 (37)	2.0 (10)	17.0 (86)	7.7 (39)	29.9 (151)

*Operator responses in this category include vague or general responses (e.g., "okay," "we'll take care of it"), no response because none is appropriate (e.g., taped alarm messages, caller hung up), expressions of appreciation (e.g., "thanks") without any other action specified, or other instances where the response could not be determined.

Callers were transferred or referred most often when they requested or provided information to the police. In many cases police operators did not have the information desired by callers, and transferred or referred them to police units or other agencies that might have the information. Operators also transferred or referred callers wanting to give information (e.g., additional information on stolen property) to internal police units, such as detectives. In still other monitored calls, police operators provided or took information from callers without further transferring or referring them. The last column of Table 8-3 lists "other responses" that, as noted previously, were vague and could not be included in the other more specific categories. Findings reported in Table 8-3 indicate that disposition decisions are influenced by the type of problem or crime reported.

Conclusion

This chapter has described a variety of alternative modes of police response to citizen calls for service. In addition, it has shown through data collected by the Police Communications Study that the Fort Worth Police Department uses several types of responses when handling calls for service. The selection of response alternatives is influenced by several factors, the most important of which is the nature and seriousness of the incident reported. Recognition of the extensiveness of alternative response modes, including telephone reporting and referral, suggests an important question for consideration: What differential impacts do these alternative response modes have? In other words, what are the costs and benefits associated with each type of response?

CHAPTER 9

CITIZEN EVALUATIONS OF POLICE RESPONSE

While many recent studies have considered citizen evaluations of police services received, most have concentrated on general citizen ratings of police or evaluations of responding officer actions. Few empirical studies have analyzed citizen evaluation of their verbal exchange with the police call taker. Since the PCS focused on the initial receipt and processing of citizen demands, it gathered data on citizen evaluations of the treatment and responses provided by the police operator. Citizen evaluations of their initial contact with police are presented in this chapter. Data were collected on citizen evaluations through a survey of individuals who had recently contacted the Fort Worth Police Department. During the 3-month period of field reseach more than 1,200 interviews were completed. This survey and the methodology underlying it have been described in Chapter 2 of this volume; a copy of the survey is included as Appendix 2 to this report.

Call Taker Treatment of Callers

Analysis of survey results indicates that most persons who called the Fort Worth Police Department during the field research period were satisfied with the way they were treated by the police operator that handled their call. When asked if the police operator was courteous, an overwhelming 97 percent replied affirmatively. Respondents were also asked if they were given the opportunity to describe their problem or incident as fully as they wanted. Again, 97 percent said that they were able to give as much information about the matter as

they wanted. Of those few who felt they did not have the opportunity to provide all information to the operator, most said they wanted to describe the incident or involved suspects more fully. Overall, citizens appeared to be very satisfied with their initial interaction with police call takers.

Examination of other data collected through this survey suggest that police operators had a calming effect on the emotional states of some callers. Both at the start and at the end of the interview, respondents were asked to classify their emotional state as calm, excited, frightened, upset, angry, or confused. Their responses to these questions are listed in Table 9-1.

Table 9-1

Emotional State of Callers at Start and End of Interview

(N = 1,232)

	Percent of Callers with Emotional States at:	
Reported Emotional State:	Start of Interview	End of Interview
Calm	59.3%	71.4%
Upset	13.1	8.1
Angry	9.0	7.6
Excited	7.8	4.3
Frightened	7.0	5.4
Confused	3.3	2.3
Other/No Response	0.4	0.9
Total	100.0%	100.0%

*The percent of other/no responses increased at the end of the interview primarily because a few respondents terminated the interview before being asked about emotional state the second time.

The findings in Table 9-1 show that 12 percent of callers who were emotionally upset, angry, excited, confused, or frightened at the start of the conversation with the police operator were calm by the

end of the conversation. At least part of this calming effect may be attributed to police operators who often tried to calm or reassure callers. This is further evidence of the positive influence that police operators may have on those seeking assistance from the police.

Evaluation of Operator Responses

In addition to seeking information on citizen evaluation of operator treatment, the PCS also wanted to gauge citizen reactions to what operators told them police would do about the matter. To gather this information citizens were asked: "How satisfied were you with the response given to you by the police operator?" Citizen responses to this question are reported in Table 9-2.

Table 9-2

Citizen Ratings of Police Operator Responses

Rating:	Number	Percent
Very Satisfied	424	34.4%
Satisfied	611	49.6
Neutral	95	7.7
Dissatisfied	65	5.3
Very Dissatisfied	34	2.8
Don't Know/No Response	3	0.3
Total	1,232	100.0%

Once again, citizen evaluations were very positive. About 85 percent of those interviewed were very satisfied or satisfied with the police operators response. Only 8 percent of the respondents rated operator responses negatively.

In order to understand why citizens were dissatisfied with operator responses, a follow-up question was included in the survey

that allowed callers to provide multiple reasons for their dissatisfaction; several gave more than one response, as listed in Table 9-3. The total number of responses is 201 because multiple responses were allowed.

Table 9-3

Reasons for Citizen Dissatisfaction with Police Operator Responses

Reason:	Number	Percent
Operator Seemed Unconcerned	26	12.9%
Operator Was Rude, Abrupt, or Discourteous	23	11.4
Operator Did Not Promise Unit Would Be Sent	20	9.9
Operator Asked Too Many Questions	20	9.9
Insufficient Information About Police Response	19	9.4
Operator Was Slow in Sending Police Unit	14	7.0
Operator Did Not Take Caller or Problem Seriously	13	6.4
Requested Service Not Promised by Operator	7	3.5
Operator Hung Up or Was Cut Off	7	3.5
Other Reasons	52	25.9
Total	201	100.0%

The data reported in Table 9-3 suggest that several reasons account for citizen dissatisfaction with operator responses, although again it is important to note that most citizens were satisfied with the response communicated by the operator. The most frequent complaints were that the operator was rude, abrupt, discourteous, or seemingly unconcerned about the caller or the problem. Other callers were displeased because the operator would not send a unit or because some other service was not provided. Still other reasons for dissatisfaction centered on delays in sending police units. Callers complained both that units were not sent quickly enough and that operators asked too many questions. Thus, while caller dissatisfaction with operator responses was relatively infrequent, it stemmed from several different sources.

Citizen Evaluation of Report Writing

As described in previous chapters, the Fort Worth Police Department uses report writing as one alternative means of handling calls for service. Citizens reporting problems where immediate police response is unnecessary, including reports of burglaries and missing persons, are often transferred to a DECOR report writer. This person speaks with the caller and completes a crime or other police report over the phone. In some but not all instances, callers are given the option of making a report over the phone or having an officer come out to complete the report.

The clientele survey utilized by the Police Communications Study provided an opportunity to examine citizen evaluation of the report writing alternative. Of all interviewed citizens, 73 (6 percent) said that they had been transferred to a report writer. Most often, these individuals were reporting thefts, missing persons, or vandalism. Of those individuals who had contact with the report writing station, 60 (80 percent) said they were satisfied to give their report over the phone. Another 12 respondents (16 percent) said they would have preferred that an officer come out and take the report. Thus, while this analysis is based on a small number of cases, the findings provide some evidence that citizens may be satisfied with response alternatives other than the dispatch of a police unit to the scene.

Conclusion

The findings from the survey of individuals who had recently contacted the Fort Worth Police Department indicate that most callers were generally satisfied with operator treatment and response. Those few who were dissatisfied tended to be unhappy about operator demeanor (i.e., rudeness, discourteousness), delays in police response, or the unwillingness of police to provide desired services. Overall, most of those individuals who gave crime reports over the phone were satisfied with this form of initial police response.

CHAPTER 10

SUMMARY AND IMPLICATIONS FOR PUBLIC POLICY

This volume has documented patterns and variations of citizen demands for police service in Fort Worth. It has attempted a detailed discussion of the kinds of demands placed on the police and the responses they initiate. The discussion of demand patterns by various time periods, caller characteristics, and neighborhood demographic conditions provides information that should prove useful to police observers and administrators interested in determining the kinds of problems citizens expect the police to handle, and in devising means of handling them. This chapter summarizes major findings, assesses their implications for policy development, and suggests some avenues of further research.

Overview of Major Findings

Types of Citizen Demands

The range of service requests received by the police is extraordinarily broad; calls to the Fort Worth Police Department as monitored by the Police Communications Study (PCS) confirm this fact. Demands involve both life-threatening situations and mundane problems totally unrelated to the mandated police functions of law enforcement, crime control, order maintenance, and assistance to citizens. To place demands in a context that could be understood and discussed, PCS researchers grouped calls for service into several general problem categories. The types of calls in each category were specified, a step that is lacking in many discussions of citizen demand patterns.

PCS observation showed that only about 15 percent of citizen calls to the police involved serious problems with persons or property; less serious problems were reported twice as frequently as serious ones. Traffic problems represented one of the largest single sources of demands, about 17 percent of calls. Additionally, more than one fifth of observed calls were either requests to obtain or offer information. These calls do not appear in police records, which are limited only to those calls judged eligible for patrol unit dispatch. There were significant differences in demand patterns by neighborhood type.

About three fourths of the time, persons calling the police made only a general, or implied, request, often by simply reporting the existence of a particular situation that they felt might require police intervention. Callers requested that the police take a specific action such as sending a patrol unit, arresting a person, or taking a report at the scene in only 23 percent of the monitored calls. Of course, as several studies have shown, the most common police response is to dispatch a unit. This fact may account for the relatively infrequent number of specific service requests observed; callers often presume that the normal response will be to dispatch a car.

Variations in Demand Patterns

Although the content of citizen demands for police service has been the subject of several empirical analyses, very little work has assessed variation in demand patterns by factors such as time periods, caller characteristics, or neighorhood context. Instead, some patterns have become widely accepted as reflective of the truth. Our analysis supports some of these "truths," but casts doubt on others.

