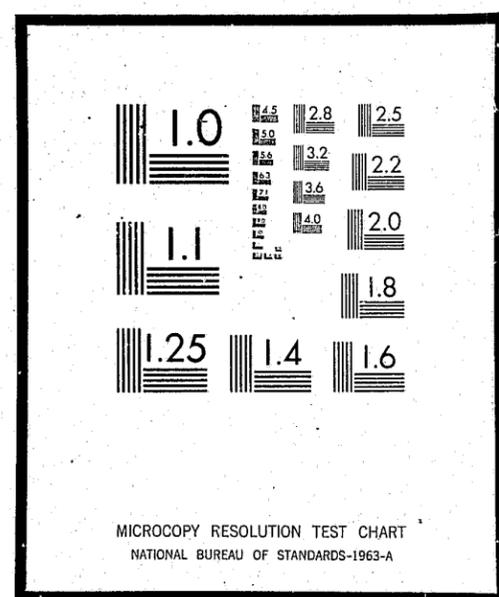


# NCJRS

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



Microfilming-procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U.S. Department of Justice.

**U.S. DEPARTMENT OF JUSTICE  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE  
WASHINGTON, D.C. 20531**

Date filmed

4/13/76

October 15, 1973

## THE RELATIONSHIP OF SELECTED PSYCHOLOGICAL TESTS TO MEASURES OF POLICE OFFICER JOB PERFORMANCE IN THE STATE OF ILLINOIS

Results of the  
Illinois Local Community  
Police Officer Selection Project

a joint project of the  
Industrial Relations Center, The University of Chicago  
Illinois Association of Chiefs of Police  
Illinois Association of Boards of Fire and Police Commissioners

supported by Grant A 70-90  
awarded by the  
Illinois Law Enforcement Commission

report prepared by  
John Furcon and Ernest C. Froemel  
Industrial Relations Center  
The University of Chicago

## ACKNOWLEDGMENTS

This project would not have been possible without the commitment and dedication of a group of key Chiefs of Police and Police and Fire Commissioners in the State of Illinois. Their desire to establish improved selection procedures in the state, coupled with their capacity to work together and marshal resources led directly to the initiation and successful completion of the project.

Special thanks are expressed to two individuals whose vision and leadership made this project possible--Henry Ediger, Chief of Police, Park Ridge, Illinois, and Vincent Boland, Past-President, Illinois Association of Boards of Fire and Police Commissioners.

As Administrative Assistant in the project, the support provided by Donna Tanzer was invaluable in the successful completion of project objectives.

We express our appreciation to staff members of the Industrial Relations Center who actively participated in the planning, conduct, and completion of the project: Joseph Ronne, Arnold Oppenheim, Ronald Franczak, Melany Baehr, Frances Burns, Gene Fox, Bernadette Vaisvila, and Michelle Zubko.

Special assistance was provided by Dennis Groner and Marvin Dunnette of Personnel Decisions, Inc., Minneapolis, in making available and in personally supporting the use of the Patrolman Job Behavior Description Scales in the project.

Messrs. Kerry Weger, Frank Koller, and Ronald Jones of the Illinois Law Enforcement Commission were extremely helpful in facilitating the conduct and successful completion of the project.

In conclusion, we express our sincere thanks to the Chiefs of Police and project coordinators in communities participating in the occupational analysis and test validation phases of the project. Without their support and assistance in the completion of these critical activities, achievement of project objectives would not have been possible.

## TABLE OF CONTENTS

	Page
CHAPTER I. INTRODUCTION	1
Purpose of This Report	
Need for the Project	
Project Objectives	
Basic Plan for Conduct of the Project	
Overview of This Report	
CHAPTER II. RESULTS OF OCCUPATIONAL ANALYSIS AND SELECTION OF TESTS	7
Focus and Methods of the Occupational Analysis	
Results of the Occupational Analysis	
Selection of Tests for Use in the Project	
Summary Description of Tests Used in the Project	
Detailed Description of Tests Used in the Project	
Tests of Motivation	
Tests of Intellectual Skill	
Tests of Aptitude	
Tests of Behavior	
CHAPTER III. RESULTS OF PATROLMAN JOB PERFORMANCE APPRAISAL	41
The Paired-Comparisons Rating Technique	
Patrolman Job Performance Description Scales	
Statistical or Objective Measures of Police Officer Job Performance	
Results of the Paired-Comparisons Performance Rating	
Results of the Patrolman Job Behavior Description Scales	
Results of the Objective or Statistical Measurement of Police Officer Job Behavior	
Conclusion	
Appendix to Chapter III.	
CHAPTER IV. RESULTS OF THE TEST VALIDATION ANALYSIS	95
Conduct and Results of the Statewide Test Administration to Police Officers	
Description of Statistical Procedures Used to Analyze Project Data	
Results of the Analysis of the Relationship between Test Scores and Patrolman Job Performance	

TABLE OF CONTENTS, cont.

	Page
CHAPTER IV. RESULTS OF THE TEST VALIDATION ANALYSIS, cont.	
Final Recommended Test Batteries	
Note on the Inclusion of Racial Minority-Origin Police Officers in the Project	
Development of Standards in the Application of the Validated Test Batteries	
General Description of Test Factors Associated with Police Officer Success in Local Communities in the State of Illinois	
CHAPTER V. RECOMMENDATIONS FOR IMPLEMENTATION OF PROJECT RESULTS AND FOR CONTINUED PERSONNEL RESEARCH AND DEVELOPMENT WORK	112
Recommendations to the Chiefs of Police in the State of Illinois	
Recommendations to the Police and Fire Commissioners in the State of Illinois	
Recommendations to the Illinois Law Enforcement Commission	
REFERENCES	118

## CHAPTER I--INTRODUCTION

### PURPOSE OF THIS REPORT

This report presents the findings of a cooperative police selection test validation project undertaken by the Illinois Association of Chiefs of Police, the Illinois Association of Boards of Fire and Police Commissioners, and the Industrial Relations Center of The University of Chicago. The project was supported by a grant from the Illinois Law Enforcement Commission.

The aim of the report is to explain clearly to the cosponsoring agencies both the procedures and the results which contributed to the final recommendations of the project. The report is not intended to be an exhaustive research report; rather, it attempts to relate the steps which were followed and the results obtained with a minimum of technical jargon. At the same time, statistical information necessary to evaluate project results has been included for the benefit of the technically qualified reader.

Dissemination of this report will probably extend beyond the boundaries of the State of Illinois. It is particularly important to stress at the outset that while the steps and procedures followed in validating the recommended test batteries are generally applicable, the specific technical results are by no means universally valid. Agencies outside the State of Illinois interested in applying these selection testing procedures must undertake their own local validation to insure the appropriateness of test procedures and standards for their own situation.

### NEED FOR THE PROJECT

This project is concerned with the staffing and strengthening of local police departments in the State of Illinois. Even in this age of unprecedented scientific and engineering advances, the human resources of an organization

remain the most crucial input in the attainment of organizational goals. This is particularly true of the law-enforcement organization, in which the individual police officer serves as a direct representative in providing service to the public. In the long run, better qualified law-enforcement personnel, rather than improved technology, will most greatly facilitate the accomplishment of the objectives of our country's system for administering justice.

The majority of the tests used at present to screen applicants for police service deal with an applicant's ability to understand language and apply reason in the solution of verbal problems. While these skills are undeniably related to success in police training, scores on this type of test have not been shown to be related to the on-the-job performance of police officers. Since officers with high general reasoning ability, or "I.Q.," do not necessarily perform duties better than officers with less of this ability, the general "I.Q." type of test has not been proven valid for the selection of police officers.

Psychologists working in the development and application of tests for use in selection have long been aware of the need to validate tests prior to using them in making decisions involving people. By test validation, we simply mean the establishment of a meaningful relationship (via statistical analysis) between the performance of a group of individuals on a given test or series of tests and the job performance of the same individuals in the work setting. To the extent that it is possible to demonstrate such a statistical relationship between performance on the test and performance on the job, we can say that the test has evidence of "validity" for selection or placement in the occupation in question. The fact that a test has been printed or published is no guarantee that the test has any validity for use in personnel decision-making.

Whereas testing experts have long insisted that employee selection tests should not be used until they are validated, it is only recently that public policy has supported this insistence. Legislative, executive, and judicial

actions concerning personnel practice, including:

1. the 1964 Civil Rights Act;
2. the 1966 and 1970 Equal Employment Opportunity Commission (EEOC) Guidelines on Employment Testing Procedures;
3. the March 8, 1971 U. S. Supreme Court decision in the case of Griggs vs. Duke Power Co.;
4. the 1972 Equal Employment Opportunities Act (which for the first time brought state and municipal government under the authority of Title VII of the Civil Rights Act of 1964); and
5. the March 9, 1973 Guidelines of the Law Enforcement Assistance Administration (LEAA) on Nondiscrimination: Equal Opportunity: Policies and Procedures,

make it clear that test validation is now a necessity if tests are to be used at all in making hiring decisions.

In the Griggs case, for example, the Supreme Court, in interpreting Title VII of the 1964 Civil Rights Act, held that "what Congress has commanded is that any tests used must measure the person for the job and not the person in the abstract."

The LEAA Guidelines on Nondiscrimination clearly outline the need for validation of selection tests and procedures:

"[42.304(g)]. . . Thus, for example, where testing is used in the employment selection process, it is not sufficient for the recipient to simply note the fact. The recipient should identify the test, describe the procedures followed in administering and scoring the test, state what weight is given to test scores, how a cutoff score is established and whether the test has been validated to predict job performance and, if so, a detailed description of the validation study. Similarly detailed responses are required with respect to other employment practices, procedures and practices used by the applicant."

If the need for the project has not already been made clear, there remains one last area to be considered--the specific need for highly qualified personnel to serve in municipal police agencies in the State of Illinois.

Most police administrators in the state recognize that traditional testing procedures have not been notably successful in assuring the hiring of superior police officers. It would seem that much of the attention focused on "maintaining standards" in selection has been misdirected by attempting to maintain standards on written tests which have not been proven valid or, worse, which have been shown to be invalid or unrelated to job performance.

In recognition of this need, one of the major recommendations in the area of recruitment and selection in the 1973 Report on Police of the National Advisory Commission on Criminal Justice Standards and Goals is the development of job-related applicant tests:

"[13.1] It is recommended that a competent body of police practitioners and behavioral scientists conduct research to develop job-related mental ability and aptitude tests, and personality profile inventories for the identification of qualified police applicants.

1. The research should identify the personality profile, mental skills, aptitude and knowledge necessary for successful performance of various police tasks.
  - A. The functional complexity of the police mission in urban and non-urban law enforcement should be defined specifically, following a comprehensive analysis of the police tasks involved in each environment.
  - B. Various mental skills, knowledge levels, and personality profiles should be defined and matched to the urban and non-urban police function.
2. Based on results of this research, tests, or test models and personality profile norms, should be developed and validated to determine reliably whether an applicant is qualified to perform the tasks of the position for which he applies."

In summary, it was the consensus of the cosponsoring agencies that professional law-enforcement personnel needs in the State of Illinois would be well served by the conduct of this project. It is noteworthy that this project, initiated in 1971, was the first statewide effort in the nation to develop job-related and valid procedures for selection of police officers.

## PROJECT OBJECTIVES

The goal of the Illinois Local Community Police Officer Selection Project was the validation of specific psychological tests for use in selecting police officers in local communities throughout the state and the establishment of general standards for use in the police selection process. The basic aim of the project was to develop a low-cost, systematic, and effective procedure for selecting police officers and placing them in assignments best utilizing their mental abilities, skills, and behavioral attributes. In addition, it was the aim of the project to provide accurate and equitable selection procedures for applicants, regardless of race or cultural background.

## BASIC PLAN FOR CONDUCT OF THE PROJECT

Nine major steps were planned in the execution of the project:

1. Analysis of Basic Job Requirements--to determine personal qualifications of the local community police officer necessary for occupational success
2. Selection of Psychological Tests--to identify tests thought to measure the key qualifications necessary for success as a police officer
3. Establishment of Job Performance Criteria--to develop supervisory evaluations and identify objective performance data available in municipal departments to serve as the standard against which to gauge the effectiveness of the tests
4. Selection of Patrolman Sample--representative of police manpower in local municipalities throughout the state
5. Test Administration--to currently employed police officers to provide the basis for test validation

6. Statistical Analysis and Validation--to identify psychological tests which show a statistical relationship with on-the-job performance of police officers
7. Development of Occupational Standards--based upon the test performance of successful patrolmen representing different regions and different-size departments in the state
8. Final Report--to communicate findings of the project to the funding agency, members of the cosponsoring organization, and representatives of other jurisdictions
9. Implementation--to provide general orientation and assistance to Police and Fire Commissions in the state interested in utilizing the results of the project.

#### OVERVIEW OF THIS REPORT

Chapter One has reviewed the need, basic objectives, and basic plan for the conduct of the project. Chapter Two describes the procedures and results of the patrolman job requirements analysis, outlines the criteria used for selecting tests, and describes the psychological tests used in the project. Chapter Three provides a description of the supervisory and objective patrolman job performance measures and reviews the results of their application. Chapter Four describes the results of the test administration to police officers in participating agencies and the results of test validation analysis. Chapter Five provides recommendations for implementation of project results in the screening of police applicants in the State of Illinois.

## CHAPTER II--RESULTS OF OCCUPATIONAL ANALYSIS AND SELECTION OF TESTS

### FOCUS AND METHODS OF THE OCCUPATIONAL ANALYSIS

#### Focus

This step of the project was aimed at identifying specific behavioral requirements necessary for successful performance of the police officer's job in local communities in the State of Illinois. In 1972, outside of the City of Chicago, the 618 municipal police departments in the state were manned by approximately 7,800 full-time officers.

Our initial exposure to departments in the state indicated that these 7,800 officers were engaged in many different assignments in a wide variety of situations. Given the large number of departments, there was no practical way for project staff to visit each department in the state within the time and budget limits of the project. For these reasons, it was necessary to narrow the focus of our occupational analysis in the following manner:

1. To place primary emphasis on identifying the requirements for success of the patrolman on the street, rather than attempting to delimit additional requirements for the many technical, administrative, and specialist functions provided by other uniformed officers in these departments.
2. To analyze these requirements in a sample of departments representing the wide range of situations existing in the state, rather than setting out to examine the patrolman's job in all departments.
3. To emphasize the identification of behavioral requirements, rather than undertaking to provide formal job descriptions or comparative job analysis between regions of the state or departments of various sizes.

### Methods

The job analysis was based primarily upon interviews with Chiefs of Police and command officers and upon field observation and informal interviews with police officers and field supervisors. In addition, a standardized job description questionnaire, the Skills and Attributes Inventory\*, was used with Chiefs and patrolmen to provide additional insight into the requirements of the job. This combination of approaches was used to achieve as broad and complete an exposure to the requirements of the police officer's job as time permitted.

The interviews with Chiefs were critical in establishing the credibility of the project itself and in achieving an understanding of: (1) the nature of the patrolman's working environment (i. e., the nature of the community served), (2) the structure and organization of the police department, (3) the range of activities and the activities most frequently engaged in by the police department, (4) the personal attributes thought to be related to success in the department, and (5) suggested methods for measuring police officer success.

The job description questionnaire was filled out privately by each participating Chief and by two police officers in his department. The Chief was requested to select the two officers, one of whom was to be clearly above-average in job performance and the other clearly below-average in job performance.

The field observations and informal interviews were perhaps the richest source of insight into the behavioral requirements of the patrolman's job, since they were based on direct contact and exposure to actual situations confronting the officer. In general, project staff members attended roll call with officers as a shift began and then spent an entire shift as an observer with an individual police officer or with a two-man patrol team.

In addition to conducting these observations in departments across the

\* Developed by Melany E. Baehr, Ph. D., Industrial Relations Center, The University of Chicago.

state, an effort was made to make observations during all three watches on various days of the week to gain as complete an exposure as possible to the day-to-day work activities of police officers in the state.

### RESULTS OF THE OCCUPATIONAL ANALYSIS

For purposes of the occupational analysis and subsequent collection of data in police departments, the decision was made to classify participating departments in terms of their geographical location and size. The decision to classify according to location was made in order to take into account possible differences in environmental factors across the state such as economic conditions, status of labor market, educational quality, etc. which might in turn influence departmental activities or requirements. The decision to classify according to size was made with the belief that certain differences in requirements might exist in departments of varying size and departments of different size might differ in nature or character of activities.

Using information included in a 1968 report entitled Police Training and Education in Illinois, which was prepared by the Public Administration Service, the State of Illinois was divided into three regions: (1) Chicago Metropolitan, (2) Northern, and (3) Southern. Chart One presents a state-wide map defining the three geographical areas.

Based upon informal discussions with several Chiefs of Police, it was decided to classify departments with 90 or more men as "Large," with between 20 and 89 as "Medium," and with less than 20 men as "Small."

#### Results of Interviews with Chiefs of Police

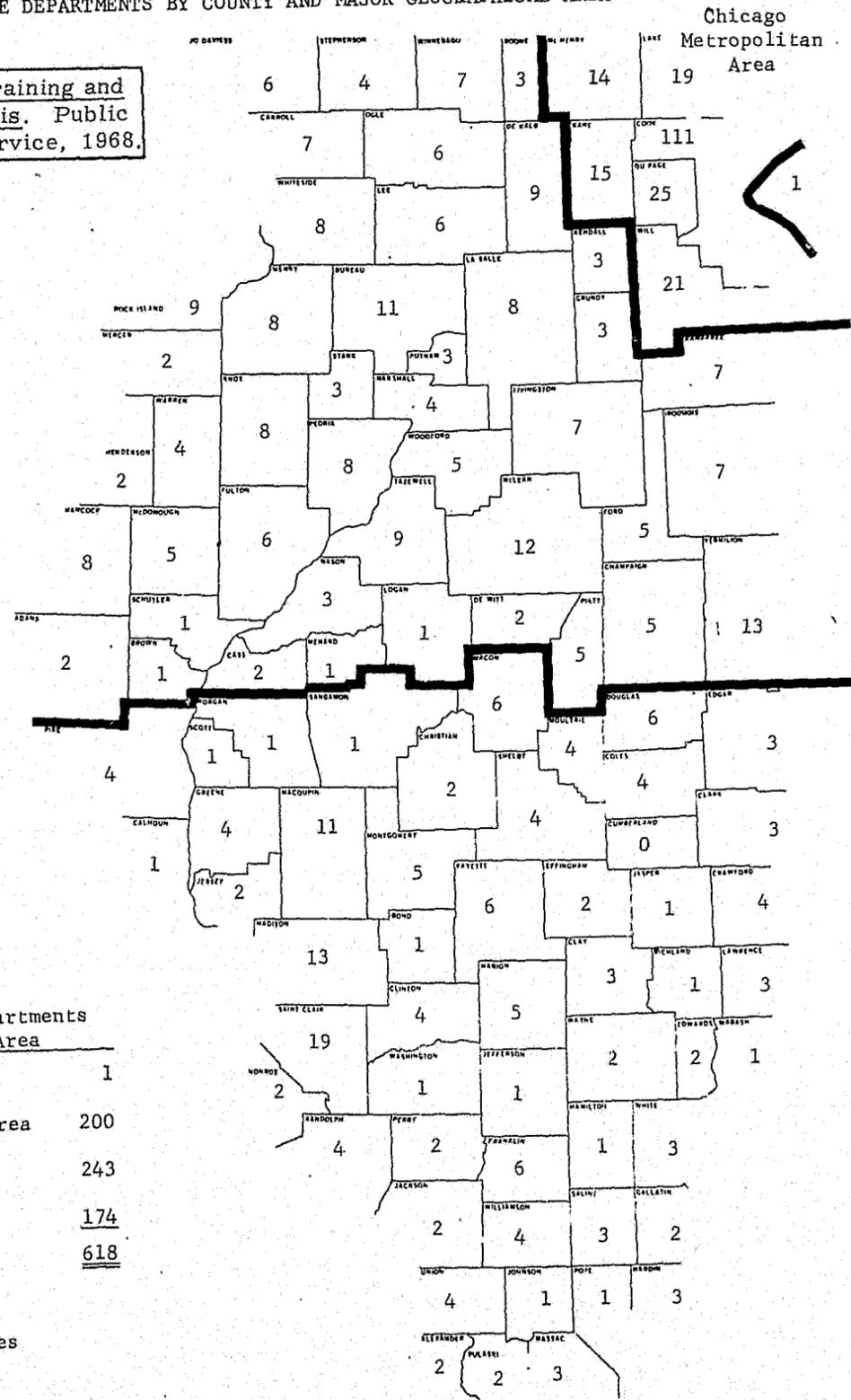
##### 1. Types of Communities Represented

The wide spectrum of Illinois communities was represented in the occupational analysis, as is indicated in Table One. Types of communities included rural farm centers and county seats with

MUNICIPAL POLICE DEPARTMENTS BY COUNTY AND MAJOR GEOGRAPHICAL AREA<sup>a/</sup>

Source: Police Training and Education in Illinois. Public Administration Service, 1968.

Northern Area



Municipal Police Departments By Geographical Area	
Chicago	1
Chicago Metropolitan Area	200
Northern Area	243
Southern Area	174
Total (State)	618

Survey Boundaries

<sup>a/</sup> Departments with at least one full-time officer, 102 county departments not included (one in each county).

TABLE ONE

Illinois Police Departments Participating in Patrolman Occupational Analysis Categorized by Region in State and Size of Department

Size	Chicago Metropolitan Area	Northern Area	Southern Area
L	(1) Aurora	(11) Peoria	(20) Decatur
A			
R	(2) Evanston	(12) Rockford	(21) E. St. Louis
G			
E	(3) Oak Lawn	(13) Rock Island	(22) Springfield
M	(4) La Grange	(14) Champaign	(23) Centralia
E			
D	(5) Markham	(15) Galesburg	(24) Granite City
I			
U	(6) Park Ridge	(16) Moline	(25) Mattoon
M			
S	(7) Countryside	(17) Belvidere	(26) Charleston
M			
A	(8) Flossmoor	(18) Loves Park	(27) Mt. Vernon
L			
L	(9) Western Springs	(19) Rantoul	
	(10) Winnetka		

(Departments with 90 or more men were classified as "Large," with between 20 and 89 as "Medium," and with less than 20 men as "Small.")

only light industry, heavily industrialized components of metropolitan areas with transient day work forces, river towns with heavy manufacturing concentrations, suburban "bedroom communities," where most residents were employed outside of town, cities which are regional centers in the state, and university towns, where a college or university is the major institution of employment. The communities visited ranged from economically depressed and low income through middle income to high income. Many of the communities had no minority population, while others were quite diverse in ethnic and racial composition. The population of these communities ranged from 10,000 to well over 100,000. Both mayor-council and mayor-city manager-council forms of local government were represented in these communities.

2. Departmental Structure and Staffing

All departments were organized along similar lines, with a chain of command starting with the Chief, continuing with captains or shift commanders, lieutenants, sergeants or street supervisors, and police officers. Within the chain of command, there were generally three functional areas--patrol, investigation, and administration and communication. Smaller departments had less complex structures, i. e., fewer levels of supervision and less functional division. Larger departments exhibited more complex structures, with more levels of supervision and more functional specialization, e. g., traffic division, narcotics bureau, task force, youth bureau. In the smaller departments, officers played more of a generalist role, including specialized skills such as evidence technician or youth officer. Practically all departments were experiencing the "younger man" phenomenon, in which the majority of personnel in the department had less than ten years of police service.

3. Services of Departments

All departments were twenty-four hour full-service police agencies. Their activities covered the entire spectrum of possible services,

ranging from homicide investigation to stray animal control. The activities most frequently mentioned by Chiefs as major activity areas included:

- (1) preventive patrol
- (2) traffic law enforcement
- (3) accident investigation
- (4) family and neighborhood disturbances
- (5) burglary investigation
- (6) juvenile crime
- (7) theft investigation
- (8) school-related programs, e. g., crossing guards, drug education, etc.
- (9) escorts
- (10) community-relations programs, e. g., speakers bureau, special projects, etc.

Practically all Chiefs reported a trend of increase in crime in their community, and in some cases, an even more notable increase in violent crime. At the same time, a high proportion of the time of police personnel was spent in providing a variety of "services" to the community, as compared to being directly engaged in "crime-related" activities. The estimates of time spent by departments in providing services ranged from 65 per cent to more than 80 per cent of the time available.

4. Attributes of Successful Police Officers

Each Chief interviewed was asked to describe the attributes he felt were important in determining police officer success. A wide variety of attributes were mentioned, but a more limited number were mentioned frequently. These included:

- (1) communications abilities--written and oral, to be able to communicate with all types of people verbally and to write clear and meaningful reports

- (2) emotional control and personal stability--ability to withstand stress and pressure; the ability to maintain emotional balance under the most trying conditions
- (3) decisiveness--ability to make prompt and effective decisions
- (4) self-reliance--the ability to take charge of situations, to have confidence in one's own ability to get the job done
- (5) judgment and problem-solving--"common sense," the ability to understand and evaluate a situation, to come up with practical answers to problems
- (6) service orientation--a desire to help people and to feel accomplishment in providing service to others
- (7) flexibility--ability to adjust to and perform well in rapidly changing situations, to be able to move quickly from situation to situation
- (8) courage--the ability to understand and handle fear, to perform effectively in dangerous situations
- (9) open-mindedness--the ability to empathize with another's point of view
- (10) "teamsmanship"--the ability to function effectively as a member of a team in the accomplishment of work objectives, as well as having the capacity to operate independently
- (11) tolerance for monotony--to be able to withstand long periods of inaction or routine activity
- (12) honesty and integrity--to act in an ethical fashion, to maintain high standards of personal morality in the face of a multitude of opportunities to do otherwise

- (13) self-direction--the capacity to work without close supervision, to exhibit initiative in the performance of one's duties.

#### Results of Administration of the Skills and Attributes Inventory

The results of an exploratory application of the Skills and Attributes Inventory are presented in Table Two. As a part of the visit to each department in the occupational analysis, the Chief was asked to complete this form privately, and to request two patrolmen (one clearly outstanding in performance and one clearly poor in performance) to also complete the form privately and return it directly to the Industrial Relations Center. The number of usable questionnaires returned by personnel in each category from the twenty-seven departments involved in the occupational analysis is indicated at the bottom of Table Two. Given the limited number of individuals participating, this information can only be considered descriptive and possibly suggestive of areas of importance in the patrolman's job.

The asterisks (\*) indicate strong agreement on the importance of a specific skill or attribute on the part of those responding. This data is of interest in identifying areas of clear-cut agreement, such as the importance of tact, staying alert, and accepting responsibility for the lives of others, and in identifying areas of agreement and disagreement between the personnel in the three categories.

#### Results of Patrolman Job Observations

The results of these observations are summarized below in the form of behavioral attributes. The list is not thought to be all-inclusive. Rather it contains the attributes most frequently identified by observers as playing a critical role in the successful performance of the police officer's job in local communities in the State of Illinois.

TABLE TWO

Summary Results of Exploratory Application  
of Skills and Attributes Inventory for Chiefs of Police,  
Better Performing Officers, and Poorer Performing Officers

	Per Cent Indicating Skill or Attribute to Be of 'Much Importance' or 'Outstanding Importance'		
	Chiefs	Better Performing Officer	Poorer Performing Officer
(04) Understanding What People Say	90	100*	93*
(05) Being a Leader	65	86	93*
(08) Enforcing Rules and Procedures	65	86	93*
(27) Reasoning	100*	100*	87
(29) Remembering Instructions	90	100*	87
(36) Eye-Hand Skill	70	79	93*
(37) Knowing Where to Get Information	85	100*	87
(40) Solving Problems	80	100*	100*
(42) Sorting Out Facts	100*	100*	87
(43) Tact	100*	100*	100*
(44) Being Part of a Team	85	100*	93*
(45) Understanding	85	93	93*
(49) Noticing Possible Trouble	95	100*	100*
(50) Speed of Reaction	95	100*	93*
(55) Writing Understandably	90	93	93*
(57) Report Writing	100*	86	93*
(58) Staying Alert	100*	100*	87*
(64) Putting Up with Abuse	100*	100*	80
(68) Following Through	80	93	93*
(70) Accepting Responsibility for the Lives of Others	100*	100*	93*
	(N = 20)	(N = 14)	(N = 15)

On the basis of job observations, it is considered essential that successful police officers exhibit:

1. Interpersonal effectiveness--the capacity to act effectively in extremely divergent interpersonal settings. The police officer must have the ability to persuade and influence a wide variety of people (e.g., youths, minority origin individuals, business people, housewives, foreign visitors, the mentally disturbed, etc.) utilizing verbal and behavioral skills. He must communicate, inform, and convince without antagonizing.
2. Questioning and listening skills--the ability to quickly and effectively obtain information and sort out the relevant from the irrelevant, as when questioning witnesses or in listening for radio assignments over a radio net that includes a number of police departments.
3. Capacity for analysis, judgment, and problem-solving--the ability to make practical, common-sense decisions (e.g., whether or not a violation of the law has occurred), to develop plans of action quickly, to help people solve problems, to anticipate the actions of others (e.g., developing the alternative routes a robber could take from the scene of a hold-up).
4. Emotional stability and control--the ability to control his emotions and impulses in the face of extremely provocative conditions (e.g., to use minimum force necessary to make arrests during a serious disturbance or riot), to withstand verbal and physical abuse, to act effectively and calmly when his own life may be in jeopardy. The police officer must not allow his personal feelings to interfere with his rendering effective service.
5. Orientation of service to other persons--to perform routine tasks, such as escorts or intersection control, with a positive attitude; to take positive action in crime or accident prevention

- (e. g. , checking an unattended vehicle with motor running, advising citizens of steps to take in obtaining police services, and in self-help measures, such as steps to prevent burglaries, etc.).
6. Perceptual skills--the ability to "size-up" or grasp situations quickly (e. g. , to quickly identify the key persons at an accident scene), the ability to perceive departures from routine events or differences from an established pattern (e. g. , activity in a place of business at an hour when the business is normally closed).
  7. Decision-making capacity--the ability to make a prompt decision and see that it is carried out, such as the decision to issue a traffic citation or the decision to arrest a suspect.
  8. Leadership and direction of others--the ability to act as a leader, to assume control of ambiguous, upset, or problem situations involving people, to exercise authority and control over the activities of others using a wide variety of approaches and techniques.
  9. Persistence--not giving up when a solution or remedy is not readily apparent, as in checking nearby areas when nothing can be found at an address given in a radio assignment.
  10. Flexibility and versatility--to deal effectively with the task at hand in spite of rapid changes in pace of activity, in the situation itself, or in the types of persons involved. To be able to make the transition from working as an individual or as a member of a two-man team under only minimum supervision to situations where large numbers of officers are required to work under direct supervision of police commanders.
  11. Communications abilities--to make effective oral reports, to write clear and concise descriptions of incidents in the preparation of formal reports, to properly complete required administrative forms.

12. Alertness--to maintain perceptual vigilance and readiness to respond during long periods of routine or even monotonous activity.
13. Psychomotor skills--to effectively perform the psychomotor activities required of police officers, such as operating a vehicle under routine and emergency conditions, utilizing non-lethal and lethal weaponry under extremely varied conditions, exercising minimum physical force in personal self-defense or in taking a person into custody.
14. Objectivity and personal integrity--to render service in a professional manner, to set aside personal feelings or attitudes in the performance of official duties, to remain objective in dealings with "special interest" individuals or groups, to exhibit a high level of personal integrity and ethical conduct.

#### SELECTION OF TESTS FOR USE IN THE PROJECT

The aim of the occupational analysis was to achieve insight into the critical requirements of the police officer's job so that tests assessing attributes related to these requirements could be administered in the validation phase of the project. The results of the occupational analysis, presented in the preceding section, were thought to provide a suitable basis for the selection of tests. Although a variety of requirements were identified in the occupational analysis, the results were judged to have a high degree of convergence, particularly with respect to critical requirements such as effectiveness in dealing with people, communications abilities and skills, etc.

Based upon the results of the occupational analysis, approximately forty different standardized tests were reviewed for possible use in the project. All these tests were thought to have at least some possibility of assessing qualifications in the areas identified as significant in the occupational analysis. The final selection of tests was made with the following objectives in

mind:

1. To develop a test battery with strong potential for predicting successful police officer performance
2. To develop a test battery which could be readily adopted for use by Illinois Police and Fire Commissions in the screening of police applicants.

In addition to the essential requirement of relevance to the position in question, a number of other technical and practical considerations were taken into account:

1. Emphasis on group tests--only tests which could be administered by trained clerical personnel on a group basis were included, to eliminate the need for reliance on highly skilled professional staff time at the initial screening step
2. Emphasis on paper-and-pencil tests--rather than tests requiring special apparatus or equipment in their administration
3. Emphasis on objective scoring--only tests which could be directly scored with a prepared key were included, eliminating the need for subjective interpretation of test responses to achieve a score.

In general, the tests selected were thought to be highly relevant to the critical requirements of the police officer's job, as well as practical and economical with respect to the applicant's time and to the time and expense incurred by the organization in administration and scoring. Given professional psychological guidance and support in implementation, all of the selected tests could be adopted in local communities in the state.

A summary description of the tests selected for use in the project is presented below. A more detailed description of each test is presented in the concluding section of this chapter.

## SUMMARY DESCRIPTION OF TESTS USED IN THE PROJECT

### Tests of Motivation

1. Personal Background Inventory
  - untimed, approximately 25 minutes to complete
  - a biographical questionnaire which presents both factual and opinion questions about the respondent's background and gauges the strength of motivational drives based on personal achievements
2. Work Interest Index
  - untimed, approximately 15 minutes to complete
  - an occupational interests inventory which measures strength of interest in various occupational areas as well as breadth of interests and level of aspiration

### Tests of Intellectual Skill

1. Non-Verbal Reasoning
  - untimed, approximately 25 minutes to complete
  - measures reasoning capacity through the solution of pictorial problems
2. Understanding Communication
  - timed, 15 minutes
  - measures ability to read and comprehend written material
3. Listening Comprehension
  - timed, approximately 30 minutes
  - assesses the respondent's oral comprehension skills in the areas of immediate recall of information, following oral directions, recognizing transitions in oral communication, and recognizing word meaning

4. Perceptual Speed
  - timed, 5 minutes
  - measures the ability to rapidly identify similarities and differences, to detect discrepancies in visual material
5. Closure Speed
  - timed, 3 minutes
  - measures the ability to rapidly organize apparently un-related visual material into meaningful wholes, to accurately define and organize incomplete visual data
6. Closure Flexibility
  - timed, 10 minutes
  - measures the ability to identify visual figures despite distraction

#### Tests of Aptitude

1. Cassel Test of Social Insight
  - untimed, approximately 30 minutes
  - assesses an individual's capacity to "size-up" problem situations involving the behavior of people in group settings
2. Chapin Test of Social Insight
  - untimed, approximately 25 minutes
  - measures a person's ability to analyze problem situations involving a single individual's behavior

#### Tests of Behavior

1. Arrow-Dot Test (IRC Modification)
  - timed, 6 minutes
  - an "objective" and performance test of personality which assesses the degree and type of impulse control shown by the individual

2. Press Test
  - timed, 3 parts of 90 seconds each
  - measures reaction speed and performance under simple conditions and under stress conditions induced by the test
3. Temperament Comparator
  - untimed, approximately 20 minutes
  - a self-descriptive test of personality dealing with factors of introversion-extroversion, degree of emotional control, self-reliance, energy level, and sociability

DETAILED DESCRIPTION OF TESTS  
USED IN THE PROJECT

TESTS OF MOTIVATION

PERSONAL BACKGROUND INVENTORY  
[PBI]

AUTHORS: Melany E. Baehr, Ph.D., and Frances M. Burns,  
Industrial Relations Center, The University of  
Chicago.

MEASURES: This inventory assists in predicting future job success on  
the basis of past performance and experience. Past  
performance and experience are evaluated by an analysis  
of the scores obtained on 10 performance factors. These  
performance factors are derived from 94 actual items of  
information concerning family, education, and work  
history; they were identified through a series of factorial  
studies. Their names are given below:

Group Leadership and School Achievement

Drive

Mobility

Financial Responsibility

Family Responsibility

Job and Personal Stability

Educational-Vocational Consistency

Parental Family Adjustment

Professional-Successful Parents

General Health

SAMPLE ITEMS:

- |   |  |
|---|--|
| 1. Do you:  | a. <input type="checkbox"/> Own a house                    |
|   | b. <input type="checkbox"/> Rent a house or apartment      |
|   | c. <input type="checkbox"/> Rent a room                    |
|   | d. <input type="checkbox"/> Live with relatives or friends |
|   | e. <input type="checkbox"/> Other                          |
| <hr/>   |  |
| 2. While in high school, where did your<br>grades rank you in your class? | a. <input type="checkbox"/> Upper 10%                      |
|   | b. <input type="checkbox"/> Upper 25%                      |
|   | c. <input type="checkbox"/> Upper 50%                      |
|   | d. <input type="checkbox"/> Lower 50%                      |
|   | e. <input type="checkbox"/> Don't know                     |

TIME LIMITS: Untimed. Approximately 20 to 25 minutes.

TESTS OF MOTIVATION

WORK INTEREST INDEX (Non-Verbal)  
[WII]

AUTHORS: Melany E. Baehr, Ph.D., Richard Renck, Ph.D.,  
and Robert K. Burns, Ph.D., Industrial Relations  
Center, The University of Chicago.

MEASURES: This Index is pictorial and completely non-verbal.  
It consists of 96 pictures, each of which shows a man  
engaged in a specific occupation. For each picture the  
subject checks whether he would like "L" or dislike "D"  
the work shown. The principal purpose of the Index is  
to assist in determining an individual's pattern of occupa-  
tional interests through an analysis of the scores he ob-  
tains on 12 work interest factors and two work attitude  
scales (Aspiration Level and Flexibility of Interests).  
The 12 factors were defined through a series of factorial  
studies. They are named and interpreted as follows:

Professional & Technical. Professional and technical  
skills used for therapeutic purposes--physical therapist,  
dentist.