Variation by Time Periods

According to common belief, the volume of demands on police increases dramatically during the weekend, particularly on Saturday. Both data gathered by PCS researchers and that from FWPD records support this belief: call volume in Fort Worth was greatest on Fridays and Saturdays. Another common belief is that demand volume is greatest during the evening hours; again this was borne out by FWPD call records. The largest number of calls were received between 9 pm and midnight, while the fewest were received between 3 am and 6 am. The volume of demands in most of the problem categories generally increased from about 9 am to midnight, although more property problems than problems with persons were reported during the morning hours. This may reflect the opening of businesses for daily trade and the discovery of weekend break-ins and cases of malicious mischief.

A third widespread perception is that demand volume changes by month, or at least reflects seasonal changes; interpersonal conflicts and violent crimes against persons are often thought to increase during the summer. FWPD data reflect no significant monthly or seasonal changes in demand patterns, however, although there was a slight summer increase in call volume in 1980. Whether this is symptomatic of most police depratments or a reflection of Fort Worth's relatively moderate climate, which might level out seasonal fluctuations found in northern cities, is unknown. This question is not adequately answered with data for only one year.

Variation by Caller Characteristics

When analyzing variations in demand patterns according to caller characteristics, we found that private citizens were more likely than

business representatives to report problems with persons, suspicious circumstances, and traffic problems. They were equally as likely to call about serious problems with property, while business callers more often reported less serious problems with property, including burglar alarms which were often unfounded. While business callers offered information to police more often, many of which were reports of accidentally triggered or unfounded burglar alarms, private citizens made more, and widely varied, requests for information.

The racial distribution of persons calling the police closely paralleled that of the general population. Black and Hispanic callers were more likely than whites to report problems with persons and less serious property problems, a finding that may reflect higher crime rates in neighborhoods inhabited by minority residents. In our analysis of calling patterns by neighborhood, we found that black and Hispanic neighborhoods had higher call rates for these problems.

More than 90 percent of persons who called the police were calm, or at least outwardly calm as determined by voice and speech patterns. While we adopted a conservative coding scheme that may have inflated caller calmness somewhat, the strength of this finding belies the claim that most people who call the police are emotionally distraught. Those people who were upset, frightened, or confused, however, were usually calling about a serious problem with persons, one expected to engender such emotions. These calls are obviously important and call for careful yet efficient handling by call takers. The majority of calls to police, though, do not involve such problems, and callers for the most part make their report or request in a calm manner. This does not imply that most callers are clear, concise, or organized, however. A calmly articulated request is not necessarily a carefully

articulated request, and police call takers frequently have to probe to determine the precise nature and intent of the citizen's call.

Demand Patterns by Neighborhood

Characteristics of the area from which calls originate may be contextual influences on both the volume and types of demand for police services. These factors include land area, population density, racial composition, and land use patterns. PCS researchers examined these variables at the police beat level, using various data sources and statistical techniques to derive estimates of neighborhood characteristics. We found tremendous variation in population, income, and land area by neighborhood. Some beats, for example, contained families with median incomes of less than $6,000 per year while others were populated by families earning nearly $30,000 yearly. Land area of police beats in Fort Worth ranged from less than one fourth square mile to 76 square miles. Population density, land use, and racial composition showed similar ranges across the 90 beats.

Just as demographic and geographic characteristics varied tremendously across beats, so too did the number and percent of calls for service of different types. The distribution of demands followed clearly discernable patterns. Analysis showed a clustering of calls about problems with persons and serious property problems from lower income, high density areas, while less serious property problems were reported proportionately more often from more affluent neighborhoods. This clustering was confirmed by correlation analysis at the neighborhood level which indicated that the relationship between calls about problems with persons and serious problems with property was

strong and positive. Additionally, reports of suspicious persons or property were positively correlated with reports of less serious property problems, and both came primarily from more affluent areas located on the outskirts of the city. These areas are characterized by a low minority population, lower population density, high median family incomes, and low concentrations of business or commercial establishments. Areas with high concentrations of black residents and high population density, on the other hand, generated a large number of reports of problems with persons and serious property problems.

Neighborhood land use also affects the kinds of problems reported to the police. The extent of land used for residential purposes was positively related to calls about persons, serious property problems, and suspicious persons; it was negatively related to requests for general and emergency assistance and reports of traffic problems. Surprisingly, the proportion of land devoted to commercial use in a beat was negatively related to serious problems with property (burglary, theft) and showed no significant relationship with less serious property problems.[1]

Police Response to Service Demands

Until recently, most research on citizen demands has overlooked the full range of call taker responses, concentrating instead on whether a unit was dispatched. Concern over developing more efficient response strategies has caused an upswing in interest in dispatch alternatives as well as in call takers themselves. The call taker has a variety of actions that can be applied to incoming calls. A first task is to screen the call for eligibility; is it suitable for some

type of police handling? In Fort Worth, about 9 percent of calls received were not handled by the police. Some were ruled out because they were ineligible for service; they concerned problems occurring outside the jurisdiction or involved minor disputes occurring on private property. Other calls were not handled because they involved problems outside the stated domain of the department; they concerned services that were not provided (vacation checks), civil matters, or disputes that were technically nonpolice matters. Several other reasons for not providing service were offered, but in a substantial proportion of these calls, even though the operator promised no direct police assistance, some help was provided through referral.

After assessing eligibility, call takers must select a response alternative. They can route the request to dispatchers, refer or transfer the caller to other sources of information or assistance, and/or provide information directly to the caller. In Fort Worth, more than 40 percent of callers were told that a police unit would respond to their request. This number may underestimate the proportion of calls that were ultimately answered by a patrol unit, however. Some callers who asked that a unit be sent were offered a noncommittal "okay," "yup," or "we'll take care of it" response that left eventual call disposition uncertain.

About 13 percent of Fort Worth callers were transferred to other offices, many to the department's report writing section where reports were taken from citizens directly over the phone, eliminating the need for unit dispatch. Ten percent of callers were referred elsewhere, many to units within the department, such as detectives or line supervisory personnel. Operators provided information directly about

10 percent of the time; in these cases, no other police units were contacted about the matter. Operators also received and relayed information within the department in about 5 percent of monitored calls. In these instances, callers merely wanted to pass along certain information to specific persons or offices.

Call disposition varied according to the type of problem reported. As expected, calls about serious problems received a dispatched unit more often than did calls about less serious ones. Referral to report writers often occurred as a result of calls about property problems, especially when the crime had occurred some time before the report was made. Operators frequently referred callers desiring information, as well as those wanting to provide the police with information. Clearly, the selection of a response alternative is strongly influenced by the nature and seriousness of the incident reported.

Citizen Evaluations of Police Response

General citizen evaluations of police services have failed to include reviews of call taker behavior, even though many callers deal only with telephone operators when contacting the police. Analysis of surveys of more than 1,200 persons who called the Fort Worth Police Department reveal almost universal satisfaction with call takers: 97 percent felt that operators were courteous and allowed them to give as much information about the matter as they desired. About 85 percent of those interviewed were satisfied with operator response. The few dissatisfied callers were unhappy with operator demeanor, delays in police response, or police unwillingness to provide desired services.

We noted earlier that more than 90 percent of persons who called the police were outwardly calm, as judged by PCS observers. When citizens were asked about their emotional state at the start of their call, however, less than 60 percent recalled that they felt calm; the remainder were upset, angry, excited, frightened, or confused. By the end of their conversation with the police call taker, though, an additional 12 percent stated that they were calm. Although just talking to the police and being told that something will be done about the reported problem may have a calming influence, part of this effect may be attributable to specific operator actions, assurances, and information provision.

Finally, the PCS attempted to evaluate the FWPD's report writing unit. Citizens who reported crimes to which immediate police response would make little difference, such as burglaries or missing persons, were often transferred to a civilian report writer. The caller could provide information by telephone that otherwise would have been gathered by an officer at the scene. Only 6 percent of respondents had been transferred to a report writer, but four fifths of those transferred were satisfied to give their report by phone, evidence that citizens can be satisfied with response alternatives other than unit dispatch.

Implications for Public Policy

Police Communications Study findings speak clearly to issues of current concern to both the police and the public, including police efficiency in handling ever-increasing demand levels, the structure of

possible alternative responses to unit dispatch, police organization for call handling and patrol deployment, the nature of the police role, the effects of initial police call processing, and ultimately, the nature of police performance. We begin our assessment of these issues where we began back in Chapter 1, with a discussion of several reasons why examination of citizen demand patterns is an important issue for both the police and the public.

Citizen Demand and the Police Role

Research during the past decade has established that police are called upon to do much more than fight crime and enforce the law. Numerous analyses of both citizen demand and dispatched calls for service have shown that performing law enforcement functions is less common than order maintenance, provision of emergency and routine assistance, and even information provision. Results of our study document what has been accepted among police observers for some time. The problem has been to encourage the police to accept a role that not only includes, but is often dominated by, noncriminal service provision. This role may include activities which to some administrators and officers do not constitute "real police work." There seems a widespread fear that this recognition somehow undermines both their collective authority as primary agents of social control and their individual respect as tough, hard-nosed law enforcers (a role that is often self-defined and administered through discretionary actions in encounters with citizens).

The genesis of how and why the police have come to view themselves, and to a large extent have come to be viewed by the

public, primarily as law enforcers and crime fighters is best left to others. Likely it is a residue of the turbulence of the 1960s plus the effect of the popularity of television police shows that garnered high ratings through presentation of stylized, simplistic good versus evil violence. In any case, police departments as originally conceived in America were charged with preserving public order, safeguarding manners and morals, and protecting property. Solving crime was not initially considered a police responsibility (Rubinstein, 1973).

There is, of course, no returning to an era when crime was simply not as widespread as it is today. Crime is significant, it will not disappear, and the police are one obvious mechanism to help deal with it. Nevertheless, it seems vital to reconcile at the operating level the variety of tasks the police are called upon to perform with the more limited functions some officers recognize as legitimate police business. Demand analysis coupled with examination of police response, such as that contained in this report, represent strong evidence that the public considers the police to be a multifaceted service providing organization. This fact must be impressed upon officers to eliminate some of the lingering resentment toward many noncriminal service-oriented tasks.