Social & Verbal. Social and verbal skills used in teach-  
ing or counseling and resulting in the esteem of others--  
school principal, office manager.

Authority & Prestige. Authority and prestige or indepen-  
dent judgment used in unpredictable or non-routine situ-  
ations--civil lawyer, newspaper reporter.

Artistic & Interpretative. Artistic and interpretative  
talents used in the performing arts--actor, composer.

Artistic & Stylized. Artistic ability used to make  
stylized products--taxidermist, glassblower.

Artistic & Creative. Artistic or creative talent used in  
the communication of ideas--sculptor, commercial de-  
signer.

Technical & Scientific. Technical and scientific skills  
used in the physical or biological sciences--physicist,  
pharmacist.

Clerical & Routine. Routine clerical skills used in con-  
crete procedures--general office worker, inventory clerk.

MEASURES:  
cont.

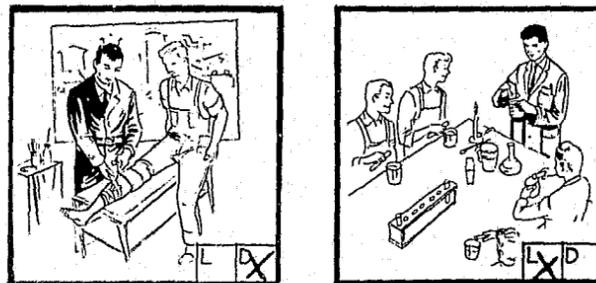
Business Contact & Structured. Business contact in structured social situations--hotel desk clerk, grocery checker.

Personal Service & Persuasive. Personal service for the advantage or enjoyment of others--ship's purser, welfare director.

Mechanical & Productive. Mechanical skills for producing or repairing a product--automobile mechanic, cabinet maker.

Control of Massive Equipment. Direction of massive equipment in largely masculine settings--locomotive engineer, cable driller.

SAMPLE ITEMS:



TIME LIMITS:

Untimed. Approximately 10 to 15 minutes.

TESTS OF INTELLECTUAL SKILL

NON-VERBAL REASONING  
[NVR]

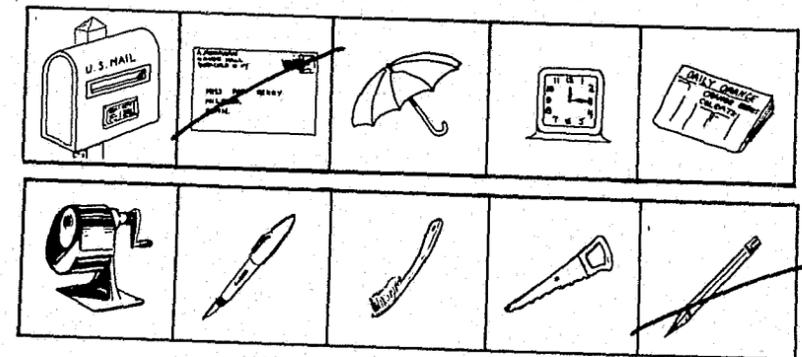
AUTHOR:

Raymond J. Corsini, Ph.D., Industrial Relations Center, The University of Chicago.

MEASURES:

This test measures reasoning ability through the medium of pictorial problems. Each of the 44 test items consists of a row of five pictures. The subject is asked to find "the picture that goes best with the first picture in the row." He then draws a line through the picture he selects. The test yields a single score.

SAMPLE ITEMS:



TIME LIMITS:

Untimed. Approximately 25 minutes.

TESTS OF INTELLECTUAL SKILL

UNDERSTANDING COMMUNICATION  
[UC]

AUTHOR:

T. G. Thurstone, Ph.D., The School of Education, The University of North Carolina.

MEASURES:

This test measures comprehension of verbal material in the form of short sentences and phrases. Vocabulary and speed of reading are of minor importance in achieving a good verbal comprehension score on it. Test items are incomplete sentences with four alternative completions. The subject selects the word or phrase which correctly completes the sentence.

SAMPLE ITEMS:

When waves hit against rocks, small pieces of the rock are broken off. When these broken pieces rub against other rocks, they break up again, making

- A. rains. (B) sand. C. waves. D. floods.

If the pilot of an airliner meets too much ice, he can ascend or descend to different flight levels until he finds a warmer

- A. engine. B. transport. (C) temperature. D. day.

TIME LIMITS:

15 minutes.

TESTS OF INTELLECTUAL SKILL

BROWN-CARSEN LISTENING COMPREHENSION TEST  
(Form AM)  
[B-C]

AUTHORS:

James I. Brown, University of Minnesota, and G. Robert Carlsen, University of Texas.

MEASURES:

This test measures the ability to comprehend spoken language. By listening comprehension is meant the aural assimilation of spoken symbols in a face-to-face speaker-audience situation, with both oral and visual cues present. This form is comprised of 76 items which measure the following important listening skills:

Immediate Recall--which measures the ability to keep a sequence of details in mind until a question is asked which requires thinking back over the sequence.

Following Directions--which measures the ability to follow oral directions.

Recognizing Transitions--which measures awareness of the function of transitional words and phrases within sentence contexts.

Recognizing Word Meanings--which measures the ability to recognize meanings of words from context.

SAMPLE ITEMS:

Part A. Immediate Recall:

"In the series of numbers 8-7-6-3-2, the fourth number is \_\_\_\_."

Part B. Following Directions:

"In the upper left corner of your answer sheet is a group of numbers and letters to which you will need to refer. "(Point to proper place.) "The even numbers and the vowels have been circled. Now look at the sample. Referring to the row of numbers above the answer spaces for this part, add the smallest number to the largest number. The answer is \_\_\_\_?"

1 (2) 3 (4) 5 (6) 7 (8)

(A) B C D (E) F G H

(from upper left corner of answer sheet)

SAMPLE ITEMS:  
cont.

Part C. Recognizing Transitions:  
"An introductory sentence sets the stage for discussion; a transitional sentence marks a change of thought or a new point; and a concluding sentence adds a note of finality to what has been said. 'It is indeed a privilege to address you on this occasion.' If you think the sentence is introductory, fill in the answer space under I; if you think it is transitional, fill in the answer space under T; if you think it is a concluding sentence, fill in the answer space under C; and if it is none of these, fill in the answer space under N."

Part D. Recognizing Word Meanings:  
"In the sentence, 'The scouts pitched their tents,' which meaning best defines the word pitched?"

- a. set up
- b. threw
- c. furnished
- d. arranged
- e. fixed at a particular level

TIME LIMITS:

Timed.      Part A.    Approximately 6 minutes.  
                  Part B.    Approximately 6 minutes.  
                  Part C.    Approximately 3 minutes.  
                  Part D.    Approximately 3 minutes.

TESTS OF INTELLECTUAL SKILL

PERCEPTUAL SPEED (Identical Forms)  
[PS]

AUTHORS:

L. L. Thurstone, Ph.D., and T. E. Jeffrey, Ph.D.,  
The Psychometric Laboratory, The University of North Carolina.

MEASURES:

This test measures the ability to identify likenesses and differences in visual configurations (i. e., diagrams, drawings, and figures). This ability has been identified as a primary one in visual thinking. It requires a minimum of thinking in the usual sense, and has very little to do with sharpness of eyesight. The subject is asked to indicate which of five similar figures is identical with a figure on the left. The test yields a single score.

SAMPLE ITEMS:

	1	2	3	4	5	
						1
						3

TIME LIMITS:

5 minutes.

TESTS OF INTELLECTUAL SKILL

CLOSURE SPEED (Gestalt Completion)  
[CS]

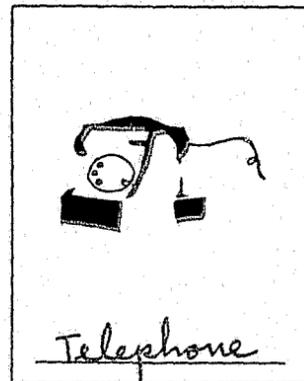
AUTHORS:

L. L. Thurstone, Ph.D., and T. E. Jeffrey, Ph.D.,  
The Psychometric Laboratory, The University of North  
Carolina.

MEASURES:

Closure speed is the ability to see an apparently disorganized  
or unrelated group of parts or ideas as a meaningful whole or  
single unit. In other words, it is the ability to unify a complex  
situation. In this test, the subject is asked to identify objects  
which are only partially or sketchily pictured.

SAMPLE ITEMS:



TIME LIMITS:

3 minutes.

TESTS OF INTELLECTUAL SKILL

CLOSURE FLEXIBILITY (Concealed Figures)  
[CF]

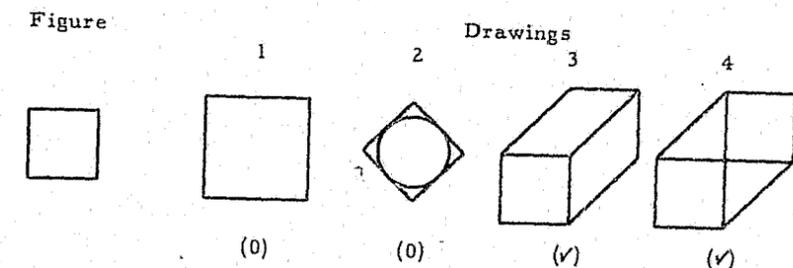
AUTHORS:

L. L. Thurstone, Ph.D., and T. E. Jeffrey, Ph.D.,  
The Psychometric Laboratory, The University of North  
Carolina.

MEASURES:

This is an objective test of the ability to keep a figure in  
mind in the face of distraction, that is, to see a given  
figure (diagram, drawing, or configuration of some kind)  
which is "hidden" or embedded in a larger, more complex,  
drawing, diagram, or configuration. The subject is given  
a figure followed by four drawings, and asked to indicate  
in which of the drawings the figure is "concealed." (The  
figure must retain its size and general spatial orientation.)

SAMPLE ITEMS:



TIME LIMITS:

10 minutes.

TESTS OF APTITUDE

TEST OF SOCIAL INSIGHT (Adult Edition)  
[TSI]

AUTHOR: Russell N. Cassel, Ed.D.

MEASURES: This test appraises the characteristic mode of reaction an individual exhibits in dealing with interpersonal or social problems. It consists of 60 items, each of which describes an interpersonal problem and offers five alternative actions to take in handling it. The five alternatives cover the following five modes of resolving such problems:

Withdrawal--avoiding or escaping the problem by leaving the situation.

Passivity--remaining in the situation but taking no action to solve the problem.

Cooperation--initiating an active endeavor to solve the problem.

Competition--drawing the attention of others, attempting to deal with the problem by excelling or outdoing others.

Aggression--directing little effort to the problem but expressing hostility or strong feelings in response to it.

The frequency with which an individual selects each mode establishes his characteristic pattern in dealing with social and interpersonal problems.

SAMPLE ITEM: After waiting in a busy garage for 20 minutes for the serviceman to take your repair order, he returns and starts taking the order of another patron who just arrived. What do you do?

- a. Report the error to the service manager.
- b. Insist that he take your order immediately.
- c. Walk out to your car and drive away.
- d. Say nothing and wait until he notices you.
- e. Explain to the serviceman that you arrived before the other patron and had been waiting for him to return.

TIME LIMITS: Untimed. Approximately 30 minutes.

TESTS OF APTITUDE

THE CHAPIN SOCIAL INSIGHT TEST  
[CHAPIN]

AUTHOR: F. Stuart Chapin, Ph.D., University of Minnesota.

MEASURES: This test measures an individual's ability to appraise others, to sense what they feel and think, and to predict what they may say and do.

SAMPLE ITEM: Mr. Carpenter, when told that an acquaintance had purchased a pleasure boat, criticized him strongly for spending so much money for a boat when he probably could not afford one. Several days after this incident, Mr. Carpenter himself bought an expensive new pleasure boat. About the same time, he negotiated a second-mortgage on his house. Why did Mr. Carpenter criticize his acquaintance for an act he afterward performed himself?

- a. His acquaintance was probably an unsafe boat operator.
- b. Because Mr. Carpenter probably received an inheritance following the death of a relative.
- c. Criticism of his acquaintance served to release his feelings of uneasiness about something he planned to do himself.
- d. Second-mortgages are not uncommon for people of Mr. Carpenter's education and income.

TIME LIMITS: Untimed. Approximately 25-30 minutes.

TESTS OF BEHAVIOR

ARROW-DOT TEST-IRC Modification  
[A-D]

AUTHORS: Lawrence A. Dombrose, Ph. D., and Morton S. Slobin, Ph. D.

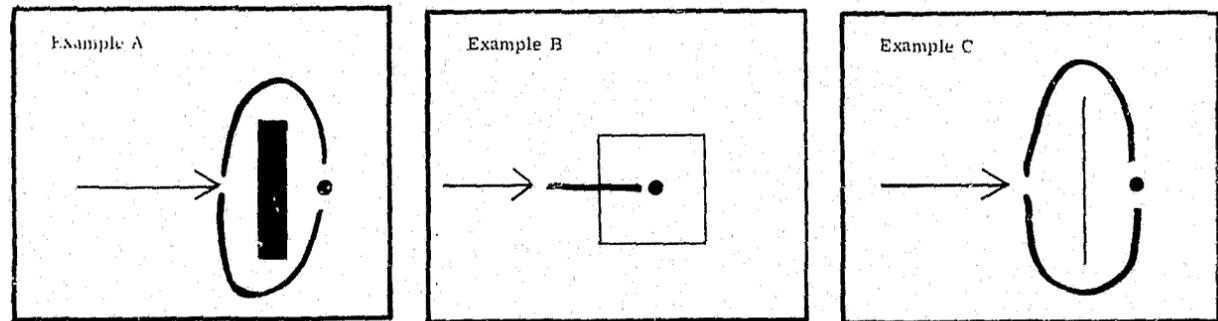
MEASURES: This projective test is an adaptation of one part of a four-part battery called The IES Test. Its 30 items each set a relatively simple perceptual-motor task--to draw a line from the point of an arrow to a dot. Arrow and dot are separated by a number of barriers in the form of solid or dotted lines and black bars. The instructions explain how various combinations of these are to be handled. The test yields three scores:

The I Score--a measure of the tendency to uncontrolled impulsive behavior through which needs are satisfied immediately and directly without any regard for realistic restrictions or moral issues.

The E Score--essentially a measure of the ability to function realistically, of the degree of ego strength and control.

The S Score--a measure of superego strength, especially in circumstances where the demands of the superego are not experienced consciously but are viewed as external restrictions.

SAMPLE ITEMS:



TIME LIMITS: 6 minutes.

TESTS OF BEHAVIOR

THE PRESS TEST  
[PRESS]

AUTHORS: Melany E. Baehr, Ph. D., and Raymond J. Corsini, Ph. D., Industrial Relations Center, The University of Chicago.

MEASURES: This is an objective test of personality, developed to measure an individual's ability to work under stress. It yields three main scores, one from each of its three parts:

Part I. Speed of reaction to verbal stimuli  
Part II. Speed of reaction to color stimuli  
Part III. Speed of reaction to color stimuli in a stress situation caused by the interference of distracting verbal stimuli.

Two further scores which can be derived are the figures for Part I minus Part II and for Part II minus Part III. Directions for each part, with sample items, are given below.

SAMPLE ITEMS:

Part I

Put the first letter of each word in the corresponding circle.

1	2	3	4	1	2	3	4
Red	Blue	Green	Yellow	(R)	(B)	(G)	(Y)
Blue	Yellow	Red	Green	(B)	(Y)	(R)	(G)

Part II

Put the first letter of the colors of the dots in the corresponding circles.\*

1	2	3	4	1	2	3	4
BLUE	YELLOW	RED	GREEN	(B)	(Y)	(R)	(G)
GREEN	BLUE	YELLOW	RED	(G)	(B)	(Y)	(R)

\*the color designations in sample are provided only for purposes of explanation; in the actual test booklet only the colored dots themselves are presented.

SAMPLE ITEMS:  
cont.

Part III

Write the first letter of the color of the ink in which the word is printed in the corresponding circles.

	1	2	3	4	1	2	3	4
	Red	Blue	Green	Yellow	(R)	(B)	(G)	(Y)
	Blue	Yellow	Red	Green	(B)	(Y)	(R)	(G)

TIME LIMITS:

Part I	90 seconds.
Part II	90 seconds.
Part III	90 seconds.

TESTS OF BEHAVIOR

TEMPERAMENT COMPARATOR  
[TC]

AUTHORS:

Melany E. Baehr, Ph.D., and R. W. Pranis,  
Industrial Relations Center, The University of  
Chicago.

MEASURES:

The Temperament Comparator measures the relatively permanent temperament traits of the individual. It yields measures of 18 temperament traits and of five temperament factors, all within the normal range of behavior. The traits are:

- |                    |                  |
|--------------------|------------------|
| Calm               | Persevering      |
| Cautious           | Prompt Starter   |
| Decisive           | Quick Worker     |
| Demonstrative      | Seeks Company    |
| Emotionally Stable | Self-Confident   |
| Energetic          | Serious          |
| Enthusiastic       | Socially at Ease |
| Even-Tempered      | Steady Worker    |
| Lively             | Talkative        |

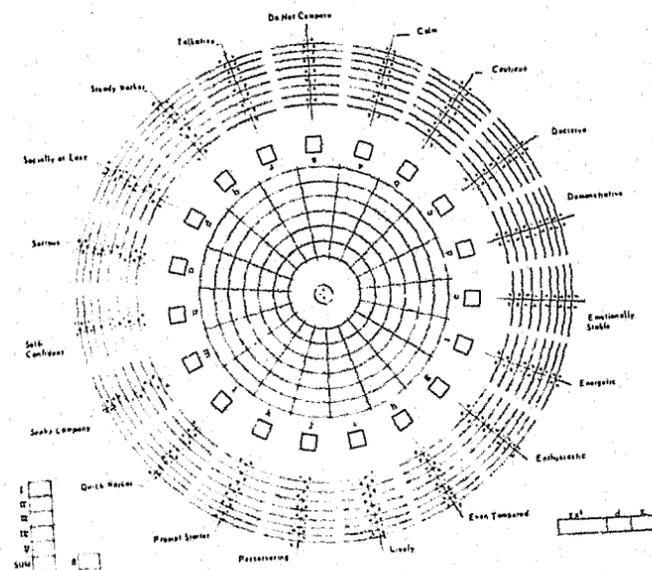
The five temperament factors based on these traits are:

- Controlled
- Stable
- Self-Reliant
- Excitable
- Sociable

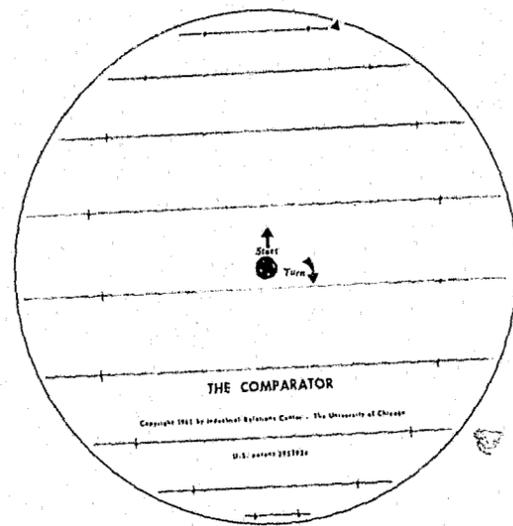
The items in the Comparator consist of all possible pairings of the 18 temperament traits. The subject rotates a disc to successive positions within a circle which has the traits printed on its circumference. Bars on the disc link pairs of traits. The subject examines each pair of traits and places a mark in a hole on the disc near the trait which he has selected as more descriptive of his behavior. The Comparator also yields a Coefficient of Consistency which indicates the extent to which the subject was consistent in his selections or judgments.