One way would be to expand entry-level training curricula to emphasize the diversity of the modern police role and to remind recruits of the beginnings of the watchman system in the United States. This could improve officer performance of service-oriented tasks. This step has been taken by many departments, particularly in relation to domestic crisis intervention, handling public drunkenness

in locales where such a condition is no longer a crime, or other areas that often border on the criminal or could potentially escalate into criminal incidents. A prior requirement for the creation of successful and innovative training programs emphasizing the importance of the police order maintenance and social service roles is acceptance of the value of performing these roles by top police administrators.

The Effect of Citizen Demand on Police Management and Planning

Data on citizen service demands have had one major use in many police departments; call volume, along with the number and patterns of crimes committed, has been used to structure patrol districts and determine unit deployment. Departments often attempt to distribute patrol division manpower across districts by equalizing district call volume.[2] Patrol district or beat boundaries are periodically altered to reflect changes in residential population, commercial development, or other factors that affect demand volume. Patrol beats and districts vary greatly in size according to the workload generated. Similarly, the number of officers assigned to a given area may be based on expected call volume. Demand can even affect patrol strategies. Beats in areas that generate relatively few calls may be quite large, and assigned units widely spread. For serious or dangerous calls, response time for back-up cars from within the beat or from neighboring beats may be slow. Consequently, some departments have assigned two-officer cars to larger beats.

There has been an emphasis on equalizing call volume; insufficient consideration has been paid to call <u>content</u> in decisions regarding beat design and patrol deployment. Analysis of demand

patterns by neighborhood showed considerable differences in the types of problems reported. Persons from high density and low income areas called frequently about assaults, fights, domestic disputes, and burglaries. Callers from areas on the city's outskirts, where neighborhoods were composed primarily of white, middle- or upper-income residents, were more concerned with less serious property problems, including vandalism. Callers from commercial strip developments and areas containing major thoroughfares reported numerous traffic accidents and burglar alarms.

Instead of attempting to equalize the volume of calls for service from patrol beats, police planners should consider beat-level diversity in calling patterns. Clearly, diverse neighborhoods may generate different patterns of demand. Beats might be created to reflect the types of demands generated as well as call volume. Additionally, patrol deployment strategies that do not consider demand content may be inefficient in that they may overcommit patrol personnel to areas dominated by predominantly minor problems. Not only do different neighborhoods generate varied demands, but the officer time required to handle them also varies by incident type. Officers responding to serious person or property problems, including assaults and robberies, may spend much longer at an incident scene than officers responding to less serious problems. Some demands may also strain patrol resources by requiring the presence of several back-up cars for long periods.

Data from FWPD records for the 3-month study period indicate that the average time officers spent handling dispatched calls is 42 minutes.[1] Table 10-1 demonstrates, however, that calls about serious

incidents require officers to be on the scene much longer than do calls about less serious problems. Calls about serious problems with persons and property required, on average, about an hour to handle, while calls about less serious problems with persons or property required less than half an hour of officer time. Calls about suspicious circumstancse generally required the least time to handle, an average of 23 minutes, largely because many of these calls were unfounded. Emergency assistance calls, often personal injury traffic accidents, kept officers on-scene nearly an hour and one half per call.

Table 10-1

Mean Time Officers Spend On-Scene, by Type of Call

Problem Category:	Number of Calls	Mean Time, in Minutes
1. Serious Problems with Persons	1,721	63.2
2. Less Serious Problems with Persons	7,924	29.8
3. Serious Problems with Property	5,302	56.1
4. Less Serious Problems with Property	5,479	26.9
5. General Assistance	2,750	52.8
6. Emergency Assistance	1,065	87.6
7. Suspicious Person or Property	2,748	23.0
8. Traffic Problems	5,897	56.3
9. General/Unspecified Request	8,883	38.5
Total Calls	41,769	
Mean Time Per All Calls		42.3

Data to analyze calling patterns and patrol force workload by neighborhood are available to most departments. Those which have installed CAD systems with geo-coded address files can easily generate relevant data. Many conventional departments maintain computerized

call/dispatch records that could also be adapted for this purpose. Departments should consider using these data to design beats by examining problems common to an area and the officer time required to handle them. Analysis of neighborhood demand patterns might also allow departments to pinpoint areas in which particular types of problems are concentrated and establish directed patrol or specialized programs to deal with them. It is not clear whether the creation of patrol districts and beats and the resulting distribution of personnel on the basis of equalized call or crime volume grew out of a common sense approach or simply from convenience. Police administrators and patrol planners should at least consider an alternative method to officer deployment, one based not on equalization of demand volume, but on assessment of demand patterns and resulting officer time allocations.

Call Processing and Police Response

How police employees receive, interpret, and dispatch citizen calls for service -- initial police call processing -- influences police performance. This fact has been largely overlooked by police observers and administrators who, in an effort to improve response capability, have concentrated on the technology of police response (CADs, automatic vehicle monitoring, 911) rather than on the actors and processes involved in answering service requests. In fact, the most attention has been directed to patrol unit response and officer activities during encounters with citizens. But police response to demands involves the activities of call takers and dispatchers as well as of field personnel.

We noted in Chapter 1 that call processing may include three functions: demand receipt and response determination by police call takers, message transfer from call takers to dispatchers, and for some calls, patrol unit dispatch. Call takers act as gatekeepers, determining service request eligibility and interpreting demand signals. Dispatchers are response coordinators, determining the specifics of agency response and monitoring unit status. Both operators and dispatchers maintain considerable discretion when performing their tasks. Call takers must code diverse demands into terminology that can be understood and acted upon by other department personnel. They determine both complaint and response priority codes with only a modicum of supervision. Initial demand interpretation by call takers influences not only whether a unit will be sent, but whether a caller will be referred, transferred, provided information, or receive no assistance at all. Dispatchers sequence calls within priority codes; faced with a backlog of pending calls, they must choose the next call to be dispatched.

Analysis of PCS data showed that dispatchers were involved in processing only about 40 percent of calls received; the remainder were handled by call takers, without patrol unit dispatch. This finding indicates the importance of the operator gatekeeping function; for many service demands, call takers are the only police official with whom citizens interact. Call takers process a significant proportion of demands themselves, with no assistance from others. They also divert demands from the patrol function by referring callers to other sources of information or assistance.

Despite their importance to call processing and their role as direct service providers, police telephone operators are generally poorly paid, poorly trained, and unsupervised. For any agency that relies on the telephone for so much of its dealings with the public, it seems odd that as important a function as gatekeeping has received so little attention. About the only time call takers are noticed is in those unfortunate instances in which their mistakes result in improper police response and eventual harm to a caller.

As we have argued elsewhere (Scott and Percy, 1980), administrators should pay closer attention to their complaint taking function. At present, few departments have instituted entry-level training programs for call takers; most training is provided on-the-job. As a result, operators may become proficient in handling phone answering equipment, but not necessarily in interpersonal relations. No major company whose business involved telephone contact with customers would employ an operator untrained in the techniques of efficiently eliciting and providing pertinent information; this is precisely what many police departments do, however. A brusque or rude manner can be disconcerting to callers, creating ill will or mistrust. Basic training that emphasizes telephone conversation techniques, including suggestions on calming distraught callers, eliminating unnecessary caller verbiage politely, and efficiently probing to determine relevant details could improve police telephone operations significantly. This training might also encourage operators to carefully spell out the expected police response rather than offering an indeterminant "yup" or "okay" which tell the caller very little.

We have noted the scope of call taker and dispatcher discretion. This is a necessary aspect of both jobs. Situations brought to police attention are so diverse and involve so many variables that concise rules of operation would be unworkable. Nevertheless, increased supervision of police call processing may be desirable. The technology exists to make supervision a simple matter. Most departments tape record all operator and dispatcher transmissions. These might be reviewed periodically, as the FWPD does, to assess individual performance. This review need not be conducted while the individual is on duty, but could be accomplished at the supervisor's convenience. Tapes could be reviewed for flaws in both operator technique and decision making, and could be used for instructing both the transgressor and incoming call processors. Much of what currently passes for call processing supervision is simply making relative comparisons of the number of calls each operator handles during a shift. Call volume handled should not be equated with performance; supervisor time might be better spent trying to improve telephone techniques or radio transmissions. The cost of such improvements should prove minimal compared with the potential improvement in service rendered. Not only would the public be pleased, but responding officers surely would appreciate receiving accurate and complete information about a situation prior to arriving at the scene. This link between initial police response and eventual service provision has been largely ignored and deserves more attention from police administrators.

Citizen Demand and Alternative Police Response

This volume has noted the importance of developing alternatives to traditional patrol unit response to citizen demands. Before various alternatives can be identified and evaluated, we must determine what the police are asked to do and how they respond. Most callers requesting police action expect that a unit will be dispatched to the scene, an expectation stemming from the belief that citizens will be satisfied only if an officer responds in person.

Data presented in Chapter 8 indicate that, at least in Fort Worth, the police use a variety of responses to handle demand. Units were dispatched in less than half the calls received. Many calls, including those involving crimes, were referred to the department's reporting writing section, where a report was completed by telephone. Other calls were referred to internal or external sources. Some calls were transferred to internal bureaus, while others were handled directly by call takers. For various reasons, some calls were refused service altogether. Although no data were collected on the relative costs of these various response alternatives, it is likely that any response supplied by telephone will be less costly than one requiring patrol officer dispatch. Just as important, however, is our finding that citizens were generally satisfied with at least one "nontraditional" form of response, telephone report writing. Our results parallel those of Cahn and Tien (1981) who found that the public in Wilmington accepted response delays, telephone reporting, and other nondispatched responses. These preliminary findings are encouraging and should spur departments to review demand patterns in their communities to determine what response alternatives might be

appropriate. A large part of the success of any alternative will involve careful explanation by call takers of the options available to the caller and the reasons why particular options are being invoked.