SAMPLES:

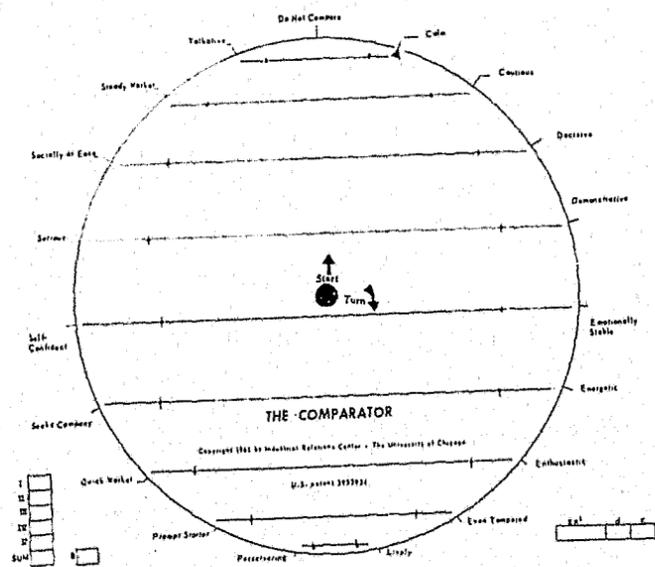
Circle with Temperament Traits



Cardboard Disc



Circle and Disc Assembled



TIME LIMITS:

Untimed. Approximately 15 to 20 minutes.

CHAPTER III--RESULTS OF  
PATROLMAN JOB PERFORMANCE APPRAISAL

An urgent requirement for the successful completion of the project was the establishment or identification of sound and effective measures of police officer job performance. These measures were needed to serve as the standard or criterion against which to judge the effectiveness of the tests. If it were possible to demonstrate a statistical relationship (via analysis of correlational data) between test scores and measures of current police officer job performance, such results would evidence the validity of the test scores in question, and would justify the use of these tests in police officer selection.

In law-enforcement organizations, few topics promote more discussion than does the topic of performance rating. An accurate appraisal of job performance is difficult to achieve on any job and is particularly difficult to secure in assessing the job performance of police officers. Much of the police officer's job is carried out without direct personal supervision. The nature of shift and day-off assignments in many police agencies further limits the relationship between officers and supervisors. However, in spite of these apparent difficulties, we believed that meaningful supervisory ratings could be obtained and would constitute the single most accurate source of information on an individual's performance.

Our job analysis activities in Illinois departments indicated that a good deal of direct contact was maintained between officers and supervisors in local community departments. Of primary importance was the contact maintained by supervisors in directing, assisting, or observing officers in their response to calls for service. Supervisors were invariably present at the scene of serious crimes or disturbances. Further, it was unusual if a supervisor did not "back up" patrol officers in their response to potentially serious incidents such as a report of a person with a gun, a family disturbance, a mentally deranged person, fight in a tavern, etc. The roll call meetings at the start of each shift and the check-in sessions at the end of the shift

were also noted as situations which promoted frequent contact and communication. The supervisor's review of field case reports provides another important source of information on the performance of individual police officers.

To support the development of an effective job performance criterion, two supervisory or "subjective" rating methods and a number of statistical or "objective" performance indices were utilized in the project. The following sections of this chapter describe these performance measures and outline the results of their inclusion.

### THE PAIRED-COMPARISONS RATING TECHNIQUE\*

The paired-comparisons rating technique was included as one of the principal supervisory rating procedures. Based upon its successful implementation in two major projects with the Chicago Police Department (Baehr, Furcon, and Froemel, 1968; Furcon, Froemel, Franczak, and Baehr, 1971), it was believed to hold considerable promise for use in rating current performance of police officers in local community departments. For the specific purpose of appraising job performance, this method requires that every individual to be assessed be compared with every other individual, and an explicit judgment be made as to who is the better performer on the job. The number of comparative judgments that would be required if six individuals were to be assessed is presented below:

- |        |        |        |        |        |
|--------|--------|--------|--------|--------|
| 1 vs 2 | 2 vs 3 | 3 vs 4 | 4 vs 5 | 5 vs 6 |
| 1 vs 3 | 2 vs 4 | 3 vs 5 | 4 vs 6 |        |
| 1 vs 4 | 2 vs 5 | 3 vs 6 |        |        |
| 1 vs 5 | 2 vs 6 |        |        |        |
| 1 vs 6 |        |        |        |        |

\*Much of the material in this section has been adapted from Baehr (1963, 1968).

In each pair, the rater would choose the individual who was the better performer. However, the judgments would not be presented to the assessing supervisor in serial fashion (as indicated in the example above), but rather in a random order.

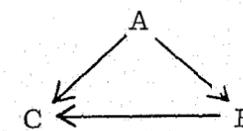
The paired-comparisons method has been generally recognized as providing one of the most reliable and valid overall performance assessments of any contemporary appraisal technique. However, up to the present time, this technique has not been widely used in organizations because of the time and effort required of the rater in handling large numbers of pairs and because of the computations required to obtain scale values. The Industrial Relations Center has developed the application of this technique over more than thirty test validation projects, and for this project extensive reliance was placed upon computers and processing equipment to prepare rating materials, score rating judgments, and prepare reports of rating results. (It should be noted that a device called The Comparator has been developed by the Industrial Relations Center for implementing the paired-comparison appraisal of groups of up to 19 individuals.)

Three measures derived from the paired-comparisons rating technique were particularly germane to the objectives of the project:

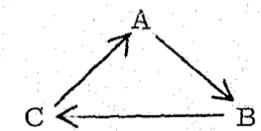
1. The per cent of consistent judgments for each rater
2. The percent of similarity between or among raters
3. The performance index for each patrolman.

The per cent consistent judgment score, which ranges from 0 to 100 per cent, represents the consistency of judgments made by each individual rater. The concept of consistency is illustrated below:

#### Consistent Judgments



#### Inconsistent Judgments



If a supervisor selects patrolman A over patrolman B, and patrolman B over patrolman C, then, to be consistent, he should also select A over C. If he selects C over A, this choice is regarded as an inconsistency. For any group of ratees, there is a maximum possible number of inconsistencies. The per cent of inconsistent judgments is the number of inconsistencies actually found expressed as a percentage of the number of possible inconsistencies. This percentage is subtracted from 100 per cent in order to obtain a positively stated "per cent of consistent judgments."

The per cent of similarity between or among raters can be calculated when two or more raters have assessed the same group of individuals or a common group of individuals within two otherwise dissimilar groups. The per cent of similarity is the ratio (expressed as a percentage) of the number of pairs of similar judgments to the total number of judgments made concerning the individuals being rated in common. With two raters, this score ranges from 0 to 100 per cent, and 100 per cent always indicates perfect similarity no matter how many raters are involved. However, the lower limit of the range varies according to the number of raters contributing to the coefficient.

It should be noted that on the basis of the two indices described above, it was possible to identify raters who were either internally inconsistent or in marked disagreement (i. e., evidencing dissimilar judgments) with other raters assessing a common group of officers. In practice, raters whose internal consistency fell below 80 per cent or whose similarity fell below 60 per cent were excluded from the project. Such exclusions were thought to increase the accuracy and meaningfulness of the third measure derived from the paired-comparisons method--the performance index derived from the ratings, which is discussed below.

The basic information needed to calculate the performance index was the number of times each patrolman in the group was chosen over all others by the rater. Each rater's preferences were converted to normalized standard scores by direct calculation on the computer. For example, a man in a

group of 11 who was chosen by a supervisor five times out of the ten possible times would have been chosen 50 per cent of the time, which converts to a normalized standard score of 50. Where two or more raters evaluated the performance of a patrolman, their standard score ratings were averaged to provide a single composite performance index. Each patrolman therefore received a standard score performance index figure, which in practice varied between a low of 30 and a high of 70 with an average of 50.

In implementing the paired-comparisons rating, supervisors in participating departments were first asked to indicate the names of those officers whose job performance they felt they knew well enough to rate. Each supervisor received a copy of the memo "Participation of Supervisors in the Illinois Local Community Police Officer Selection Project" (see Appendix) which outlined required information, conditions of participation, and guidelines for selecting patrolmen, along with a roster of police officers in the department. These rosters were returned to the Industrial Relations Center for use in preparing rating materials for each responding supervisor. In addition, each supervisor received a copy of the memo "Illinois Local Community Police Officer Selection Project" (see Appendix).

Rating materials were prepared for each supervisor, based on his list of patrolmen. These materials were distributed by the departmental coordinator, along with a copy of "Instructions for Completing the Paired-Comparison Rating and Job Behavior Rating Scale" (see Appendix). Individual envelopes were provided for direct return of rating results to the Industrial Relations Center.

#### PATROLMAN JOB PERFORMANCE DESCRIPTION SCALES

An important innovation in the area of police officer performance appraisal during the time period of the project was the development of the Job Performance Description Scales for Precinct Patrolmen by Personnel Decisions, Inc., (Heckman, Groner, Dunnette, and Johnson, 1972) under a grant from

the Law Enforcement Assistance Administration. These scales were unusual in several respects. First, they were based upon "critical incidents" of actual police officer performance, provided in workshop meetings with experienced police personnel from several different major police departments. Second, they consisted of scales whose composition and weighting were based upon the categorization and judgments of other experienced police personnel working with the factual incidents of police performance. Third, unlike previously used trait scales, no numbers were directly involved. Rather the rating supervisor was requested to select a behavioral description in each area which best represented his expectation of the typical performance of the patrolman being rated. Last, the dimensions or categories of the rating, which included the following:

1. Handling Domestic Disputes
2. Investigating, Detecting, and Following Up on Criminal Activity
3. Crime Prevention
4. Maintaining Public Safety and Giving First Aid
5. Using Force Appropriately
6. Commitment, Dedication, Conscientiousness
7. Integrity and Professional Ethics
8. Dealing Constructively with the Public
9. Teamwork
10. Report Writing
11. Traffic Maintenance and Control

were thought to include the major activity areas required in successful performance of the police officer's job. A sample of the Job Performance Description Scales is provided in the Appendix.

As a prelude to the inclusion of these scales in the project, an orientation and review meeting was held which brought together approximately twenty Illinois Chiefs of Police (representing departments of various size and location in the state), project staff, and two of the developers of the scales.

Following a presentation on the development of the scales and an extensive discussion of each scale, the appropriateness and value of these scales for inclusion in the project were strongly endorsed by all Chiefs present.

The procedure for implementing the use of the Job Performance Description Scales paralleled the implementation of the paired-comparisons rating. Based upon a list of patrolmen known well enough for rating, each participating supervisor was requested to rate one or more patrolmen, using one complete booklet of scales for each patrolman. The two supervisory memoranda mentioned in the previous section provided orientation and guidance to supervisors in their completion of the scales (see Appendix). As with the paired-comparisons rating, supervisors returned these scales directly to the Industrial Relations Center for processing. Unlike the paired-comparisons rating, where supervisors were encouraged to assess all patrolmen known well enough to rate, the application of these scales was limited to those officers who would be included or had participated in completing the battery of tests in the validation phase of the project.

#### STATISTICAL OR OBJECTIVE MEASURES OF POLICE OFFICER JOB PERFORMANCE

Objective or statistical measures of police officer job performance were included to provide as wide and as extensive a consideration of performance measures as was possible within the limitations of the project. Information on a number of descriptive factors and performance indicators was requested from participating departments on police officers participating in the test administration phase of the project.

All selected elements were thought to have relevance in either describing important demographic characteristics (such as race, age, etc.) or in assessing performance (with indicators such as attendance, number of citizen complaints, etc.) of local community police officers. Three criteria were used in screening variables for inclusion or exclusion:

1. Availability in most or all departments--since results would be combined across many departments, it was considered pointless to include information such as number of court convictions, which was recorded by very few participating departments.
2. Accuracy--certain data on file collected at time of entry into police service such as number of children, weight, etc. was likely to be out of date.
3. Meaningfulness--for example, many departments had a variety of test scores on file for officers. It was not possible to combine such information because of the variety of tests and incompatibility of test scores.

A total of nineteen variables were included in this phase of the project. These variables are listed on a sample data collection sheet included in the Appendix.

#### RESULTS OF THE PAIRED-COMPARISONS PERFORMANCE RATING

Primary responsibility for implementation of the paired-comparisons rating was assumed by a specific individual in each agency who served as coordinator of project activities in the department. Coordinators distributed rating materials, assisted supervisors in their review of instructions, and insured that rating materials were promptly returned. In most cases, a personal meeting was held between a project staff member, the Chief of Police, and the department coordinator at the outset of the department's participation to review procedures and outline specific requirements of the project. During the periods of intensive activity in the agency, close telephone communication was maintained with the coordinator.

The implementation of the paired-comparisons rating went extremely well. No particular difficulty in completing the rating task was reported by departmental coordinators. The success of the implementation is particularly

outstanding given the many departments, large numbers of raters, and indirect lines of communication between raters and project staff. Credit for this success should be placed primarily upon the department coordinators, who effectively met the requirements set by the project.

Figure 1 presents the distribution of paired-comparisons performance ratings in all participating departments. A distribution of scores which approximated the normal distribution or "bell-shaped curve" was anticipated and was actually achieved. Approximately 1400 sworn officers were rated by approximately 330 raters in the 43 departments participating in the test validation phase of the project. On the average, each supervisor rated the job performance of eighteen police officers in his department.

The distribution of the paired-comparisons rating on the Chicago Metropolitan Area departments, presented in Figure 2, also approximated the normal distribution. In this geographic region, approximately 650 officers were rated by approximately 165 supervisors, with supervisors rating the job performance of an average of seventeen officers.

Figure 3 gives the distributions of the per cent consistent judgments exhibited by all raters and also for raters in Chicago Metropolitan Area departments. The consistency of the judgments made in the paired-comparisons rating was quite high, with over 93 per cent of the police supervisors statewide and in Chicago Metropolitan Area departments achieving a consistency score of 90 per cent or more. These results compare quite favorably with consistency results obtained in other industrial and governmental studies. As indicated earlier, raters with a consistency score lower than 80 per cent were excluded from the project.

The results of the analysis of the similarity of judgments of supervisors rating a common group of officers in all participating departments and in Chicago Metropolitan Area departments are presented in Figure 4. The statewide and Chicago Metropolitan Area results are quite comparable and evidence a high degree of similarity of judgment on the part of raters independently rating a common group of police officers. In contrast to

FIGURE 1  
DISTRIBUTION OF PAIRED-COMPARISONS PERFORMANCE RATINGS  
IN ALL PARTICIPATING DEPARTMENTS

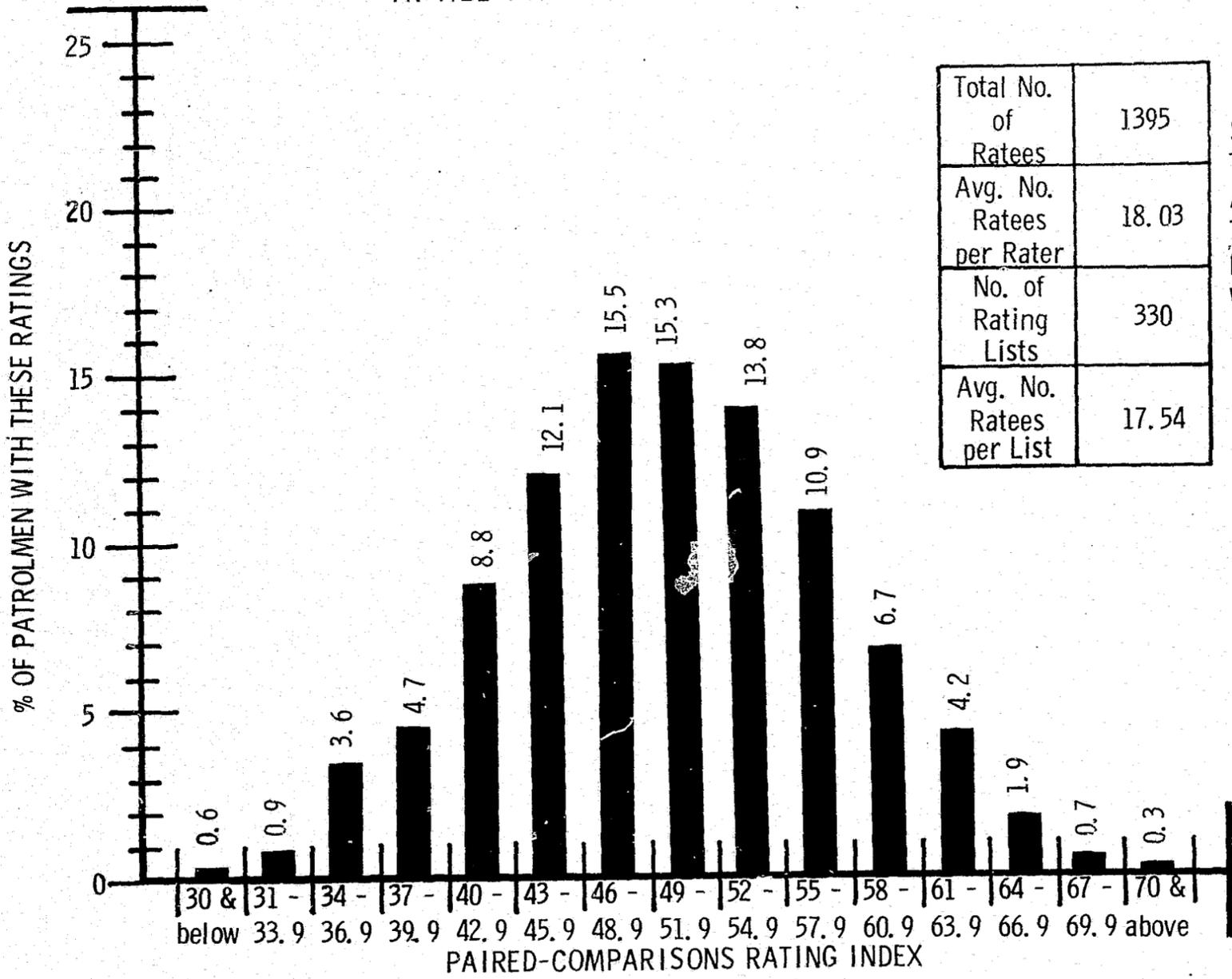


FIGURE 2  
DISTRIBUTION OF PAIRED-COMPARISONS PERFORMANCE RATINGS  
IN CHICAGO METROPOLITAN AREA DEPARTMENTS

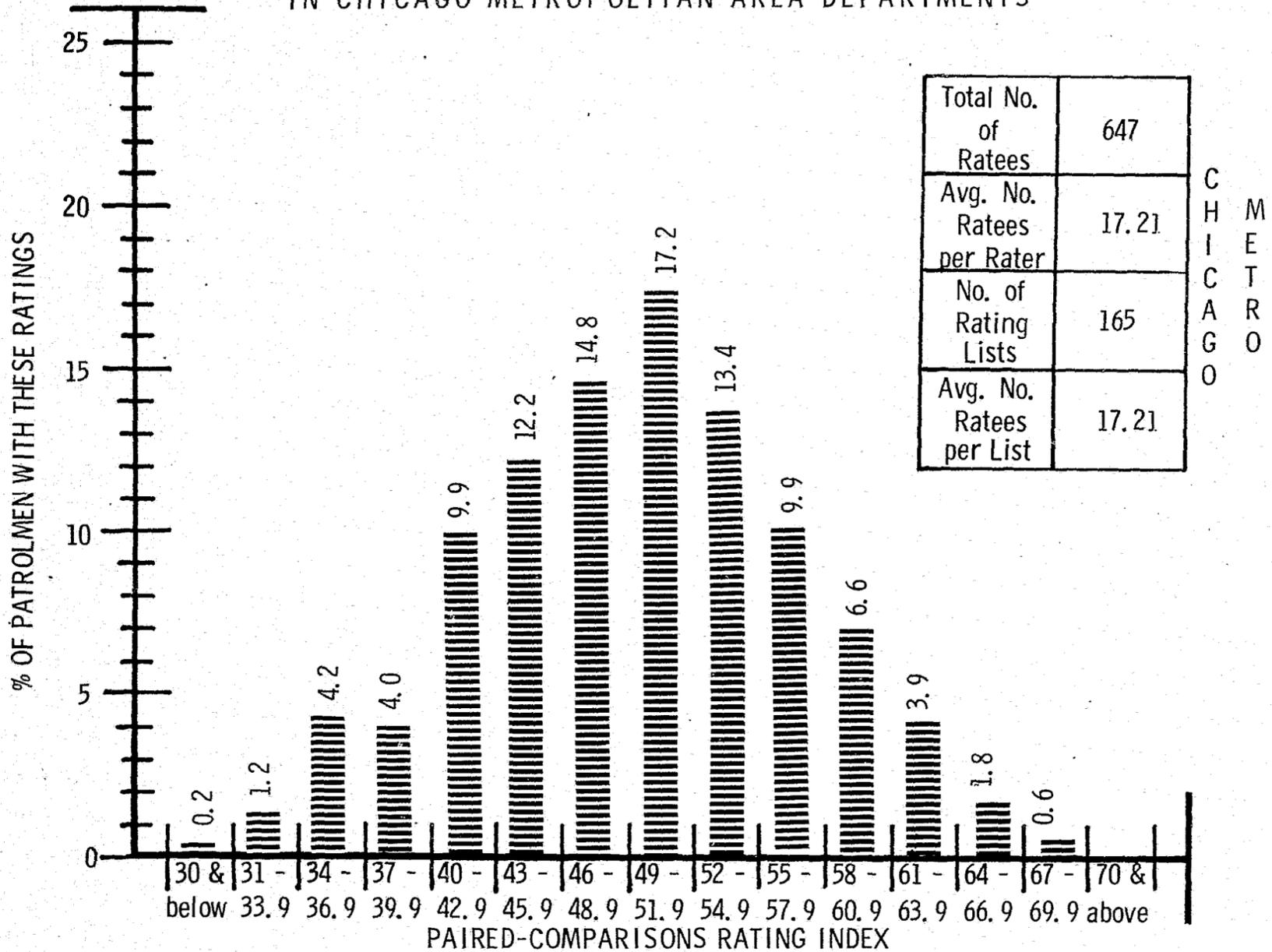


FIGURE 3

LEVELS OF INTERNAL CONSISTENCY  
EXHIBITED BY RATERS IN ALL PARTICIPATING DEPARTMENTS  
AND IN CHICAGO METROPOLITAN AREA DEPARTMENTS

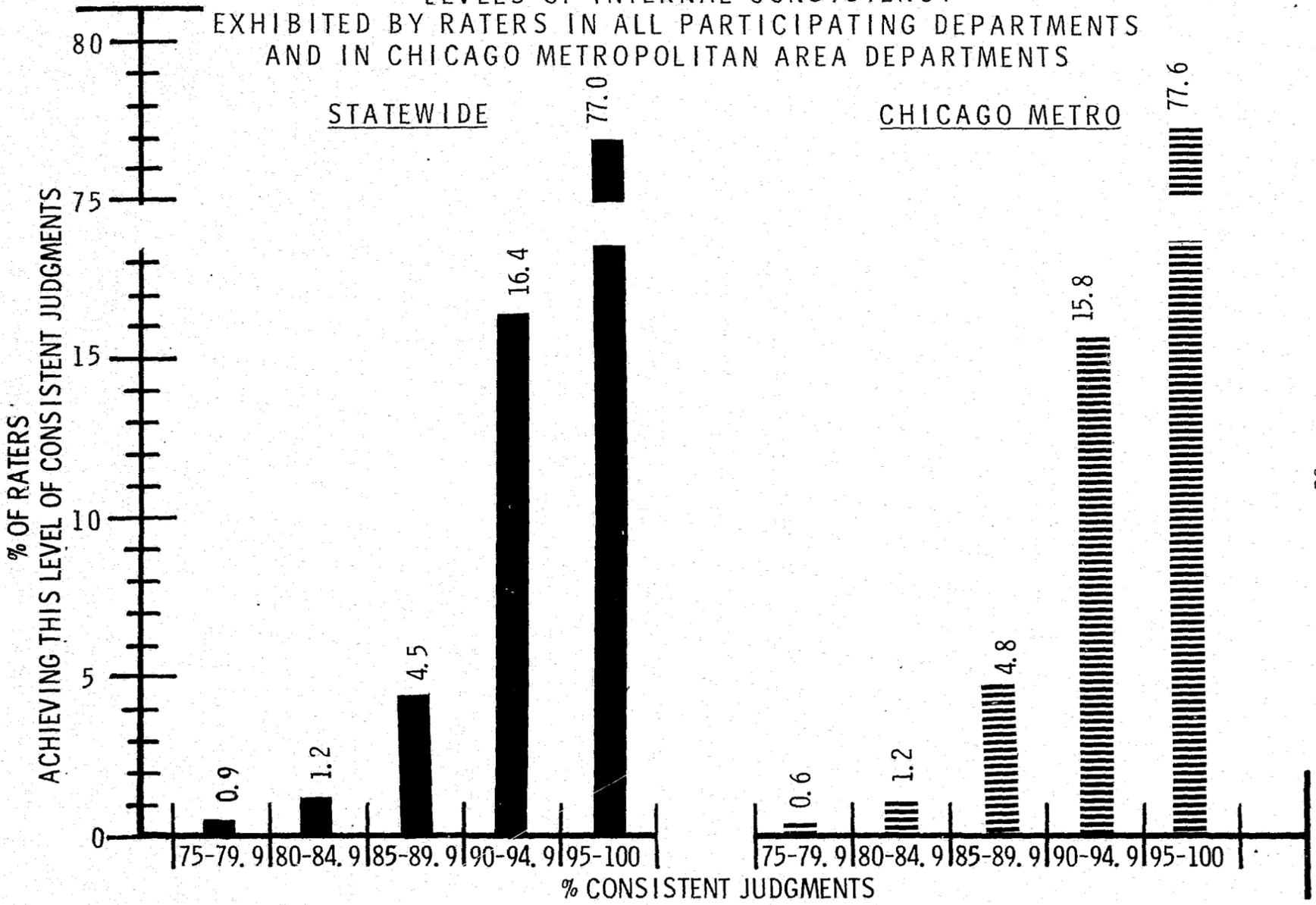
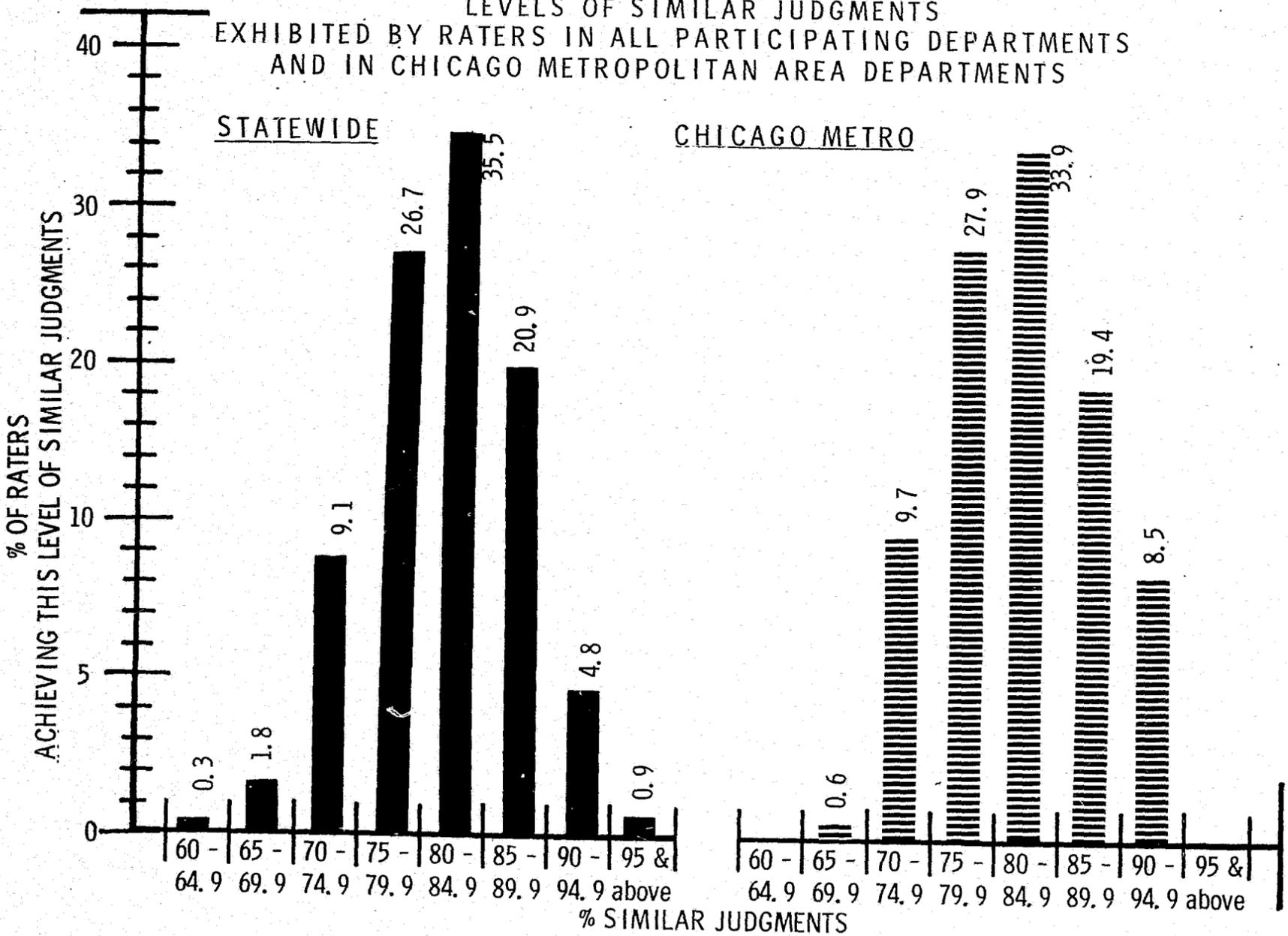


FIGURE 4

LEVELS OF SIMILAR JUDGMENTS  
EXHIBITED BY RATERS IN ALL PARTICIPATING DEPARTMENTS  
AND IN CHICAGO METROPOLITAN AREA DEPARTMENTS



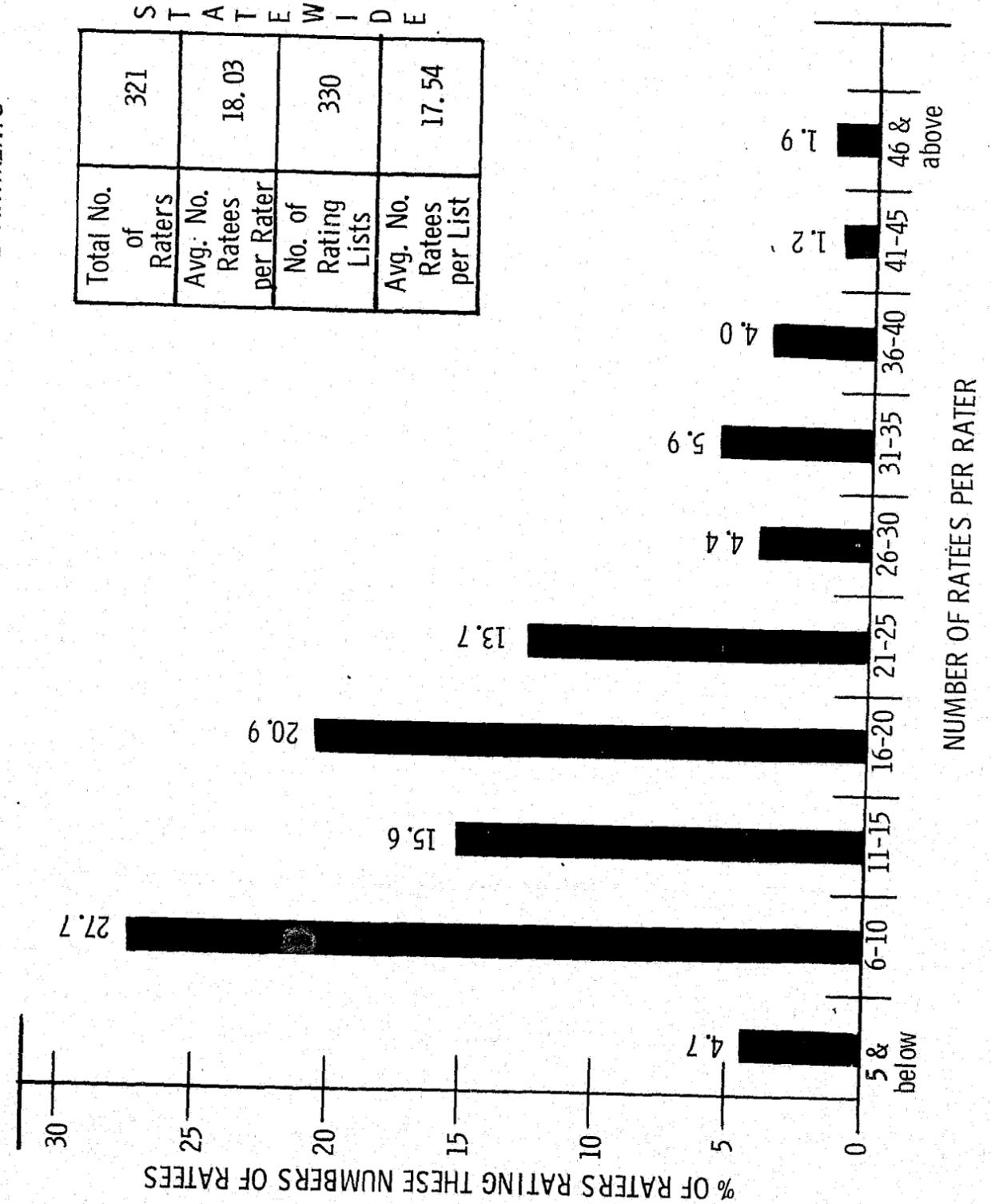
earlier results established in the Chicago Police Department studies, local community departments in the state evidenced a somewhat higher level of similarity of judgment. This difference may be explained by the fact that the sizes of groups rated and size of unit were much smaller in the present project, as was the number of possible raters. In any event, the similarity results were quite encouraging, and provided further evidence of the meaningfulness of the paired-comparisons ratings. As indicated earlier, raters whose similarity index fell below 60 per cent were excluded from the project.

The paired-comparisons performance index for police officers in participating departments was, therefore, based on supervisory ratings which were: (1) internally consistent for each individual rater, and (2) also exhibited an acceptable level of similarity among raters assessing a common group. Given these results, it was concluded that the paired-comparisons index would provide an accurate and meaningful measure of current police officer performance and could be used as one of the major performance criteria in the project. Figure 5 presents the distribution of size of rating group selected by each supervisor.

RESULTS OF THE  
PATROLMAN JOB BEHAVIOR DESCRIPTION SCALES

The implementation of the Job Behavior Description Scales (JBDS) rating was accomplished at the same time the paired-comparisons rating was completed. In the case of the paired-comparisons rating, the supervisor was assessing all police officers in the department known well enough by him for rating. Thus, he rated a large number of officers, some of whom took part in the test administration activities of the project and some of whom did not take part. In the case of the JBDS rating, to minimize the time of participating supervisors, only those officers who had been tested or were very likely to be tested were included in the rating. A typical

FIGURE 5  
DISTRIBUTION OF NUMBER OF RATEES PER RATER  
FOR THE PAIRED-COMPARISONS RATING IN ALL PARTICIPATING DEPARTMENTS



supervisor would receive a set of paired-comparisons rating materials and several JBDS rating booklets for his rating assignment in the project.

As with the paired-comparisons rating, the conduct of the JBDS rating was accomplished without any notable difficulties. The scales themselves were thought to possess a high degree of face validity for the participating supervisors, and given the instructions in the booklet itself, along with the supplementary instructions provided by the project, the rating was carried out without incident. Departmental coordinators provided ample support to participating supervisors, and insured the prompt return of JBDS rating materials.

Table Three contains a description of the average number of raters assessing police officers in the project with the paired-comparisons and JBDS ratings. In general, in the paired-comparisons rating, each officer was assessed by approximately four supervisors. In the JBDS rating, on the average, between two and three supervisors participated.

In completing the JBDS rating, the supervisor's first task was to review the definition of the scale in question provided at the top of the booklet page. Next, he selected one of the eight job behavior descriptions, the one which he felt exemplified the typical job performance of the man being rated. In the analysis a weight of 8 was attached to the most favorable or most ideal description on the scale. Each of the other descriptions was weighted consecutively downward, with the least favorable or least ideal description on the scale being weighted 1.

With this system of weighting, the statewide average on each of the scales ranged from 5.87 to 4.69, with standard deviations ranging from 0.71 to 1.48. The averages within the Chicago Metropolitan Area departments were quite similar, with scale averages ranging from 5.83 to 4.59, and standard deviations ranging from 0.71 to 1.52.