There is still a great deal to learn about the impacts of response alternatives, especially as they may relate to subsequent handling of cases and overall police performance. Departments must weigh both the benefits and costs of embarking on a program of organized alternative responses to demands for service. One potential negative factor, as yet unmeasured, is the potential trade-off between cost efficiency and benefits of direct citizen-officer contact. While handling a demand by telephone may be less costly in the short run, it may not generate less tangible benefits such as citizen-officer trust, obtaining useful evidence, knowledge about a situation that could benefit the officer in a later encounter, and an overall feeling of goodwill toward the department. Even if officer presence at the scene of an incident, such as a burglary that has occurred previously, results in no gain in solving the crime, it may make the caller more sympathetic toward the police and more willing to call at some future time. Also, do report writers, who are often civilians, prepare reports of the same quality as field officers? Are referred callers likely to receive services from other agencies or are persons excluded from traditional patrol unit response unlikely to obtain needed services? And what impact does response delay have on crime and noncrime situations? Answers are needed to questions such as these before a careful assessment of response alternatives can be achieved.

All of the suggestions presented thus far point in the same direction: to process and respond to citizen service demands

efficiently and effectively, police administrators must pay much closer attention to the development and implementation of departmental rules and policies about handling calls for service. Police communications have often been viewed simply as an internal support function for the more important tasks performed by the patrol division. We have tried to demonstrate that the call processing function plays not only more than a supporting role, but in fact often determines the nature of police response. For many callers, call takers are the police. For dispatched calls, call taker coding decisions affix an identity and a response priority that represent reality at least until the responding officer has a chance to make a different determination. Dispatcher queuing decisions guide the speed of police response for calls with equal priority.

With little or no guidance from departmental rules, and with the usual lack of supervision from superiors, call processing personnel are often left on their own when making crucial decisions that can conceivably involve life and death, psychological trauma, or simple unpleasantness. While the nature of the call processing functions requires individual discretion, that discretion can be bounded to a degree by careful administrative attention to rule making, supervision, and individual performance review. Concomitant with the development of formal rules should be an upgrading in status of call processors, and a recognition of their central role in policing.

Directions for Future Research

The past 10 to 15 years have seen a tremendous growth of interest in and research about policing. Although areas such as police

communications, call processing, and noncriminal service provision have received less attention than, for example, the patrol or criminal investigation functions, they too have been the subjects of interest among some observers. Given this recent research, including that reported in this volume, are there any remaining unanswered questions, and what are the next logical avenues of research?

Development of Comparative Data

One obvious need in assessing patterns of citizen service requests is a valid basis for comparison across departments. At present there is no standard set of complaint codes that can provide an accurate basis for comparing demands. Additionally, most analysts of citizen demand have not described how complaint codes were defined and grouped into the general categories they normally report. While some of these problems are being addressed by an on-going research project (National Institute of Justice, 1980), it will take a concerted effort among those who are interested in citizen demand to begin to provide a basis from which comparisons can be generated.

Even if comparative data can be developed, large-scale comparison on the basis of general categories masks the diversity of demands. Each of the general problem categories discussed in this report contains several different types of crimes and problems. At the individual level, however, each type of incident reported may pose a significantly different problem for the officer who responds. A domestic disturbance code, for example, could describe a fight between husband and wife, an argument between a couple living together, a drunken brawl among several brothers, a mother's struggle to have her

retarded daughter committed to an institution, or any number of other scenarios. Each one presents a different psychological, physical, and legal challenge to the police. Even if a call taker is able to elicit information differentiating among these types of problems, each incident will receive the same complaint code. The accompanying information on the complaint card then becomes crucial, as does whether or not this information is passed along to responding officers.

At one level, then, development of comparative data may be extremely useful in settling the issue of the types of demands made on police. At another level, this type of analysis sheds little light on what police actually do in response to demands. An ideal, yet costly, research design would incorporate a means of observing calls for service from initial receipt through call processing, dispatch, officer receipt, and officer field response. We have suggested that the demand information officers receive when dispatched may help prepare them for handling the incident and to find the location quickly. It would be interesting to determine precisely what effect demand information has on responding officers, how it influences their mental preparation and actual case handling, and how often an incident as dispatched is coded the same as on the officer's activity report.

To conduct such analysis at the general level would be extremely difficult. This is the problem addressed by Goldstein (1979: 246) in his argument for a "problem-oriented policing";

> It seems desirable, at least initially in the development of a problem-solving approach to improved policing, to press for as detailed a breakdown of problems as possible. In addition to distinguishing different forms of behavior and the apparent motivation, as in the case of incidents commonly grouped under the heading of [domestic

> disturbance], it is helpful to be much more precise regarding locale and time of day, the type of people involved, and the type of people victimized. Different combinations of these variables may present different problems, posing different policy questions and calling for radically different solutions.

One future research approach might be to identify a single problem, review police tape recordings to determine the factors influencing the operator's coding decision, determine through direct observation and officer interviews how dispatched information affects subsequent police actions, and evaluate the nature and effectiveness of police response, perhaps with interviews with relevant citizen participants. Such research would be difficult to design and costly to execute, but if done properly, would pinpoint the nature of citizen demand about and police response to a single issue, determine how call taker and dispatcher decisions affect the subsequent police-citizen encounter, identify alternative responses where applicable, and assess police performance.

Costs and Benefits of Police Response Alternatives

Such an approach suggests the importance of evaluating the costs and benefits of various police and nonpolice alternatives to traditional patrol unit response. Several recent studies, including this one, have identified and discussed various approaches to handling demand that are designed to reduce patrol force workload and department costs while maintaining present service levels and citizen satisfaction with them. These alternatives include telephone report writing, planned response delays, referral to other sources of assistance, police call-back options, and walk- or mail-in reporting systems, among others. Before any of these alternatives are

instituted on a large-scale basis, they should be carefully evaluated, with particular emphasis on their costs to the police and the public.

To this point, such assessments have been few and widely scattered. They should consider not only actual dollar costs to departments, but opportunity costs as well. By not sending an officer to the scene immediately, or at all, how likely is it that police will lose the chance to gain valuable information that could lead to solving a crime or arresting a suspect? What are the trade-offs between reducing patrol force workload and generating citizen goodwill with prompt, courteous response? How is citizen evaluation of alternative responses affected by call takers telling callers precisely what their options are, what to expect from police, and when to expect it? Convincing evidence in support of response alternatives will likely be required to achieve widespread acceptance of changes in traditional police response patterns.

Police Operator and Dispatcher Performance

Another unexplored area for further research is the effect of training and supervision on police call takers and dispatchers. It would not be difficult to design an evaluation of the effects of training and supervision on operator and dispatcher behavior; a pretest-posttest design could incorporate elements such as courtesy to callers, number of times operators asked for information already provided, number of calls handled, amount and content of information recorded, amount and content of information relayed to officers, degree of probing for information, average length of conversation, and many other factors. To our knowledge, such a study has never been

considered, perhaps because of the relatively low esteem in which police call processing personnel are generally held by administrators and officers. Controls for length of service, sworn/civilian distinctions, and even job assignment (some communications personnel are qualified both to answer and dispatch calls) could be instituted. Baseline data could be collected and compared to data gathered after training or supervision intervention was made; the result could be a significant analysis of factors affecting call processor performance.

An important component of such a study would be to assess the relative costs and benefits of training. Training programs may be costly. Departments might be more reluctant to let a trained call taker or dispatcher move on to another job than they are now, but increased tenure might require an upgraded pay scale. This cost would have to be weighed against that of hiring and training new people at lower pay rates. Would increasing training increase pay scales, job tenure, and ultimately performance?

Another measure of operator/dispatcher performance could be evaluations of behavior both by citizen callers and field officers. The Police Communications Study contained some elements of this approach, and found that citizens in Fort Worth were very satisfied with their contacts with call takers. Further research is required to determine if this was the result of a conscious effort by FWPD administrators to provide excellent service during the study period, symptomatic of only a single department, indicative of callers' inattention to their contacts with call takers, or a typical response found in most communities.

The Need for Neighborhood Contextual Analysis

This study represents, to our knowledge, the first attempt at analyzing citizen demand patterns by neighborhood type. Much more work is required in this area, especially if it is to be used as a source for designing patrol beats. One requirement is a means of identifying commercial strip developments, those areas of wholesale and retail establishments that are found in many urban neighborhoods. They may contain neighborhood groceries, fast-food franchise restaurants, local taverns, general merchandise outlets, or any number of other businesses. If located within an otherwise primarily residential beat, they may generate very different sets of demands than would otherwise be expected. Police planners need to keep them in mind when considering patrol deployment strategies. Unfortunately, this will probably require special data collection efforts, as land use data is often imprecise and of little use for police purposes.

A related research topic might be to determine if there are differences in citizen expectations about desired police service by neighborhood type, and if so, what implications they might have for police response. Our analysis has shown that residents in different neighborhoods call the police about different types of problems. We have only speculated as to why this is the case. Residents in some areas, for example, may desire the police to perform an active order maintenance role, one designed to reduce neighborhood incivility by rousting drunks, breaking up groups of youths, and challenging strangers to identify their business. Residents of other neighborhoods may favor a reduced police presence, preferring that the police be as inconspicuous as possible. Demand data, coupled with

direct input from residents, could help police understand what is expected of them and act accordingly.

Still another research question concerns the propensity of citizens in different neighborhoods to call the police about crimes and other police-relevant problems. An implicit assumption in the contextual analysis presented in Chapter 7 was that differences in neighborhood calls were the result of differential incidence of problems and crimes. It is possible that residents of different community areas may also have varying propensities to call the police, both generally or in regards to particular problems. For example, residents of high crime, inner-city areas may confine calls to police to serious incidents, being less concerned about minor property problems such as vandalism or potential problems such as suspicious persons. Residents of low crime areas, on the other hand, may be more "crime-sensitive," calling the police about any unusual circumstance or crime-related situation. This suggests the need for researchers to study individual and neighborhood influences on the propensity of individuals to contact the police about different types of problems and crimes. Victimization studies have begun to examine reasons why citizens fail to report crimes, yet have given little attention to the full range of neighborhood reporting patterns.