Table Four presents the intercorrelation of supervisory rating dimensions included in the project. Statewide intercorrelations are reported above

TABLE THREE  
AVERAGE NUMBER OF SUPERVISORY RATERS  
FOR EACH RATEE FOR THE PAIRED-COMPARISON (P/C)  
AND JOB PERFORMANCE DESCRIPTION SCALES (P/D)

REGION	P/C or P/D	CHICAGO			TOTAL
		METRO	NORTH	SOUTH	
LARGE	P/C	4.15	5.55	2.26	4.52
	P/D	2.71	2.42	1.81	2.64
MEDIUM	P/C	4.58	3.26	4.12	4.14
	P/D	2.41	2.71	2.82	2.70
SMALL	P/C	4.24	2.73	3.47	3.63
	P/D	2.86	2.83	2.17	2.35
TOTAL	P/C	4.37	4.31	3.36	4.14
	P/D	2.73	2.75	2.35	2.61
TOTAL NON-METRO			P/C	4.23	
			P/D	2.57	

TABLE FOUR  
Intercorrelations of Supervisory Performance Ratings  
in Statewide and Chicago Metropolitan Area Departments<sup>#</sup>

Variable	(60)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)
(60) Paired-Comparisons Rating		.39***	.58***	.55***	.52***	.25***	.54***	.35***	.35***	.34***	.52***	.48***
(47) JPDS 1-Handling Domestic Disputes			.47***	.44***	.43***	.39***	.45***	.40***	.51***	.44***	.47***	.47***
(48) JPDS 2-Investigating Criminal Activity				.66***	.54***	.30***	.62***	.41***	.41***	.52***	.62***	.53***
(49) JPDS 3-Crime Prevention					.50***	.38***	.57***	.44***	.44***	.47***	.59***	.46***
(50) JPDS 4-Maintaining Public Safety						.24***	.52***	.41***	.42***	.44***	.52***	.53***
(51) JPDS 5-Using Force Appropriately							.28***	.33***	.41***	.29***	.38***	.34***
(52) JPDS 6-Commitment and Dedication								.46***	.47***	.54***	.55***	.54***
(53) JPDS 7-Integrity and Ethics									.41***	.36***	.43***	.47***
(54) JPDS 8-Dealing Constructively with the Public										.40***	.44***	.51***
(55) JPDS 9-Teamwork											.41***	.45***
(56) JPDS 10-Report Writing											.38***	.59***
(57) JPDS 11-Traffic Maintenance and Control												

<sup>#</sup> Statewide intercorrelations are presented above the diagonal, N = 500. Chicago Metropolitan Area intercorrelations are presented below the diagonal, N = 300.

\*\* indicates correlation is statistically significant at the .01 level of confidence.

\*\*\* indicates correlation is statistically significant at the .001 level of confidence.

the diagonal, Chicago Metropolitan Area intercorrelations are reported below the diagonal. With respect to the JBDS ratings, a high degree of correlation existed among the scales in the total statewide sample, ranging from .24 to .66, all of which were statistically significant at the .001 level. In the Chicago Metropolitan Area departments, practically all of the correlations among the scales were also significant at the .001 level. These correlations ranged from .18 to .66.

The correlations between the paired-comparisons rating and the eleven JBDS ratings ranged between .25 and .58 in both the statewide total and in the Chicago Metropolitan Area sample. All of these correlations were statistically significant at the .001 level.

These correlation results indicated a high degree of consistency in the rating of individuals across the eleven Job Behavior Description Scales, and a strong association between ratings in the eleven JBDS categories and the overall rating of performance provided by the paired-comparisons technique.

#### RESULTS OF THE OBJECTIVE OR STATISTICAL MEASUREMENT OF POLICE OFFICER JOB BEHAVIOR

As indicated in a preceding section, information on nineteen descriptive or performance variables was requested from participating departments on police officers who completed the battery of tests. Of the nineteen variables, results on three descriptive and seven performance categories are presented in Table Five. Information on date of birth and date of entry into police service was not included because of the high correlation between this information and the category of departmental tenure, which was included. Marital status was not included because the large majority of officers were married, and because there was no assurance that all department files were equally up to date with respect to possible separation or divorce status. Race was dropped because of the extremely low number of non-white cases (less than 30). Days off lost, suspensions, chargeable accidents, and

TABLE FIVE  
Intercorrelations of Paired-Comparisons Performance Rating and Selected Objective Performance Dimensions  
in Statewide and Chicago Metropolitan Area Departments #

Variable	(060)	(008)	(009)	(010)	(139)	(140)	(141)	(142)	(143)	(144)	(147)
(060) Paired-Comparisons Rating											
(008) Departmental Tenure	-.05										
(009) Years of Education	-.03	.13*									
(010) Hours of Police Training	.07	-.15**	.05								
(139) Average No. of Felony Arrests	.25***	.01	-.04	.16*							
(140) Average No. of Misdemeanor Arrests	.16*	.00	-.08	.06	.64***						
(141) Average No. of Traffic Citations	-.06	.13*	.09	.20**	-.07	.04					
(142) Average No. of Ordinance Arrests	-.10	.17**	.13	.05	-.14	.03	.52***				
(143) Average No. of Citizen Complaints	-.03	.04	-.08	-.10	.02	-.08	-.10	-.11			
(144) Average No. of Reprimands	-.23***	.01	-.01	.03	.07	.09	-.08	-.07	.00		
(147) Average No. of Absences	-.05	-.17**	.02	-.11	-.01	-.08	.00	-.12	.00	.09	

# Statewide intercorrelations are presented above the diagonal, N = 375.  
Chicago Metropolitan Area intercorrelations are presented below the diagonal, N = 220.

\* indicates correlation is statistically significant at the .05 level of confidence.

\*\* indicates correlation is statistically significant at the .01 level of confidence.

\*\*\* indicates correlation is statistically significant at the .001 level of confidence.

departmental awards were dropped because of infrequency of these events. Departmental service ratings were not included since it did not prove to be feasible to meaningfully combine this information across departments. Information in the three descriptive categories was up to date as of June, 1972. Information on the seven performance categories was averaged across three six-month time periods (January-June, 1971; July-December, 1971; January-June, 1972) to provide a more stable estimate of current performance.

In Table Five, statewide results are presented above the diagonal and Chicago Metropolitan Area results are presented below the diagonal. Given the significant correlations between the paired-comparisons and the JBDS ratings, only paired-comparisons results are presented in this table. Although many interesting results are presented in this table, the correlations between the paired-comparisons rating and the objective performance indicators are of prime concern. Significant positive correlations were found to exist between the paired-comparisons rating and felony and misdemeanor arrests in both the statewide and Chicago Metropolitan Area analyses. A significant negative correlation was established with departmental reprimands in both analyses.

#### CONCLUSION

The results discussed above describe a good deal of progress in the development of performance appraisal techniques which can be of use to municipal departments in the State of Illinois. The results of the application of the paired-comparisons rating were most encouraging, and were thought to evidence the strong utility of this technique in the provision of an overall assessment of current job performance. The results achieved in the use of the Job Performance Description Scales were also highly encouraging and were considered to support the use of this technique for personnel research purposes and for purposes of diagnosis of individual training needs.

The results of the analysis of the objective data supported the utility of the supervisory performance measures and demonstrated the utility of objective measures in characterizing specific facets of police officer job performance.

Based upon the supporting evidence provided by results of the Job Behavior Description Scales and the objective performance indicators, and upon the results of the internal consistency and similarity analyses, it was concluded that the paired-comparisons rating results provided an accurate and meaningful assessment of overall police officer job performance in participating departments. For these reasons, the paired-comparisons rating was carried forward as the principal job performance criterion in the validation of the police officer selection test battery.

APPENDIX TO CHAPTER THREE

1. "Illinois Local Community Police Officer Selection Project," distributed to Police Officers, Supervisory Personnel, and Chiefs of Police in Participating Agencies.
2. "Participation of Supervisors in the Illinois Local Community Police Officer Selection Project," distributed to Supervisory Personnel and Chiefs of Police in Participating Agencies.
3. "Instructions for Completing the Paired-Comparison Rating and Job Behavior Rating Scale," distributed to Supervisors Participating in Patrolman Job Performance Rating.
4. Sample Paired-Comparison Appraisal Sheet and Answer Sheet.
5. Sample of Patrolman Job Performance Description Scales.
6. Sample of Form Used to Collect Objective Performance Data.

## THE UNIVERSITY OF CHICAGO

To: Police Officers, Supervisory Personnel, and Chiefs of Police in  
Participating Agencies

From: John Furcon, Project Director

In re: Illinois Local Community Police Officer Selection Project

### I. BACKGROUND OF THE PROJECT

In 1969, the Industrial Relations Center of The University of Chicago was contacted by representatives of the Illinois Association of Chiefs of Police and the Illinois Association of Boards of Fire and Police Commissioners, and was requested to assist these organizations in the development of an improved selection testing procedure for police applicants. A project plan was written and, in the spring of 1971, the Illinois Law Enforcement Commission awarded a grant to support the conduct of the project.

### II. PURPOSE OF PROJECT

The aim of the project is to develop a testing program of proven validity (i. e., a program in which the tests are related to the on-the-job requirements of the police officer's work, and are associated with, and predictive of, successful police officer performance) and a testing program which is fair and equitable to applicants of all backgrounds.

### III. ROLE OF COSPONSORING ORGANIZATIONS

The project can be successfully implemented only with the complete cooperation and support of a number of key police agencies in the State of Illinois. The Illinois Association of Chiefs of Police has worked with the

project staff in reviewing the needs of each phase of the project, in planning activities, and in realizing a high level of support from participating agencies.

The Illinois Association of Boards of Fire and Police Commissioners has shared in project planning and has worked to develop community-wide support for the project. Most importantly, however, this group will have a decisive role in developing and determining the actual use of these testing procedures in communities throughout the State.

The Illinois Law Enforcement Commission has not only provided the financial support which makes the project possible, but has also made ILEC staff available to contribute to the planning and conduct of all phases of the project.

### IV. PROGRESS TO DATE

The first phase of the project was a thorough analysis of the requirements of the police officer's job, which was conducted in thirty cities throughout the State. This phase led to the identification of a number of tests which were relevant to the requirements of the job, and to the identification of patrolmen job performance criteria which could be used as a standard against which to judge the value and effectiveness of each test. Most recently, work has been centered on selecting approximately 100 key police agencies from throughout the State for participation in the test-data collection phase of the project.

### V. PRESENT NEEDS OF THE PROJECT

Project progress has reached a critical phase. Patrolmen in participating agencies are needed at this time to cooperate by taking the battery of tests which has been identified as potentially valuable in the establishment of improved and valid selection testing procedures. Participation forms will be distributed and a call for volunteers will be made in your department. A random sample of patrolmen, representative of (1) the region of the State and (2) the sizes of police departments in each region, will be selected by the University and scheduled for a testing session by their department.

The test administration will take approximately five hours, and will be conducted at locations conveniently accessible to participants. These tests

will, in general, be quite different from the usual "I. Q." test, and will instead focus on areas such as work interests, perceptual ability, reaction speed, analysis of problem-solving situations involving people, and behavioral traits.

The results for these participants will be used to decide which of the tests should be used with police applicants, what weight should be given to each test in the selection process, and, most important, what standards should be set on the tests for passing or rejecting applicants.

#### VI. CONDITIONS OF PARTICIPATION

Police officer participation will take place under the following conditions:

- A. All Test Results Are Confidential. Individual test booklets and scores will be retained by the Industrial Relations Center of The University of Chicago.
- B. Individual Test Results Will Not be Disclosed to Participating Agencies. Police Departments and Fire and Police Commissions will not have access to the test results. No record of scores will be placed in a man's personnel file.
- C. No Administrative Action Will Be Based on These Results. Since individual scores will not be disclosed, no promotion or transfer decisions can be based on them. A man's participation in the project will in no way help or hinder his police career.
- D. Individual Identity Will Not be Important. Although the testing will not be anonymous, individual identity will be used only to relate scores and performance data in the statistical analysis. Findings will be presented in the form of group rather than of individual results.

#### VII. RESPONSE TO CALL FOR VOLUNTEERS

Each patrolman in participating agencies will be required to complete a patrolman participation form. If a patrolman volunteers, he will also be given the chance to indicate his preference for time of day and week of participation. Given the large number of participating agencies, specific test

sessions will be scheduled based upon (1) preferences of selected volunteers and (2) manpower assignment needs of each department. Patrolmen who decide not to volunteer will also indicate this choice. The participation forms will be collected in each department by the Chief of Police, who will forward them to The University of Chicago for processing. Selected volunteers will be notified and scheduled by their own department.

#### VIII. BENEFITS TO BE DERIVED

A number of individual and department benefits will be derived from participation in the project:

##### A. For the Individual

1. Participants will contribute directly to the refinement and upgrading of procedures used in selecting applicants for police service in the State of Illinois and, in a very real way, will set the standards for men entering police service in the future.
2. Participation in the project and exposure to, and experience with, the new types of tests will be a valuable personal growth experience, given the importance of written examinations in the promotional process in police service.

##### B. For Participating Agencies

1. The project will develop improved personnel selection methods for use in the State of Illinois, thereby providing a mechanism for upgrading the qualifications of those being admitted to police service.
2. On the basis of the test results of experienced and successful police officers participating in the project, it will be possible to set meaningful standards on the tests identified as valid in the project.
3. This test validation project is the first statewide project of its type in the United States. Its successful completion will make a positive contribution to the effectiveness of police selection procedures throughout the State of Illinois and, in addition, will contribute to the professionalization of local

community police departments throughout the country. The national significance of the project has already been recognized, and the successful completion of the project will reflect credit to the agencies involved as well as to the State of Illinois.

THE UNIVERSITY OF CHICAGO

DATE October, 1972

To: Supervisory Personnel and Chiefs of Police in Participating Agencies

From: John Furcon, Project Director

In re: Participation of Supervisors in the Illinois Local Community Police Officer Selection Project

#### I. INTRODUCTION

This memo describes the specific responsibilities of supervisors in police departments participating in the project. Another memo which is being distributed to all sworn personnel in these departments provides a thorough description of the background and goals, and of the requirements being set, for patrolman participants in the project.

#### II. REQUIREMENTS SET FOR SUPERVISORS

Three requirements need to be fulfilled by supervisors:

- A. The identification of patrolmen whom they feel they know well enough to rate.
- B. The completion of the paired-comparison performance rating procedure for all patrolmen identified in 'A'.
- C. The completion of other patrolman rating scales for several specific patrolmen.

#### III. IMPORTANCE OF THE SUPERVISORY RATINGS

As outlined in the memo to all sworn personnel mentioned in I, above, the aim of the project is to develop a selection testing program of proven validity. Tests in themselves are of little value unless they can be related to measures of on-the-job police officer performance. Given the complex

nature of the police officer's job, it is difficult to agree on any single measure which most accurately and validly depicts actual job performance. It has been our experience that supervisory ratings of police officer performance provide the most reliable and valid measure, and for this reason, supervisory ratings are the foundation of the project. Test scores achieved by police officers participating in the testing phases will be related to the supervisory ratings by statistical analysis, to indicate: (1) which specific tests should be recommended for use with police applicants; (2) what weight should be attached to these tests in the selection process; and (3) perhaps most important, what type of standards should be set in screening applicants.

#### IV. CONDITIONS OF PARTICIPATION FOR SUPERVISORS

- A. All rating results are confidential. Individual rating materials and scores will be retained by the Industrial Relations Center of The University of Chicago.
- B. Individual rating results will not be disclosed to participating departments. No record of scores will be placed in a patrolman's personnel file. A supervisor's rating material and results will not be reviewed or returned to the department.
- C. No administrative action will be based on these results. Since individual patrolmen and supervisor results will not be disclosed, no promotion or transfer decision can be based on them. A man's participation in the project will in no way help or hinder his police career.
- D. Individual identity will not be important. Findings related to the supervisory rating will be presented in terms of group rather than individual results.

#### V. CONSIDERATIONS IN SELECTING PATROLMEN FOR RATING

- A. The primary rating procedure will be a "paired-comparison" rating. In this rating, each supervisor first indicates which police officers he feels he knows well enough to rate in terms of job performance. Based upon his list, a set of rating materials is prepared in which all possible pairs of names on the list are contrasted, one pair at a time. The rating is conducted when the supervisor considers each pair of names and decides which of the two men is the better police officer in terms of job performance, and records this decision on a separate answer sheet.

There are three immediately apparent advantages to using the paired-comparison rating: (1) the rating is quite rigorous since each man is compared to every other man; (2) each supervisor makes his own decisions privately using the standards he has developed as a police officer and a police supervisor; and (3) a relatively short time is needed to complete the rating. A group of 30 patrolmen is ordinarily rated in 35 minutes or less using this method.

#### B. Supervisors should select for rating:

1. Police officers whose current job performance is known to them.
2. Only officers who are or who have recently been assigned to field duty.
3. As many officers as possible, so that the full range of job performance (i.e., exceptional, average, and marginal performers) will be included in the rating.

In this rating, each supervisor should select at least ten men, but no more than fifty men. A desirable range would be twenty to thirty officers.

- C. Additional information on the other rating scales to be used will be disseminated when these scales are reviewed and established in their final form.
- D. The total time commitment for each supervisor in the project, including all rating, should not exceed three hours.

#### VI. CONCLUSION

This project is thought to differ from many other types of projects in at least two important ways:

- A. The successful completion of the project will provide tangible personnel tools and methods for immediate use by departments and appointing authorities in the State.

- B. Police personnel have been involved in all phases of the project, and are in fact providing the information which will be used to establish procedures and set personnel standards in the future for communities throughout the State.

For these reasons, and in the light of the purpose and goals of the project, the complete cooperation and support of supervisory personnel in participating agencies is urgently requested.

THE UNIVERSITY OF CHICAGO

DATE November, 1972

TO Supervisors Participating in Patrolman Job Performance Rating

FROM John Furcon, Project Director

IN RE: Instructions for Completing the Paired-Comparison Rating and Job Behavior Rating Scale

A. GENERAL INSTRUCTIONS

Enclosed are the rating materials prepared from the list of subordinates you indicated you knew well enough to rate. Your envelope(s) should contain the following:

1. For the Paired-Comparison Rating:
  - a. a set of computer pages containing pairs of names of subordinates
  - b. a folder containing one or more answer sheets
  - c. one number 2 lead pencil
2. For the Job Behavior Rating Scale
  - a. a number of rating booklets, one booklet for each man you will rate

You are requested to fill out these rating materials, following the specific instructions presented below. If any questions arise in your completion of these materials which you are unable to resolve with your Chief or Project Coordinator, please contact Joseph Ronne, Field Coordinator, at (312) 753-2039 for further information.

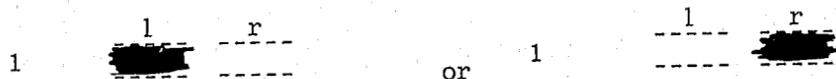
B. SPECIFIC INSTRUCTIONS: PAIRED-COMPARISON RATING

The computer pages contain all possible pairs of names on your rating list, arranged in random order. Each line containing a pair of names has a corresponding position on the separate answer sheet (as is printed in the right hand column on each page). Use only a number 2 lead pencil indicating your response on the separate answer sheet. Avoid making stray marks as this may result in scoring errors. You may change a response if you completely erase the unwanted response.