Conclusion

There has been much research directed toward determining the police role, toward what citizens ask the police to do, and toward how officers respond during encounters. The body of research on police

response, from the time required to arrive at the scene to various alternatives to traditional patrol car response, is growing. Some research has assessed the effects of activities on police performance. Examination of police call processing and its effects on overall police response and performance, however, is sorely lacking. This report has begun to identify areas in which further work is needed. Our analysis has indicated that such work would be useful in assisting operating agencies to determine what citizens expect of them, to improve their response to citizen demand, and to suggest areas where improvements might make a meaningful difference.

Footnotes

[1]Our measure of commercial land use reflects the presence of large shopping centers, but undercounts the number and extent of commercial strip development, no doubt accounting in part for this finding.

[2]Data from the Police Services Study, conducted by the Workshop in Political Theory and Policy Analysis in 24 police departments from three metropolitan areas in 1977, indicate that call volume and crime statistics were the most commonly used factors in determining beat configuration. Sixty-one percent of the responding departments (14) relied on call volume to design their patrol beats. Another 44 percent (10 departments) said that they also used crime statistics in determining beat configuration.

[3]Service time is calculated from time data stored by the FWPD's computer-aided dispatch system. For every dispatched call for service, the responding officer must report the time he arrives on the scene and the time he completes handling the incident and is ready to receive the next dispatch. Service time is simply the period between these two reported times. Even considering that officers may delay calling the dispatcher upon completion of a call (to rest, attend to personal business, or simply waste time), Table 10-1 provides a good indication of the relative time required to handle each general type of call.

Bibliography

American Bar Association (1972) Standards Relating to the Urban Police Function. New York, New York: Institute of Judicial Administration.

Antunes, George and Eric J. Scott (1981) "Calling the Cops: Police Telephone Operators and Citizen Calls for Service." Journal of Criminal Justice, Vol. 9, No. 2, 165-180.

Bercal, Thomas E. (1970) "Calls for Police Assistance: Consumer Demands for Governmental Service." American Behavioral Scientist, Vol. 13, Nos. 5-6 (May-August), 681-691.

Cahn, Michael F. and James M. Tien (1981) An Evaluation Report of An Alternative Approach in Police Response: The Wilmington Management of Demand Program. Cambridge, Massachusetts: Public Systems Evaluation, Inc.

Cumming, Elaine, Ian Cumming, and Laura Edell (1965) "Policeman as Philosopher, Guide, and Friend." Social Problems, Vol. 12, 276-286.

Goldstein, Herman (1977) Policing a Free Society. Cambridge, Massachusetts: Ballinger.

_____ (1979) "Improving Policing: A Problem-Oriented Approach." Crime and Delinquency, Vol. 25 (April), 236-258.

Levens, Bruce R. and Donald G. Dutton (1980) "Citizens' Requests for Service and the Vancouver Police Department Response." In Bruce R. Levens and Donald G. Dutton, eds. The Social Service Role of Police - Domestic Crisis Intervention. Ottawa, Ontario, Canada: Minister of Supply and Services, 5-38.

Lilly, J. Robert (1978) "What Are the Police Now Doing?" Journal of Police Science and Administration, Vol. 6, No. 1 (March), 51-60.

Lipsky, Michael (1980) Street Level Bureaucracy: Dilemmas of the Individual in Public Services. New York, New York: Russell Sage Foundation.

Manning, Peter K. (1977) Police Work: The Social Organization of Policing. Cambridge, Massachusetts: MIT Press.

_____ (1980) "Organization and Environment: Influences on Police Work." In R. V. G. Clarke and J. M. Hough, eds. The Effectiveness of Policing. Farnborough, Hants., England: Gower Publications, Ltd.

Meyer, John C. (1976) "Empirical Analysis of Police Service Tasks: Antecedent for Management Planning." Journal of Police Science and Administration, Vol. 4, No. 1 (March), 264-273.

Misner, Gordon E. (1967) "The Urban Police Mission." Issues in Criminology, Vol. 3 (Summer), 35-46.

National Institute of Justice (1980) "Differential Police Response to Calls for Service - Test Design." Program solicitation, October 1980.

Percy, Stephen L. and Eric J. Scott (1982a) "Discretion and Performance: The Neglected Roles of Police Operators and Dispatchers." Paper presented at the Annual Meetings of the Academy of Criminal Justice Sciences, Louisville, Kentucky, March 23-27, 1982.

_____ (1982b) "The Importance of Gatekeeping in Urban Police Agencies." Paper presented at the Annual Meeting of the Southwestern Political Science Association, San Antonio, Texas, March 18-20, 1982.

_____ (forthcoming) Demand Processing and Performance in Human Service Organizations.

Reiss, Albert J., Jr. (1971) The Police and the Public. New Haven, Connecticut: Yale University Press.

_____ and David J. Bordua (1967) "Environment and Organization: A Perspective on the Police." In David J. Bordua, ed. The Police: Six Sociological Essays. New York, New York: John Wiley & Sons, 25-55.

Rumbaut, Ruben G. and Egon Bittner (1979) "Changing Conceptions of the Police Role: A Sociological Review." In Norval Morris and Michael Tonry, eds. Crime and Justice: An Annual Review of Research, Vol. 1. Chicago, Illinois: University of Chicago Press.

Scott, Eric J. (1981) Calls for Service: Citizen Demand and Initial Police Response. Washington, D.C.: National Institute of Justice.

_____ and Analee Moore (1981) Patterns of Police-Referral Agency Interaction. Washington, DC: National Institute of Justice.

_____ and Stephen L. Percy (1980) "Improving Police Service Through Telephone Operations." The Police Chief, Vol. 47, No. 7 (July), 48-52.

_____ and Asha L. Swarup (1981) Police Communications Study Report on Data Collection and Research Instruments. Bloomington, Indiana: Indiana University, Workshop in Political Theory and Policy Analysis.

Shearing, Clifford D. (1974) "Dial-A-Cop: A Study of Police Mobilization." In R. L. Akers and E. Sagarin, eds. Crime Prevention and Social Control. New York, New York: Praeger, 77-88.

Silberman, Charles E. (1978) Criminal Violence, Criminal Justice. New York, New York: Random House.

Sumrall, Raymond O., Jane Roberts, and Michael T. Farmer (1981) Differential Police Response Strategies. Washington, D.C.: Police Executive Research Forum.

U.S. Department of Justice (1980) Crime and Seasonality. Washington, D.C.: Bureau of Justice Statistics.

Webster, John A. (1970) "Police Task and Time Study." Journal of Criminal Law, Criminology, and Police Science, Vol. 61, No. 1, 94-100.

Wilson, James Q. (1968) Varieties of Police Behavior. New York, New York: Atheneum.

APPENDIX 1

Calls for Service/Dispatch Form

W80-33-3(1)

Field Check _____
Coding Check _____
1st Punch _____
2nd Punch _____

POLICE COMMUNICATIONS STUDY

Cover Sheet

Calls for Service/Dispatch Form 01

Form Number. 01

Shift Identification Code. . . . . _____

Sequence Number. . . . . _____

PART I INFORMATION:

Part I Coder _____ Date Call Received _____

Date Coded _____ Location _____

Channel Monitored _____ Dispatched? YES NO DK

Time Call Begin ___:___:___ Time Call End ___:___:___ TAPE # _____

DEBRIEFING:

Is call Appropriate? YES NO Determined by _____

In sample for debriefing? YES NO Sampled by _____

FORM 07 Completed: Coder _____ Date _____

PART II INFORMATION:

Is call matched with dispatch card/record? YES NO

CAD Serial Number _____ Time Dispatched ___:___

Beat I.D. _____

Part II Coder _____ Date Coded _____

SAMPLING: Selected in Sample?: YES NO Date _____ Sampler _____

PART III INFORMATION: Dispatch Transmission for Call Found?: YES NO

Channel Monitored _____

Part III Coder _____ Date Coded _____

COMMENTS/NOTE TO DEBRIEFERS: _____

POLICE COMMUNICATIONS STUDY

Calls for Service/Dispatch Coding Form

FORM 01

1. Form Number. 1 0 1
2. Shift I.D. _____ 3 _ _ _
3. Sequence Number _____ 6 _ _ _ _
4. Card Number. 10 1
5. Date Call Received _____/_____ 11 _ _/_ _
6. Day of Week Call Received _____ 15 _

PART I INFORMATION:

7. Coder Name and I.D. _____ 16 _ _
8. Date Coded _____ 18 _ _/_ _
9. Tape Channel Monitored _____ 22 _ _
10. Time Call Received: _ _:_ _:_ _ 24 _ _:_ _:_ _
11. Operator Identified Self by Name? 1-YES 2-NO 9-DK 30 1 2 9

	Acquisition Code	
• INFORMATION ABOUT CALLER:		
12. Name _____	_____	31 1 2 3 4 5 6 9
13. Home Address _____	_____	32 1 2 3 4 5 6 9
14. Home Phone _____	_____	33 1 2 3 4 5 6 9
15. Business Name _____	_____	34 1 2 3 4 5 6 9
16. Business Address _____	_____	35 1 2 3 4 5 6 9
17. Business Phone _____	_____	36 1 2 3 4 5 6 9
18. Other Phone _____	_____	37 1 2 3 4 5 6 9
19. LOCATION WHERE PROBLEM OCCURRED _____	_____	38 1 2 3 4 5 6 9
_____		
_____		
20. CURRENT LOCATION OF CALLER (IF DIFFERENT THAN #19)	_____	39 1 2 3 4 5 6 9 +
_____		
_____		
_____		

• 21. Other Description of Location to Which Police Might Respond (other than information listed in items 13, 16, 19, 20).

_____

_____

Specific Location Information:	Acquisition Code	
a. Nearby intersection.	_____	40 1 2 3 4 5 6 9
b. Location on street or highway.	_____	41 1 2 3 4 5 6 9
c. Placement of building.	_____	42 1 2 3 4 5 6 9
d. Description of exterior building features.	_____	43 1 2 3 4 5 6 9
e. Description of location inside building.	_____	44 1 2 3 4 5 6 9
f. Exterior location described in proximity to building	_____	45 1 2 3 4 5 6 9
g. Named building, establishment, area.	_____	46 1 2 3 4 5 6 9
h. Other description.	_____	47 1 2 3 4 5 6 9

• 22. General Description of Problem: _____ 48 — — —

_____ 51 — — —

_____

_____

_____

_____

_____

• 23. Description of/Information About the Problem and/or Its Participants:	Acquisition Code	
a. Caller, Personal Description _____	_____	54 1 2 3 4 5 6 9
b. Suspect, Personal Description _____	_____	55 1 2 3 4 5 6 9
c. Suspect, Other Information _____	_____	56 1 2 3 4 5 6 9
d. Other Participants, Personal Description _____	_____	57 1 2 3 4 5 6 9
e. Other Participants, Other Information _____	_____	58 1 2 3 4 5 6 9
f. Personal Injury Involved _____	_____	59 1 2 3 4 5 6 9
g. Vehicles Involved _____	_____	60 1 2 3 4 5 6 9
h. Weapons Involved _____	_____	61 1 2 3 4 5 6 9

• 24. Problem Reported as In-Progress? 1-YES 2-NO 9-DK 62 1 2 9

• 25. Specific Service Requests Made by Caller _____ 63— — —

_____ 66— — —

_____ 69— — —

_____ 72— — —

_____ 75

• 26. First Report of Problem by Caller? 1-YES 2-NO 9-DK 1 2 9

NEXT CARD 10 2

• 27. Operator Response: _____ 11— — —

_____ 14— — —

_____ 17— — —

_____ 20— — —

_____ 23— — —

_____

• 28. Operator Demeanor: 1-rude/abrupt 2-neutral
3-friendly/reassuring 9-DK 26 1 2 3 9

• 29. Caller Put on Hold or Interrupted? 1-YES 2-NO 27 1 2

* * * * * * * * * * * * * * * * * * * *

• 30. CALLER ATTRIBUTES (Circle Appropriate Code):

a. Position: 1-crime victim
2-suspect
3-person needing assistance/information
4-third party/witness
5-representative of victimized business/agency
6-representative of business/agency needing assistance/information
9-other/DK 28 1 2 3 4 5 6 9

b. Age: 1-young 2-middle 3-old 9-DK 29 1 2 3 9

c. Sex: 1-male 2-female 9-DK 30 1 2 9

d. Race: 1-white 2-black 3-Mexican/Spanish 4-other 9-DK 31 1 2 3 4 9

e. Emotional State: 1-calm 2-excited 3-frightened
4-angry 5-upset 6-confused 9-DK 32 1 2 3 4 5 6 9

* * * * * * * * * * * * * * * * * * * *

• 31. Time Call Ended: __ __:__ __:__ __ 33— —:— —:— —

- - - END PART I INFORMATION - - -

PART II INFORMATION:

(This information is to be obtained from dispatch cards and/ or computer printouts from the CAD system.)

1. Is Dispatch Information found and coded for call for service?:
   1-YES 2-NO — 39 1 2

2. Coder Name and I.D. _____ — 40 — —

3. Date Coded _____ — 42 — — / — —

4. Beat I.D. _____ — 46 — — — —

5. PRA Code _____ — 50 — — — —

6. Serial Number of Call _____ — 54 — — — — — —

7. Signal Code _____ — 60 — —

8. Location Address _____

9. Complainant Address _____
   DIFFERENT THAN #8?: 1-YES 2-NO — 62 1 2

10. Complainant Name _____

   10a. NAME LISTED?: 1-YES 2-NO — 63 1 2

   10b. OTHER DESCRIPTION LISTED?: 1-YES 2-NO — 64 1 2

11. Complainant Phone Number _____
   LISTED?: 1-YES 2-NO — 65 1 2

12. Units Assigned: ____ / ____ / ____ — 66 — — — —
   — 70 — — — —
   — 74 — — — —

13. Time Information: _____ NEXT CARD — 10 — 3

   a. Time Call Entered (10-4) _____ — 11 — — : — —

   b. Time Dispatched (10-7) _____ — 15 — — : — —

   c. Time Unit Arrived (10-23) _____ — 19 — — : — —

   d. Time Back-In Service (10-24) _____ — 23 — — : — —

14. Complaint Taker ID Number _____ — 27 — —

15. Dispatcher ID Number _____ — 29 — —

16. Priority Code (Circle one code): 1 2 3 4-NONE — 31 1 2 3 4

17. SELF RPT Code (Circle one code): 1-1 2-2 3-T 4-NONE — 32 1 2 3 4

• 18. Were any REMARKS recorded on call record?: 1-YES 2-NO 3-RAPID ENTRY 33 1 2 3

• 19. Record REMARKS verbatim _____

_____

_____

_____

• 20. Were the following descriptions of/information about the PROBLEM/PARTICIPANTS included in the REMARKS?:

a. Complainant, Person Name _____ 34 1 2

b. Complainant, Business Name _____ 35 1 2

c. Complainant, Personal Description _____ 36 1 2

d. Complainant, Other Information _____ 37 1 2

e. Suspect, Personal Description _____ 38 1 2

f. Suspect, Other Information _____ 39 1 2

g. Other Participants, Personal Description _____ 40 1 2

h. Other Participants, Other Information _____ 41 1 2

i. Personal Injury Involved _____ 42 1 2

j. Vehicles Involved _____ 43 1 2

k. Weapons Involved _____ 44 1 2

l. In-Progress (stated) _____ 45 1 2

m. Indication No Further Information _____ 46 1 2

n. Problem Elaboration _____ 47 1 2

_____

o. Units en Route _____ 48 1 2

• 21. Were the following descriptions of problem LOCATION included in the REMARKS?:

a. Nearby Intersection _____ 49 1 2

b. Location on Street or Highway _____ 50 1 2

c. Placement of Building _____ 51 1 2

d. Description of Exterior Building Features _____ 52 1 2

e. Description of Location Inside Building _____ 53 1 2

f. Exterior Location Described in Proximity to Building _____ 54 1 2

g. Named Building, Establishment, Area _____ 55 1 2

h. Other Description _____ 56 1 2

- - - END PART II INFORMATION - - -

PART III INFORMATION:

(This information is to be obtained from monitored dispatch transmissions.)

WORKSHEET AREA Time Start __ __:__ __:__ __

Units Contacted _____/_____

Time End __ __:__ __:__ __

1. Is Dispatch Transmission found and coded for call for service:
   1-YES 2-NO
2. Coder Name and I.D. _____
3. Date Coded _____
4. Tape Channel Monitored _____
5. Date of Dispatch _____
6. Time Dispatch Transmission Begins __ __:__ __:__ __
7. Units Contacted: a. Primary _____
   b. Backup _____
8. Signal Code Mentioned _____
9. Officer Priority Code Mentioned _____

NEXT CARD 1 2 4 10 11 12 14 18 19 23 29 33 37 41

• 10. Location Address and Description _____

_____

_____

_____

Specific Location Information:	Acquisition Code	
a. Nearby intersection.	_____	42 1 2 3 4 5 9
b. Location on street or highway.	_____	43 1 2 3 4 5 9
c. Placement of building.	_____	44 1 2 3 4 5 9
d. Description of exterior building features.	_____	45 1 2 3 4 5 9
e. Description of location inside building.	_____	46 1 2 3 4 5 9
f. Exterior location described in proximity to building .	_____	47 1 2 3 4 5 9
g. Named building, establishment, area.	_____	48 1 2 3 4 5 9
h. Other description.	_____	49 1 2 3 4 5 9

• 11. Were the following descriptions of/information about the PROBLEM/PARTICIPANTS included in the dispatch?:

	Acquisition Code	
a. Complainant, Person Name _____	_____	50 1 2 3 4 5 9
b. Complainant,Business Name _____	_____	51 1 2 3 4 5 9
c. Complainant,Home Address _____	_____	52 1 2 3 4 5 9
d. Complainant Phone _____	_____	53 1 2 3 4 5 9
e. Complainant, Personal Description _____	_____	54 1 2 3 4 5 9
f. Complainant, Other Information _____	_____	55 1 2 3 4 5 9
g. Suspect, Personal Description _____	_____	56 1 2 3 4 5 9
h. Suspect, Other Information _____	_____	57 1 2 3 4 5 9
i. Other Participants, Personal Description _____	_____	58 1 2 3 4 5 9
j. Other Participants, Other Information _____	_____	59 1 2 3 4 5 9
k. Personal Injury Involved _____	_____	60 1 2 3 4 5 9
l. Vehicles Involved _____	_____	61 1 2 3 4 5 9
m. Weapons Involved _____	_____	62 1 2 3 4 5 9
n. In-Progress (stated) _____	_____	63 1 2 3 4 5 9
o. Indication No Further Information _____	_____	64 1 2 3 4 5 9
p. Problem Elaboration _____	_____	65 1 2 3 4 5 9

● 12. Officer told other units would be sent to the scene. (Circle units mentioned.)

++ - no units mentioned
01 - other patrol units
02 - detectives, evidence technicians, etc.
03 - juvenile officer
04 - animal control
10 - supervisory personnel
51 - ambulance
72 - fire department
88 - wrecker
99 - other unit

66 __ __
68 __ __
70 __ __
72 __ __

● 13. Time End of Dispatch Transmission __ __:__ __:__ __

74 __ __:__ __:__ __

- - - END PART III INFORMATION - - -

APPENDIX 2

Caller Debriefing Form

W80-33-9

Field Check _____

Coding Check _____

1st Punch _____

2nd Punch _____

POLICE COMMUNICATIONS STUDY

Cover Sheet

CALLER DEBRIEFING FORM

Form Number. 1 0 5

Sequence Number (From FORM 07) _____ 3 — — — —

Card Number. 7 1

Interviewer Name and Code Number _____ 8 — —

Date Letter Sent _____ 10 __/__ __

Date of Interview _____ 13 0 __/__ __

Interview Completed?: 1-YES 2-NO (If NO, EXPLAIN BELOW) 17 1 2

Case Number: Calls for Service Form 01 _____ 0 1 /___ __ /__ __ __ __

18 Form Shift Seq. No.

Total Minutes of Interview ___ ___ ___. . . . . 27 — — —

COMMENTS: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Interview Verification: By _____ Date _____

INTRODUCTION: (If Name is KNOWN)

Hello. May I please speak to (name on FORM 07). . . My name is _____. I am part of a research team studying police services in this area. We are working with the permission of the Fort Worth Police Department, but we are an independent research study. You may have received a letter from us explaining our project. I understand that you called the Fort Worth police on day, date from FORM 07 concerning incident description on FORM 07. I would like to talk to you about this incident. This brief survey will take no more than five minutes. Please be assured that all of your responses will be kept completely confidential. Do you have a few moments to speak to me about this incident?