To carry out the rating, consider each pair of names, and in view of the duties of patrolmen in your department, ask yourself the following question:

"Which of the two men is the better patrolman in terms of demonstrated job performance?"

When you have made your choice, place your mark in the indicated space on the separate answer sheet. Each line on the computer page has a designated page number and answer sheet position. Completely blacken the area on the answer sheet which corresponds to your choice, as is shown below:



Make a choice for each pair of names. Do not omit any comparisons. Try not to consider what you may have heard others say about these men--rather, base your decisions upon your own experience with them. Your decision should be based upon: (1) the standards you have developed for patrolman performance based on your own experience as a police officer and police supervisor, and (2) your own experience with the job performance of these men.

It is not necessary to provide narrative statements justifying each choice you make. Merely decide which of the two men in each pair demonstrates the more effective level of job performance, and record your choice on the separate answer sheet.

Repeat the process for each of the remaining pairs of names. Work rapidly, making sure to indicate a decision for each pair. A set of materials for rating 30 individuals (containing 435 pairs) can be completed in thirty to forty minutes. You will note that each time you start a new computer page of pairs of names, your first rating response will be made at the top of a column on the answer sheet.

Some raters may require more than one answer sheet. In such instances, the answer sheets are labeled in sequence, e. g., "page 1 of 3," "page 2 of 3," etc., and should be filled out accordingly.

When you are finished, check to be sure that the last entry on the answer sheet corresponds to the page number and the answer sheet number designated on the last line of your computer page.

Place the answer sheet(s) into the cardboard folder for return to the University of Chicago. The computer pages should NOT be returned.

C. SPECIFIC INSTRUCTIONS: JOB BEHAVIOR RATING SCALE

Each rater will be provided with several job behavior rating scale booklets, one for each patrolman he is requested to rate. All patrolmen who are rated with job behavior rating scales will be officers who have completed the test battery.

These steps should be followed in completing the patrolman job behavior rating scale:

- 1) Read the instructions and example provided in the first several pages of the rating booklet.
- 2) Read the actual rating scales themselves--that is, read through the rest of the pages of the booklet, noting the definition of each particular dimension as well as the specific job incidents comprising each scale.
- 3) Note that you are being asked to indicate your judgment of the "typical" job performance of the officer. He may have never been involved in situations identical to those contained in the scales. The rating he receives is based on your assessment of his typical job performance, and is indicated by your selection of the one paragraph on each page which best describes his typical job performance.
- 4) One rating booklet should be filled out for each patrolman you are requested to rate. His name, your name, and the name of your department should be entered on the cover of each booklet.

D. CONCLUDING COMMENTS

As noted in the earlier memo distributed to supervisors in participating departments:

- 1) Your rating judgments are confidential and will not be returned to your department for review or for any other purpose.
- 2) Since these results are confidential, your judgments will have no influence on your own career or assignment, or on any patrolman's career or assignment, in the department.

The most meaningful rating will be obtained if each supervisor completes and submits his paired-comparison rating and behavior rating scales individually, without detailed discussion with other supervisors. In all cases, the final ratings achieved by a patrolman will be based on the composite judgment of all supervisors rating him.

F. INSTRUCTIONS FOR RETURN

Used the enclosed prepaid return envelope for the return of rating materials as described below:

Paired-Comparison Rating--answer sheets should be placed in the gray folder provided for return to the Industrial Relations Center. Care should be taken so that the sheets are not folded or torn in the mail. The computer pages containing pairs of names of patrolmen are NOT to be returned--they may be discarded once the rating has been completed.

Job Behavior Rating Scales--All booklets are to be returned to the Industrial Relations Center

PAIRED COMPARISON APPRAISAL FOR ILEC PROJECT

PAGE 1

RATER NAME BLODICK KENNETH A S413 LIST # 1 FILE # 50 3

DIRECTIONS: FIND THE SPACE ON THE ANSWER SHEET WHICH HAS THE SAME NUMBER AS FOUND IN THE COLUMN MARKED "ANSWER SHEET #"  
CHOOSE EITHER THE LEFT OR RIGHT ELEMENT FROM THE PAIR.  
BLACKEN THE CORRESPONDING SPACE UNDER L OR R.

PAIR #	LEFT ELEMENT	RIGHT ELEMENT	PAGE #	ANSWER SHEET #
1	PETERSON RAYMOND A 1506	MCCALLUM JAMES G 2323	1	1
2	PETERSON RAYMOND A 1506	DODLEY ROBERT W 2837	1	2
3	MCCALLUM JAMES G 2323	BROOKS RIGLER L 197	1	3
4	KARPOWSKI PATRICK J 1750	RICCI JOHN P 1607	1	4
5	DODLEY ROBERT W 2837	MOFFITT JAMES E 2587	1	5
6	KNOWLES CAMERON J 1719	MOFFITT JAMES E 2587	1	6
7	RICCI JOHN P 1607	DODLEY ROBERT W 2837	1	7
8	KNOWLES CAMERON J 1719	MCCALLUM JAMES G 2323	1	8
9	BROOKS RIGLER L 197	RICCI JOHN P 1607	1	9
10	BROOKS RIGLER L 197	KARPOWSKI PATRICK J 1750	1	10
11	RONAN JOHN P 1500	BROOKS RIGLER L 197	1	11
12	KARPOWSKI PATRICK J 1750	PETERSON RAYMOND A 1506	1	12
13	PETERSON RAYMOND A 1506	RICCI JOHN P 1607	1	13
14	MOFFITT JAMES E 2587	KARPOWSKI PATRICK J 1750	1	14
15	MOFFITT JAMES E 2587	BROOKS RIGLER L 197	1	15
16	RONAN JOHN P 1500	KARPOWSKI PATRICK J 1750	1	16
17	PETERSON RAYMOND A 1506	KNOWLES CAMERON J 1719	1	17
18	MOFFITT JAMES E 2587	RICCI JOHN P 1607	1	18
19	BROOKS RIGLER L 197	KNOWLES CAMERON J 1719	1	19
20	KNOWLES CAMERON J 1719	DODLEY ROBERT W 2837	1	20
21	KARPOWSKI PATRICK J 1750	DODLEY ROBERT W 2837	1	21
22	KNOWLES CAMERON J 1719	RONAN JOHN P 1500	1	22

THE COMPARATOR

TPVF 728

IRC, U OF C

NAME \_\_\_\_\_ SEX \_\_\_\_\_ YRS. OF EDUCATION \_\_\_\_\_ ORGANIZATION \_\_\_\_\_  
OCCUPATION \_\_\_\_\_ DATE \_\_\_\_\_ AGE \_\_\_\_\_ SOCIAL SECURITY NUMBER \_\_\_\_\_

DO NOT WRITE IN THIS AREA

-----  
-----  
-----  
-----  
-----  
-----

1	L	R	23	L	R	45	L	R	67	L	R	89	L	R	111	L	R	133	L	R	155	L	R
2	L	R	24	L	R	46	L	R	68	L	R	90	L	R	112	L	R	134	L	R	156	L	R
3	L	R	25	L	R	47	L	R	69	L	R	91	L	R	113	L	R	135	L	R	157	L	R
4	L	R	26	L	R	48	L	R	70	L	R	92	L	R	114	L	R	136	L	R	158	L	R
5	L	R	27	L	R	49	L	R	71	L	R	93	L	R	115	L	R	137	L	R	159	L	R
6	L	R	28	L	R	50	L	R	72	L	R	94	L	R	116	L	R	138	L	R	160	L	R
7	L	R	29	L	R	51	L	R	73	L	R	95	L	R	117	L	R	139	L	R	161	L	R
8	L	R	30	L	R	52	L	R	74	L	R	96	L	R	118	L	R	140	L	R	162	L	R
9	L	R	31	L	R	53	L	R	75	L	R	97	L	R	119	L	R	141	L	R	163	L	R
10	L	R	32	L	R	54	L	R	76	L	R	98	L	R	120	L	R	142	L	R	164	L	R
11	L	R	33	L	R	55	L	R	77	L	R	99	L	R	121	L	R	143	L	R	165	L	R
12	L	R	34	L	R	56	L	R	78	L	R	100	L	R	122	L	R	144	L	R	166	L	R
13	L	R	35	L	R	57	L	R	79	L	R	101	L	R	123	L	R	145	L	R	167	L	R
14	L	R	36	L	R	58	L	R	80	L	R	102	L	R	124	L	R	146	L	R	168	L	R
15	L	R	37	L	R	59	L	R	81	L	R	103	L	R	125	L	R	147	L	R	169	L	R
16	L	R	38	L	R	60	L	R	82	L	R	104	L	R	126	L	R	148	L	R	170	L	R
17	L	R	39	L	R	61	L	R	83	L	R	105	L	R	127	L	R	149	L	R	171	L	R
18	L	R	40	L	R	62	L	R	84	L	R	106	L	R	128	L	R	150	L	R	172	L	R
19	L	R	41	L	R	63	L	R	85	L	R	107	L	R	129	L	R	151	L	R	173	L	R
20	L	R	42	L	R	64	L	R	86	L	R	108	L	R	130	L	R	152	L	R	174	L	R
21	L	R	43	L	R	65	L	R	87	L	R	109	L	R	131	L	R	153	L	R	175	L	R
22	L	R	44	L	R	66	L	R	88	L	R	110	L	R	132	L	R	154	L	R	176	L	R



PERSONNEL DECISIONS, INC.  
2515 FOSHAY TOWER  
MINNEAPOLIS, MINN. 55402

-79-

JOB PERFORMANCE DESCRIPTION SCALES  
FOR PRECINCT PATROLMEN

Your name \_\_\_\_\_

Your title and precinct \_\_\_\_\_

The name of the patrolman you are rating \_\_\_\_\_

THE MATERIAL IN THIS BOOKLET IS TO BE USED FOR RESEARCH  
PURPOSES ONLY.

JOB PERFORMANCE DESCRIPTION SCALES  
FOR PRECINCT PATROLMEN

Measuring job performance has always been an important issue for both supervisors and subordinates. Supervisors want to know how well a man is performing his job so that they can make decisions about him such as salary increases, promotions, etc. And all men, whether supervisors or subordinates, want to know how well they are doing their own job so that they can pay more attention to the things they do poorly and thereby improve.

However, measuring job performance is a difficult thing to do. Though we all speak English, we quite often have a different understanding of what some common words mean, such as good, poor, average, etc. Because we differ in what we mean by these words, we often cannot agree on whether a person's job performance is "good," "average," or "poor." Numbers don't help either, because people still have trouble agreeing on what they mean in terms of job performance. Another problem in measuring job performance is that most people find it hard to make up their minds about what the major characteristics are of what they want to measure.

Let's say you were going to paint a room brown for a friend. You show him the color of paint you have and he says that the color you have is "a lot less brown" than the color he wants. So you change the combination of colors and he says that the color you have is "not quite as brown" as the one he had in mind. You change the color again and he says, "That's a little too brown." Again, you change the combination of colors that make up brown and he says, "That color is a little less brown than I wanted." It is clear that what your friend means by "a lot less brown," "not quite as brown," "a little too brown," etc. is not the same as what you mean by "a lot less brown," "not quite as brown," etc. This is an example of the problem people have with measuring things using words that are not closely related to the thing they are measuring, in this case the color brown.

If your friend had told you that the paint was too shiny, you would have known he was talking about something other than the color of the paint, but what if he took the shininess of the paint into account and didn't tell you? This is an example of having different ideas of what is involved in measuring brownness.

Well, you got smart and decided that you would make up a whole series of brown paint chips according to different combinations of colors and arrange them so that your friend could look at them and pick the color he expected his room to be painted in. Of course, not every possible shade of brown was included in the colors you showed him, but the examples you had mapped out formed a scale of brown.

We have tried to develop job performance rating scales for precinct patrolmen that consist of about the same thing. Each scale is a list of possible examples of behavior. The examples form an outline of what is involved in doing one aspect of the job of a patrolman. The examples also serve as guideposts or trail markers along the scale, marking off more and more effective performance.

We developed 11 different rating scales for the job of precinct patrolman, based on information provided by patrolmen and sergeants in a major metropolitan city. The names of these scales are:

1. Crime Prevention
2. Investigating, Detecting, and Following up on Criminal Activity
3. Using Force Appropriately
4. Dealing Constructively with the Public
5. Handling Domestic Disputes
6. Traffic Maintenance and Control
7. Maintaining Public Safety and Giving First Aid
8. Integrity and Professional Ethics
9. Commitment, Dedication, Conscientiousness
10. Teamwork
11. Report Writing

INSTRUCTIONS: Look at the scale on the following page entitled "Crime Prevention." Read the short paragraph defining the Crime Prevention aspect of a patrolman's job. The supervisor who used the scale to rate one of his men felt that the example that best represented the typical performance of this patrolman was the one in which the officer took notes on apartments that didn't have good lighting. Though he never saw the patrolman make the specific behavior in the example, his impression of the patrolman's crime prevention performance matched that example. The supervisor felt that the patrolman's typical performance was better than the performance in the examples below the one he had checked. He also felt that the typical performance represented by the examples above the one he checked were better than the typical performance of the patrolman he was rating.

In making your ratings we would like you to read the job aspect definition and the examples of job performance that serve as guideposts for the scale. After you have a good idea of the kinds of things the scale is concerned with, pick the one example which best represents the typical performance of the man you are rating. Put an X on the blank by that example.

CRIME PREVENTION

Knowledge of effective modes of crime prevention, such as alarms, security fences, lighting, and random patrol; educating citizens to aid in deterring criminal activity or in aiding apprehension of suspects; maintaining security in keeping relevant information from potential criminals; being aware of trends in criminal activity; keeping an eye on potential or known criminals in the area.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

The officer went to every late night gas station in his area to alert the attendants about a group of hold-up men who had been hitting gas stations. He left a description of the men, a phone number to call and detailed instructions on what to do if the men were spotted. Because of his actions the hold-up men were apprehended.

When eight burglaries had occurred in a small area, the officer told a citizen that he would tell them how to help if they wished. The citizen organized a coffee party where the officer's tips on what to do led to the arrest of six young men.

An officer, after checking apartment house parking lots for car prowlers, would make a note of any apartment that didn't have good lighting and then tell the caretaker during the day.

The officer advised a bar owner who had been burglarized to wire a bell to the back door so a bartender who lived above the bar could tell when there was a break-in.

After there had been a rash of burglaries, the officer began spending more time patrolling the area they occurred in.

While on his night beat, an officer observed a business with one of the windows open. Finding no evidence of a break-in, he failed to report the open window to the owner the next day.

A burglar who was being transported to jail asked how the officer had known he had broken in. The officer then explained all about silent alarms--how they worked, how to spot them, etc.--educating him for his next job.

While on patrol an officer takes his coffee and lunch breaks at the same time and same place every night. He also patrols his beat in the same pattern every night.

\_\_\_\_\_
\_\_\_\_\_
X
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

HANDLING DOMESTIC DISPUTES

Holding back and using restraint in working with arguments and fights between husbands and wives, boyfriends and girlfriends, or other domestic combatants; exercising caution; mediating between parties, while maintaining impartiality; referring citizens to appropriate agencies for further help.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

When the officer arrived at the scene of a domestic, he found that the husband had assaulted his wife but that she didn't want him arrested. She wanted to leave with her small children, so the officer helped the woman dress her children while he kept the husband in a separate room. While the officer drove them to her parents' home, he advised her of the various agencies that could assist her with her marital problems.

The husband and wife knew the officer by name and his first action at that domestic call was to get them in separate rooms, ask each what their problems were, and how he could help. The wife wanted the husband to go to bed or leave, since he had been drinking. The officer presented him with these alternatives and advised him to go to bed, which he did.

On the third call to a husband/wife domestic, the officer realized the wife was using the officer's presence to belittle the husband. The officer took her aside and told her to seek help for her problems, but that the officer would not allow her to misuse his authority.

In order to arrest a man without a fight, the officer at a domestic explained that by law he had to arrest the man, that he would call more officers if need be, and that the man might get hurt if he put up a fight.

At a domestic, the wife made a "citizen's arrest" of her husband. The son sided with his father, and the officer had a difficult struggle to subdue and jail him.

At a domestic, the officer advised the husband, who was drunk, to leave when his wife refused to sign a complaint. The domestic was settled, because the husband drove away, but he left under the influence of alcohol.

When the officer arrived at a domestic, the wife started to leave, but the officer called her back and the husband/wife domestic began again.

The officer took a gun away from a woman in a domestic, but gave it back to her before her husband had left, so that she had it reloaded as her husband was leaving.

\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

INVESTIGATING, DETECTING, AND FOLLOWING UP ON CRIMINAL ACTIVITY

Being fully informed about all wanted felons; being alert to unusual circumstances or out of the ordinary situations; attentive to detail; protecting the crime scene to maintain the integrity of evidence; effective questioning of witnesses; verifying both suspects' and witnesses' answers; following up on all clues or leads.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

An officer was called to a domestic involving a man with a .38 caliber revolver and two companions trying to get an ADC check. Six hours later, when an armed robbery took place in another district by three men with a .38, he immediately provided detectives with names of suspects and a car description, leading to arrests and recovery of the loot.

After finding footprints leading up to a wall of a warehouse, but no prints leading away, an officer called for a dog and a key for the warehouse. A burglar who had scaled the wall and entered through a ventilator shaft was found inside.

At the scene of a man with a gun call, the officer found a gun which he handled carefully to preserve any fingerprints.

An officer requested a listing on a car parked in front of a house occupied by people who were suspected of associating with burglars. Since the plates listed to another car, it was towed away.

The officer was given a knife that appeared to have blood on it by a man who had found it laying in his yard. The officer put the knife in the glove compartment and forgot about it.

Early one morning an officer noticed a young man standing near a used car lot. When the officer asked him what he was doing, he said he was waiting for his dad to pick him up. The officer left and the next morning several car parts were reported missing from the used car lot.

At the scene of a burglary where many TV sets were taken, the officer was told by a neighbor that he had observed a truck at the scene earlier in the evening. The officer failed to get the neighbor's name and did not follow up the information.

\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

CRIME PREVENTION

Knowledge of effective modes of crime prevention, such as alarms, security fences, lighting, and random patrol; educating citizens to aid in deterring criminal activity or in aiding apprehension of suspects; maintaining security in keeping relevant information from potential criminals; being aware of trends in criminal activity; keeping an eye on potential or known criminals in the area.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

The officer went to every late night gas station in his area to alert the attendants about a group of hold-up men who had been hitting gas stations. He left a description of the men, a phone number to call and detailed instructions on what to do if the men were spotted. Because of his actions the hold-up men were apprehended.

When eight burglaries had occurred in a small area, the officer told a citizen that he would tell them how to help if they wished. The citizen organized a coffee party where the officer's tips on what to do led to the arrest of six young men.

An officer, after checking apartment house parking lots for car prowlers, would make a note of any apartment that didn't have good lighting and then tell the caretaker during the day.