INTRODUCTION: (If Name is UNKNOWN)

Hello, my name is _____. I am part of a research team studying police services in this area. We are working with the permission of the Fort Worth Police Department, but we are an independent research study. I understand that someone who [lives at this residence or works at this business or agency] recently contacted the Fort Worth police on (date from FORM 07) about (incident description from FORM 07. I would like to talk to this person.

IF CALLER IS SOMEONE DIFFERENT THAN PERSON WHO ANSWERED, REPEAT THE FIRST INTRODUCTION LISTED ABOVE.

IF RESPONDENT HESITATES OR IS UNCERTAIN, ASSURE HIM/HER THAT:

1. All responses are confidential. The police will not learn of their individual responses.

2. We are cooperating with the Fort Worth police, but we are an independent research team.

3. Citizen can call the Fort Worth police at 870-6410 to verify our study.

4. The interview will be quite short.

IF CITIZEN REMAINS HESITANT, SUGGEST THAT YOU CAN CALL BACK AT SOME TIME THAT IS MORE CONVENIENT. SET UP TIME TO CALL. NOTE CALL BACK INFORMATION ON FORM 07.

Time Interview Started __ __:__ __

First of all, we would like to ask you some questions about your conversation with the police operator when you called the Fort Worth Police Department.

1. When you called, did you receive a recorded message telling you that all police operators were busy and that an operator would be with you shortly?

   1-YES [2-NO 9-DK/NR] → GO TO Q. 2 30 1 2 9 +

   1A. IF YES: How long did you wait before an operator came on the line and spoke with you?

   [Record in Seconds] _____ 31 __ __ __

2. Was the police operator you spoke with male or female?

   1-Male 2-Female 9-DK/NR 34 1 2 9 +

3. When you started talking with the police operator about this incident were you:

   READ: 1 - calm, 9 - DK/NR
   2 - excited,
   3 - frightened,
   4 - upset,
   5 - angry, or
   6 - confused?

   35 1 2 3 4 5 6 9 +

4. Could you briefly describe exactly what you told the police operator?

   INTERVIEWER SHOULD PROBE FOR DETAILS OF THE INCIDENT AND FOR THE RESPONDENT'S RELATIONSHIP TO THE INCIDENT. RECORD DETAILS BELOW AND CODE RESPONDENT'S RELATIONSHIP.

   36 __ __ __

   _____

   _____

   _____

   _____

   _____

   39 __ __ __

   4A. Respondent's relationship to the incident:

   1 - crime victim
   2 - person needing assistance/info
   3 - third party/witness
   4 - representative of victimized business/agency
   5 - representative of business/agency needing assistance/info
   7 - refused
   9 - DK/NR

   42 1 2 3 4 5 7 9

5. Where did this incident happen?

INTERVIEWER SHOULD PROBE TO DETERMINE APPROPRIATE CODE BELOW

1 - inside residence
2 - inside nearby residence or apartment
3 - outside location near residence (hallway, yard, parking lot)
4 - at place of work (inside or outside)
5 - commercial location, respondent conducting business (not place of work)
6 - public place or facility (not place of work)
7 - other location
8 - refused
9 - DK/NR

1 2 3 4 5 6 7 8 9 + (43)

6. As you were calling the police, did you expect that they would send a police car in response to your call?

1-YES 2-NO 9-DK/NR

1 2 9 + (44)

7. Did the police operator specifically TELL YOU that a police unit would be sent in response to your call?

1-YES 2-NO 9-DK/NR → GO TO Q. 8

1 2 9 + (45)

7A. IF YES: Did the police operator give you any indication of how long it would take police to respond?

1-YES 2-NO 9-DK/NR → GO TO Q. 8

1 2 9 + (46)

7B. IF YES: How long did the operator say it would take the police to arrive?

_____ (Circle code below)

1 - number of minutes specified _____
2 - general indication of fast response
3 - general indication of slow response
4 - other indication of response time
9 - DK/NR

1 2 3 4 9 + (47)

8. Did the police operator transfer you to someone who took a report from you over the phone?

1-YES 2-NO 9-DK/NR → GO TO Q. 9

1 2 9 + (48)

IF YES: Ask Questions 8A-8C

8A. Was the police report writer courteous?

1-YES 2-NO 9-DK/NR

1 2 9 + (49)

8B. Did the police report writer tell you what the police would do about the matter you reported?

1-YES | 2-NO | 9-DK/NR → GO TO Q. 8C

50 1 2 9 +

8B1. IF YES: What did he or she tell you the police would do?

_____

_____

_____

_____

_____

CIRCLE ONE OR TWO CODES THAT DESCRIBE THE RESPONSE GIVEN TO THE CALLER.

01 - forward report/matter to detectives
02 - forward report/matter to supervisors
03 - general response that matter will be taken care of
04 - told someone will call them about matter
05 - told police can do little or nothing about the matter
07 - caller refused to tell debriefer
09 - other response

51 — —

53 — —

8C. Were you satisfied to give a report over the phone or would you have preferred that a police officer be sent to take the report in person?

1 - satisfied to give report over phone
2 - prefer officer sent to take report
9 - no opinion -- DK/NR

55 1 2 9 +

NOTE TO INTERVIEWER: If the respondent did give a report over the phone, at this point indicate that the following questions will refer to the original police operator and NOT to the report writer.

9. Did the police operator provide you with any other information relevant to your call?

1-YES → GO TO Q. 9A

2-NO | 9-DK/NR → GO TO Q. 10

56 1 2 9 +

9A. IF YES: What kind(s) of information did the police operator give you?

CIRCLE UP TO FIVE OF THE CODES BELOW WHICH DESCRIBE INFORMATION GIVEN BY THE OPERATOR.

01 - name and number of internal police unit or person
02 - more detailed information on internal police unit
03 - name and phone number of external agency or person
04 - more detailed information on external agency
05 - nonpolice related information
06 - information on particular case
07 - crime prevention information
08 - general information on police response or policies
09 - explanation of why police cannot respond
10 - other information
11 - general information about operator response
12 - info on what caller should do (no police response)
13 - info on what caller should do (police response)

57 — —
59 — —
61 — —
63 — —
65 — —

10. Overall, how satisfied were you with the response given by the police telephone operator? Were you:

READ: 1 - very satisfied, 2 - satisfied, 3 - neutral, → GO TO Q. 11
4 - dissatisfied, or 5 - very dissatisfied
9 - DK/NR

67 1 2 3 4 5 9 +

10A. IF DISSATISFIED: Why were you dissatisfied with this response by the police operator?

CIRCLE UP TO FIVE CODES ON THE NEXT PAGE WHICH DESCRIBE WHY CALLER WAS DISSATISFIED.

01 - operator was rude, abrupt, discourteous
02 - operator seemed unconcerned
03 - police unit was not promised
04 - police would not/could not provide requested service
05 - police unit not sent quickly enough
06 - insufficient info given on police response
07 - insufficient info given on response time
08 - insufficient info given on what caller should do
09 - insufficient info on police practices & policies
10 - insufficient info on why police cannot handle the matter
11 - insufficient info passed on to responding officers
14 - operator did not ask for enough information
15 - operator could not provide requested information
16 - operator did not understand caller/situation
17 - operator did not take caller/situation seriously enough
20 - operator hung up on or cut off caller
30 - caller put on hold or had long interruption
35 - no appreciation expressed for call
40 - operator asked too many questions before forwarding to dispatcher
44 - lack of response from operator/police
55 - other reason given

68 — —
70 — —
72 — —
74 — —
76 — —

NEXT CARD 7 2

11. Was the police operator you spoke with courteous?

1-YES 2-NO 9-DK/NR

8 1 2 9 +

12. Did the police operator give you the opportunity to describe the incident as fully as you wanted?

1-YES 2-NO 9-DK/NR

9 1 2 9 +

IF YES: GO TO Q. 13

12A. IF NO OR DON'T KNOW: What information were you not able to give to the police operator?

_____ 10 + +

_____ 12 + +

_____ 14 + +

CIRCLE UP TO THREE CODES WHICH DESCRIBE THE INFORMATION NOT GIVEN TO THE POLICE OPERATOR

Additional Information About:

01 - caller involvement in the incident
02 - suspects
03 - victim(s) (Other than caller)
04 - incident in general
05 - expectations about what expected police to do
06 - other information _____
09 - DK/NR

16 — —
18 — —
20 — —

13. When you finished talking with the police operator did you feel:

READ: 1 - calm, 9 - DK/NR
2 - excited,
3 - frightened,
4 - upset,
5 - angry, or
6 - confused?

22 1 2 3 4 5 6 9 +

14. Did a police officer arrive in response to your call?

1-YES 2-NO 9-DK/NR → GO TO Q. 16

23 1 2 9 +

14A. IF YES: How long did it take for the police to arrive? (Code in minutes)_____

24 — — —

14B. Was police response time faster, slower, or about the same as you expected?

1 - faster 9 - DK/NR
2 - slower
3 - about the same

27 1 2 3 9 +

14C. How satisfied were you with police response time? Were you:

READ: 1 - very satisfied, 9 - DK/NR
2 - satisfied,
3 - neutral,
4 - dissatisfied, or
5 - very dissatisfied

28 1 2 3 4 5 9 +

15. Please consider now the actions taken by the police officer or officers who responded to your call. Overall, how satisfied were you with the actions taken by the police. Were you:

READ: 1 - very satisfied, 9 - DK/NR
2 - satisfied,
3 - neutral,
4 - dissatisfied, or
5 - very dissatisfied

29 1 2 3 4 5 9 +

16. Based upon this experience with the police, would you say that you now feel more favorable, less favorable, or about the same toward the Fort Worth police?

1 - more favorable 9 - DK/NR
2 - less favorable
3 - about the same

30 1 2 3 9 +

READ: Now I would like to ask you a few general questions that we ask of all interviewed persons. As with all parts of this interview, all of your answers will remain totally confidential.

NOTE TO INTERVIEWER: If the respondent is a BUSINESS REPRESENTATIVE, then skip on to QUESTION #26. IF the respondent is NOT a business representative, then continue on with QUESTION #17.

17. What kind of housing unit do you live in?

1 - single family residence
2 - a duplex
3 - an apartment
4 - a mobile home, or an
5 - other type of residence _____
7 - refused
9 - DK/NR

31 1 2 3 4 5 7 9 +

18. How long have you lived at this residence?

1 - less than 6 months
2 - 6 months to a year
3 - more than a year to 5 years
4 - more than 5 years
7 - refused
9 - DK/NR

32 1 2 3 4 7 9 +

19. Do you own, are you buying, or do you rent your home?

1 - own
2 - buying
3 - renting
7 - refused
9 - DK/NR

33 1 2 3 7 9 +

20. Do you think that crime in your neighborhood in the past year has increased, decreased, or stayed the same?

1 - increased
2 - decreased
3 - stayed the same
8 - no crime here
7 - refused
9 - DK/NR

34 1 2 3 7 8 9 +

21. Overall, would you rate the police services delivered to your neighborhood as outstanding, good, adequate, inadequate, or very poor?

1 - outstanding
2 - good
3 - adequate
4 - inadequate
5 - very poor
7 - refused
9 - DK/NR

35 1 2 3 4 5 7 9 +

22. How many years of education have you had?

00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
	Elementary School						Junior High			High School			College or Technical School				Graduate School			

36 ___

23. How many persons live in your residence? _____

38 ___

24. How many children (under 18), adults, and senior adults (over 65) live in your residence?

Number of Children _____ 40 ___

Number of Adults _____ 42 ___

Number of Senior Adults _____ 44 ___

NOTE TO INTERVIEWER: Be certain total from Question 24 equals total in Question 23.

25. Is your total family income for a year:

READ:
1 - below $5,000
2 - between $5,000 and $10,000
3 - between $10,000 and $15,000
4 - between $15,000 and $20,000
5 - between $20,000 and $25,000
6 - between $25,000 and $30,000
7 - more than $30,000
8 - refused
9 - DK/NR

46 1 2 3 4 5 6 7 8 9 +

26. What is your race or ethnic background?

1 - White
2 - Black
3 - Mexican American
4 - American Indian
5 - Other _____
7 - refused
9 - DK/NR

47 1 2 3 4 5 7 9 +

27. In what year were you born? 18__ 19__ Refused____

48 ___

DON'T ASK:

28. Respondent's Sex 1-Male 2-Female 9-DK/NR

50 1 2 9 +

READ: Thank you very much for your help. Your answers will be of great assistance to our study of police services. My supervisor on this project may call you to verify that this interview was conducted. Thank you again.

TIME INTERVIEW ENDS __ __:__ __

ITEM 7B, code 1, number of minutes

51 ___

APPENDIX 3

Police Officer Questionnaire

OFFICE USE ONLY

Field Check _____
Coding Check _____
First Punch _____
Second Punch _____

POLICE COMMUNICATIONS STUDY

Police Officer Questionnaire
Form 06

Computer Coding Only: Please Do Not Write in This Column

1 0 6

3 — — —

6 1

7 — — — —

11 —

12 — —

14 — —

16 1 2 +

17 1 2 3 4 +

18 1 2 3 +

19 1 2 3 9 +

20 1 2 3 9 +

21 1 2 9 +

22 1 2 3 9 +

23 1 2 3 9 +

Please answer each question by placing a check (✓) or writing numbers in the appropriate spaces. All responses will be kept strictly confidential.

1. Date you are completing this form: _____

2. What is your current rank? _____

3. How many years have you worked for the Fort Worth P.D.? _____

4. In which sergeant's district do you currently patrol? _____

5. Have you ever worked in the Fort Worth P.D.'s communications center?

   1___Yes 2___No

6. IF YES TO QUESTION 5: What was your job there?

   1___Dispatcher 2___Call Taker 3___Both 4___Other

7. How well informed do you feel about the operations of the department's communications center?

   1___Very well informed 2___Fairly well informed

   3___Not well informed

8. What effect do you think the Fort Worth P.D.'s computer-aided dispatch system has had on the following? (Please check one answer for each item a through e).

	Improved	No Effect	Worsened	Don't Know
a. Police response time	_____	_____	_____	_____
b. Officer safety	_____	_____	_____	_____
c. Dispatch operations	_____	_____	_____	_____
d. Officer effectiveness in responding to calls for service	_____	_____	_____	_____
e. Radio congestion	_____	_____	_____	_____

Computer Coding Only: Please Do Not Write in This Column

9. In general, do you think the information you now receive when dispatched provides enough details about an incident to enable you to respond effectively?

1___Yes (GO TO QUESTION 13) 2___No (ANSWER QUESTIONS 10-12) 24 1 2 +

10. What additional information that you currently do not receive would you like to have before arriving at the scene?

(CHECK EACH ITEM THAT APPLIES)

1___More details about the nature of the problem 25 1 2 +
2___More details about the participants 26 1 2 +
3___More details about how to locate the address 27 1 2 +
4___Other information (Please specify)_____ 28 1 2 +

_____

11. Do you think that in most cases the information you checked in Question 10 is currently available to the dispatcher?

1___Yes (GO TO QUESTION 13) 2___No 29 1 2 +

12. Do you think that complaint takers should be instructed to obtain the information you checked in Question 10?

1___Yes 2___No 30 1 2 +

13. In your opinion, does the signal you now receive adequately describe the nature of most incidents to which you are dispatched?

1___Yes 2___No 31 1 2 +

14. Are there any particular incident categories that you would like to see added to the department's current list of signals? 32 1 2 +

1___Yes (PLEASE INDICATE CATEGORIES BELOW) 2___No 33 — — 35 — —

_____ 37 — —

_____ 39 — —

_____ 41 — —

15. In general, do you receive enough information about the location to enable you to rapidly find the address to which you are dispatched?

1___Yes 2___No 43 1 2 +

Computer Coding Only: Please Do Not Write in This Column

5. Besides the address, what other information would you find useful in locating the problem or crime scene? (PLEASE LIST BELOW)

_____ 44 — —

_____ 46 — —

_____ 48 — —

_____ 50 — —

52 — —

17. How often is the nature of the problem as dispatched different from that which you discover at the scene?

1 ___ Most of the time
2 ___ Some of the time
3 ___ Very infrequently

54 1 2 3 +

18. When there is a difference between the problem as dispatched and the problem you discover upon arrival, do you think it is because: (CHECK EACH ITEM THAT APPLIES)

1 ___ The caller reported the problem incorrectly or incompletely — 55 1 2 +
2 ___ The complaint taker used an incorrect signal — 56 1 2 +
3 ___ The complaint taker did not obtain enough information — 57 1 2 +
4 ___ The nature of the problem changed between time of call and officer arrival time — 58 1 2 +
5 ___ Other (Please specify)_____ — 59 1 2 +

_____

19. How often do you have difficulty in contacting the dispatcher because of radio congestion?

1 ___ Most of the time
2 ___ Some of the time
3 ___ Very infrequently

60 1 2 3 +

20. Do you think the radio congestion problem would be relieved by greater radio discipline?

1 ___ Yes 2 ___ No

61 1 2 +

21. Do you think that police response to priority 1 calls is generally more effective when officers:

1 ___ Receive only location and signal so that they can respond rapidly
OR
2 ___ Receive location, signal, and other information about the problem that may delay their response somewhat
OR
3 ___ Other (Please specify)_____

62 1 2 3 +

_____

Computer Coding Only: Please Do Not Write in This Column

NEXT CARD DUPLICATE 1-5

6 2

22. Assume that the information items listed below are known to the dispatcher. For which of the three types of dispatched calls (Priority 1, 2 and 3) listed below would you like to know the following items before arriving at the scene? (PLEASE CHECK (✓) THE APPROPRIATE SPACE UNDER EACH TYPE OF CALL WHENEVER YOU WOULD LIKE TO KNOW A PARTICULAR INFORMATION ITEM)

	Priority 1	Priority 2	Priority 3	
a. Complainant name	____	____	____	7 ___ ___ ___
b. Number of persons involved	____	____	____	10 ___ ___ ___
c. Business name	____	____	____	13 ___ ___ ___
d. When incident occurred	____	____	____	16 ___ ___ ___
e. Weapons involved	____	____	____	19 ___ ___ ___
f. Previous incidents at location	____	____	____	22 ___ ___ ___
g. Physical violence present	____	____	____	25 ___ ___ ___
h. Personal injuries involved	____	____	____	28 ___ ___ ___
i. Description of vehicles involved	____	____	____	31 ___ ___ ___
j. Information about Suspects	____	____	____	34 ___ ___ ___
k. Back-up units dispatched	____	____	____	37 ___ ___ ___
l. Role of complainant (victim, witness, etc.)	____	____	____	40 ___ ___ ___
m. Type of location (house, apt., business, parking lot)	____	____	____	43 ___ ___ ___
n. Emotional state of participants	____	____	____	46 ___ ___ ___

23. Your age? _____ 49 ___ ___

24. Your sex? 1___Male 2___Female 51 1 2 +

25. Your race? 1___White 3___Hispanic
2___Black 4___Other_____ 52 1 2 3 4 +

26. What level of education have you completed?

1___High school or equivalent
2___Some college, no degree
3___Associate degree
4___B.A. or B.S.
5___Some graduate work or graduate degree

53 1 2 3 4 5 +

THANK YOU VERY MUCH FOR COMPLETING THIS FORM.
PLEASE RETURN IT TO US IN THE ENVELOPE PROVIDED.
FEEL FREE TO ADD ANY COMMENTS ON THE BACK OF THIS PAGE.