The officer advised a bar owner who had been burglarized to wire a bell to the back door so a bartender who lived above the bar could tell when there was a break-in.

After there had been a rash of burglaries, the officer began spending more time patrolling the area they occurred in.

While on his night beat, an officer observed a business with one of the windows open. Finding no evidence of a break-in, he failed to report the open window to the owner the next day.

A burglar who was being transported to jail asked how the officer had known he had broken in. The officer then explained all about silent alarms--how they worked, how to spot them, etc.--educating him for his next job.

While on patrol an officer takes his coffee and lunch breaks at the same time and same place every night. He also patrols his beat in the same pattern every night.

\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

MAINTAINING PUBLIC SAFETY AND GIVING FIRST AID

Concern for public safety; knowing and using the proper procedures for dealing with hazardous or emergency situations; evacuating and restricting activities in dangerous areas; giving quick and effective first aid when indicated.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

At a propane gas tank leak, the officer requested cars to block specific intersections. He then shut down two nearby companies and began evacuating the area, all before receiving orders from his supervisor.

\_\_\_\_\_

While watching a parade, an old man collapsed. An officer rushed up, pushed the crowd back, gave mouth-to-mouth resuscitation and saved the man's life.

\_\_\_\_\_

Arriving at a house with two burning fire bombs on the front porch, the officer evacuated the house, contacted the fire department, and extinguished the flames with dirt.

\_\_\_\_\_

Responding to a call about a burning car, an officer, noticing a fire near the gas tank, evacuated the area of bystanders and contacted the fire department.

\_\_\_\_\_

In response to a suicide attempt where a girl had slashed her wrists, the officer administered proper first aid to stop the bleeding.

\_\_\_\_\_

At a bomb threat to a business, the officer evacuated the building, but did not evacuate adjacent buildings.

\_\_\_\_\_

An officer saw that the sidewalk next to a building that was being wrecked was not blocked off and that people might be hurt by debris, but he did nothing about it.

\_\_\_\_\_

At an auto accident a victim complained that he was injured, though there were no signs of any injury. The officer told the person that he was faking and then refused to call an ambulance.

\_\_\_\_\_

**CONTINUED**

**1 OF 2**

MAINTAINING PUBLIC SAFETY AND GIVING FIRST AID

Concern for public safety; knowing and using the proper procedures for dealing with hazardous or emergency situations; evacuating and restricting activities in dangerous areas; giving quick and effective first aid when indicated.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

At a propane gas tank leak, the officer requested cars to block specific intersections. He then shut down two nearby companies and began evacuating the area, all before receiving orders from his supervisor.

\_\_\_\_\_

While watching a parade, an old man collapsed. An officer rushed up, pushed the crowd back, gave mouth-to-mouth resuscitation and saved the man's life.

\_\_\_\_\_

Arriving at a house with two burning fire bombs on the front porch, the officer evacuated the house, contacted the fire department, and extinguished the flames with dirt.

\_\_\_\_\_

Responding to a call about a burning car, an officer, noticing a fire near the gas tank, evacuated the area of bystanders and contacted the fire department.

\_\_\_\_\_

In response to a suicide attempt where a girl had slashed her wrists, the officer administered proper first aid to stop the bleeding.

\_\_\_\_\_

At a bomb threat to a business, the officer evacuated the building, but did not evacuate adjacent buildings.

\_\_\_\_\_

An officer saw that the sidewalk next to a building that was being wrecked was not blocked off and that people might be hurt by debris, but he did nothing about it.

\_\_\_\_\_

At an auto accident a victim complained that he was injured, though there were no signs of any injury. The officer told the person that he was faking and then refused to call an ambulance.

\_\_\_\_\_

USING FORCE APPROPRIATELY

Keeping one's "cool" under pressure or personal abuse; being able to judge and to utilize the correct amount of force to resolve an incident promptly and effectively; avoiding acts that might be seen as brutal or sadistic; retaining composure when confronted with hostility and provocation.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

A deskman calmly convinced a man who was pointing a rifle at him to hand it over rather than shooting the man when he had the chance.

\_\_\_\_\_

In a fight with a traffic violator, the violator knocked one officer down, took his revolver, and shot six shots at the officer's partner, hitting him four times. The wounded officer pulled his revolver and drew a bead on the violator, who then threw the empty gun down and raised his hands. The wounded officer did not fire, but instead kept the violator covered until he was in custody.

\_\_\_\_\_

An officer stopped a car for a traffic violation and the driver assaulted the officer with obscenities and verbal abuse. The officer wrote the tag and calmly explained why the man got the tag and how he could handle it, still amid a barrage of obscenities.

\_\_\_\_\_

The officer grabbed the arm of a girl attacking her boyfriend with an ice pick, narrowly saving him. The officer was then assaulted by her, and had his shirt ripped by the ice pick before he struck her in the head with his gun to subdue her.

\_\_\_\_\_

The officer waited for two young men who had been rowdy and noisy in a restaurant to come back to their car to pick them up. He took them to a dark area several blocks from their car, kicked them in the ass, and told them to walk back to their car. He also said that they should stay out of the area, because their kind weren't needed.

\_\_\_\_\_

While taking a very hostile and belligerent man to jail, the officer purposely threw him against the wall.

\_\_\_\_\_

The officer slapped a man who was pestering a bartender to sell him a drink after hours.

\_\_\_\_\_

A man stopped after being chased at high speed. Even though the situation was in hand, an officer from a second squad which pulled up began beating the man.

\_\_\_\_\_

COMMITMENT, DEDICATION, CONSCIENTIOUSNESS

Exerting maximum effort at all times; responding to all calls, constantly updating and improving one's skills; being on time; readiness to provide police services at all times, both on and off duty; readiness to respond to needs at all times, off or on duty; conducting oneself properly when off duty.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

An off-duty police officer and his wife pulled into a gas station just after it had been held up. The officer told his wife to call the police, then gave chase on foot, apprehending one suspect.

\_\_\_\_\_

An officer observed a person jump from a bridge into the Mississippi River. He jumped into the river and pulled the person to safety.

\_\_\_\_\_

An officer recently assigned as deskman at the precinct received no instructions on what the job involved, so he read the job description and was able to handle all duties.

\_\_\_\_\_

An officer occasionally assigned to a certain beat noticed juveniles hanging around a vacated building. The officer passed this information on to the men who were permanently assigned to the area.

\_\_\_\_\_

An off-duty who was informed of a potentially dangerous situation; i.e., children digging into the side of a steep bank, failed to make note of it and did not remember to report it for several days.

\_\_\_\_\_

The officer was in a cafe drinking coffee, even though he had told the dispatcher he was still at an accident.

\_\_\_\_\_

After being informed at roll call every day two weeks prior to the date that officers were to change to winter uniforms, an officer came to work in his summer uniform.

\_\_\_\_\_

The officer was tipped off to a burglary, but got there too late because he took care of some personal business first.

\_\_\_\_\_

INTEGRITY AND PROFESSIONAL ETHICS

Avoiding opportunities to use one's badge, uniform, or authority for personal gain; refusing bribes, inventorying all evidence; presenting evidence accurately and completely; refusing bribery attempts.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

The officer gave a businessman he knew a ride home, because the man was drunk. The next day the officer received an envelope containing \$200 from the businessman. The officer returned the money and explained that he took the man home because he was a friend and expected nothing for it.

\_\_\_\_\_

A man offered to pay the officer if he wouldn't enforce prostitution laws so tightly in his area. The officer refused, sent a memo to the Morals Division and observed the man even closer in the future.

\_\_\_\_\_

An officer who was having financial problems was offered a \$100 bribe by a drunk driver, but he immediately refused the money and added attempted bribery to the charges.

\_\_\_\_\_

The officer gave a ride to a man who had left his house as a result of a domestic. At his destination, the man offered the officer some money for his troubles, but the officer declined.

\_\_\_\_\_

After arresting two men drinking illegally and confiscating their bottle, the officer refused the money offers of "winos" along the street for the liquor.

\_\_\_\_\_

On the way home from work, an officer would stop at a drive-in that fed uniformed officers for nothing and pick up dinner for his family.

\_\_\_\_\_

Two officers walked into a bar and one officer asked for a Christmas bottle for each. When his partner said, "Put mine back, I don't want it," this officer took both bottles.

\_\_\_\_\_

Answering a call to a D.O.A., an officer told the bystanders in the apartment building to go back to their rooms, that he would handle everything. His partner asked why he was searching the apartment, and the officer replied, "You never know what you can find, especially money."

\_\_\_\_\_

DEALING CONSTRUCTIVELY WITH THE PUBLIC

Courtesy and understanding; helping citizens in matters that may not be strictly police business; maintaining and improving the police department's image in the eyes of the public; knowing about and using other agencies for referral of citizens who have special problems.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

The officer made a service call to a destitute family. He called the proper authorities to obtain assistance for them and bought a tree and presents to make their Christmas happier.

\_\_\_\_\_

Answering a call in which a blind man had been robbed of his grocery money, the officer went to a nearby church to collect food coupons and then took the blind man to the store and assisted him in buying groceries.

\_\_\_\_\_

The officer had an elderly woman who had lost her house keys sit in the squad, out of the cold, while he gained entry. After she was inside the officer replaced the storm window he had removed.

\_\_\_\_\_

Because the bartender admitted having served the man too much liquor, the officer didn't arrest the man who was slumped over the bar, but instead walked him home.

\_\_\_\_\_

A girl's boyfriend was abusive toward an ambulance attendant, who spoke in a loud voice to the hysterical girl in an attempt to get through to her. An officer called the boyfriend aside and told him in no uncertain terms that he was wrong and to stop interfering.

\_\_\_\_\_

A man flagged an officer down and asked if he could get a jump start since his car battery was dead. The officer said he wasn't allowed to and drove off.

\_\_\_\_\_

The deskman was listening to a man's questions about a traffic accident when the phone rang. He just picked up the phone saying, "The forms are on the table," but he didn't answer the man's questions.

\_\_\_\_\_

A depressed alcoholic committed suicide by jumping out of a hotel room after a minister left the room to get the man's bag. The investigating officer said, "When you left the room to go down to the car, did the guy tell you he'd meet you?"

\_\_\_\_\_

TEAMWORK

Having a good "feel" for what one's partner's actions are going to be without asking; backing him up and keeping his safety in mind at all times; keeping him informed; willingness to risk one's own safety to assure his protection; cooperating with other divisions or departments; assisting other law enforcement agencies such as the FBI or State's Attorney.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

When the officer saw the criminal he and his partner had been tailing was about to shoot his partner, he yelled the criminal's name, which fouled his shot, saving the partner's life.

\_\_\_\_\_

While two officers were closing in on a wanted criminal, the officer realized that his partner had not seen the gun the criminal had drawn. The officer yelled and alerted his partner.

\_\_\_\_\_

While searching some bars for a robbery suspect, the officer would stand in front of the bar while his partner would go inside and look for the suspect.

\_\_\_\_\_

When the officer received his days-off slip for the month, he called his partners and arranged the days off so that the days off were acceptable to all.

\_\_\_\_\_

At roll call an officer was given memos concerning his squad's work in a district. The officer put the information in his pocket, failed to tell his partner what it concerned, and handled the situation by himself. Thus, his partner was unable to answer his supervisor's questions regarding the handling of the instructions.

\_\_\_\_\_

When asked to assist in arresting a drunk, the officer simply walked away, even though the drunk was being obviously troublesome to his fellow officer.

\_\_\_\_\_

An officer remained in a squad car "apparently frozen" even though his partner got out of the squad, attempted to break up the fight, got involved in it, and was threatened by the crowd.

\_\_\_\_\_

REPORT WRITING

Knowing and using the proper style or mode for reporting or communicating information; providing complete reports of one's actions; specifying all details which may aid in reconstructing the incident; using the correct grammar and language in reports.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

The officer's report of a robbery of a person where a suspect was apprehended contained not only a standard account of the crime, but details of the weather and lighting conditions at the scene and a field sketch of the crime scene.

\_\_\_\_\_

The officer's resume contained the names of all witnesses he questioned, their occupation, residence, phone number, and reason for being in the area.

\_\_\_\_\_

An officer helped two other officers write a report of a felony arrest so that it contained all necessary information and was acceptable to the county attorney.

\_\_\_\_\_

On a report form for a burglary of a dwelling, the officer filled in all of the spaces properly, but the body of the report was brief and he failed to explain some minor details.

\_\_\_\_\_

An officer's offense report did not mention the type of residence burglarized.

\_\_\_\_\_

An officer's report contained many incomplete sentences or fragments, such as "held suspect while partner opened case he was carrying."

\_\_\_\_\_

An officer was called to a house burglary, investigated, and filed a report. The next day, he was requested by the Detective Division to return to the scene and redo his incomplete report.

\_\_\_\_\_

An officer wrote an incomplete and messy report of a serious crime. He was told to redo the report, but instead he simply filled in the missing information. (The report was again returned and the officer was told to retype it.)

\_\_\_\_\_

TRAFFIC MAINTENANCE AND CONTROL

Concern for and effective actions for maintaining motorized and pedestrian traffic safety; knowing traffic ordinances; exercising caution in apprehension of speeders and other offenders; responding quickly to accidents and taking proper actions to preserve life and protect property; protecting the accident scene.

Read each behavioral example and then put an X by the example that best represents your expectation of the typical performance of the patrolman you are rating.

After an officer became aware that a dangerous intersection had no traffic control devices and that a high hedge was obstructing the view, he took it upon himself to contact the traffic engineers to have signs posted and the owner of the hedge to have it cut.

\_\_\_\_\_

While tagging a driver for speeding in a school zone, the officer explained how unpredictable children were when playing and how much damage a car can do to a pedestrian.

\_\_\_\_\_

An officer on routine patrol observed an emergency vehicle attempting to go through an intersection and immediately took measures to stop traffic and control the situation.

\_\_\_\_\_

The officer tagged and towed a parked car which he found covered with snow, though it hadn't snowed for five days.

\_\_\_\_\_

Investigating an accident, an officer used his squad car to block a street at the bottom of a hill. A car coming down the hill was unable to stop and hit the squad.

\_\_\_\_\_

Observing a driver traveling at high speeds down a residential area late one night, an officer decided not to ticket the individual because the street was clear, but to warn him. [Even when the driver became impatient with being stopped, the officer gave only a warning.]

\_\_\_\_\_

While on patrol, the squad car was almost involved in an accident with a car which turned right in front of it. The officer disregarded the partner's suggestion to give a tag and said, "No, I'll just chew them out."

\_\_\_\_\_

While directing rush hour traffic from the middle of a very busy intersection, the officer began a needless conversation with a friend. He stopped directing traffic and stood with his friend in the middle of the street obstructing the flow and seriously endangering himself and his friend.

\_\_\_\_\_

ILLINOIS LAW ENFORCEMENT STUDY  
OBJECTIVE RATINGS

NAME: \_\_\_\_\_ FILE: \_\_\_\_\_  
BADGE NUMBER: \_\_\_\_\_

OBJECTIVE PERFORMANCE MEASURES JANUARY 1971 TO JUNE 1972

A: GENERAL INFORMATION:

- 1. DATE OF BIRTH .....
- 2. MARITAL STATUS .....
- 3. RACE .....
- 4. DATE OF ENTRY INTO POLICE SERVICE .....
- 5. DATE OF ENTRY AT THIS DEPARTMENT .....
- 6. NUMBER OF YEARS OF EDUCATION .....
- 7. NUMBER OF HOURS OF PROFESSIONAL POLICE TRAINING .....

B: DEPARTMENTAL INFORMATION:

- 1. NUMBER OF FELONY ARRESTS ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 2. NUMBER OF MISDEMEANOR ARRESTS ..... JULY-DEC 71 ..... JAN-JUNE 72
- 3. NUMBER OF TRAFFIC CITATIONS ISSUED ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 4. NUMBER OF CITY ORDINANCE ARRESTS ..... JULY-DEC 71 ..... JAN-JUNE 72
- 5. NUMBER OF CITIZEN COMPLAINTS ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 6. NUMBER OF WRITTEN REPRIMANDS ..... JULY-DEC 71 ..... JAN-JUNE 72
- 7. NUMBER OF DAYS OFF LOST ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 8. NUMBER OF DAYS SUSPENDED ..... JULY-DEC 71 ..... JAN-JUNE 72
- 9. NUMBER OF DAYS ABSENT ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 10. NUMBER OF CHARGEABLE ACCIDENTS ..... JULY-DEC 71 ..... JAN-JUNE 72
- 11. NUMBER OF DEPARTMENTAL AWARDS ..... JAN-JUNE 71 ..... JAN-JUNE 72
- 12. DEPARTMENTAL SERVICE RATING ..... JULY-DEC 71 ..... JAN-JUNE 72

CHAPTER IV--RESULTS OF THE TEST VALIDATION ANALYSIS

CONDUCT AND RESULTS OF THE  
STATEWIDE TEST ADMINISTRATION TO POLICE OFFICERS

The recruitment and scheduling of police officers to participate in the test administration phase of the project was one of the primary responsibilities of the project coordinator in each department. The memo entitled "Illinois Local Community Police Officer Selection Project" (contained in the Appendix to Chapter III) was distributed to all sworn personnel. In addition, each patrolman received a reply form to indicate his willingness or his refusal to voluntarily participate in the project. Names of volunteers were returned to the Industrial Relations Center, placed in a random rank order (using a table of random numbers), and returned to each coordinator. Police officers with less than one year's service, or with fewer than two supervisors able to rate their current job performance, were not included in the final list of volunteers. Coordinators were instructed to use the random list as a "priority list," and to schedule men for the test sessions in terms of their standing on this list.

All testing sessions were conducted by Industrial Relations Center staff. Location of the testing session was set to minimize any inconvenience to participants. Whenever possible central locations were set where officers from the host department and from neighboring departments could meet in combined sessions to complete the test battery. Sessions began with an introduction of staff, a statement of conditions of participation, a discussion of the benefits anticipated from the project and concluded with the answering of any questions of concern to the officers present. Following this introduction, the thirteen tests described in Chapter II were administered in accordance with their respective test administration manual. A sequence which alternated timed and untimed tests was followed, opportunities for brief rest periods were provided, and in practically all

instances, provision was made for a coffee break (or luncheon or dinner break, depending upon the time of day) about midway through the battery of tests. Approximately four and one-half hours were required to complete the test battery.

Table Six identifies departments which participated in the test administration phase of the project and indicates the numbers of officers participating in terms of the department size and geographical location categories. A total of 563 local community police officers in the State of Illinois participated in this phase of the project.

DESCRIPTION OF STATISTICAL PROCEDURES  
USED TO ANALYZE PROJECT DATA

In this project, our prime objective was the identification and validation of test measures which would be useful in assessing the potential for success exhibited by applicants for the police service in the State of Illinois. To aid in the accomplishment of this objective, an extensive battery of tests was administered to a representative sample of patrolmen working in selected police departments. Data in a number of categories of supervisory ratings and objective performance indicators were collected and analyzed, and the paired-comparisons performance rating was established as the principal criterion of patrolman job performance. With the test battery and job performance data collected in the project, it was possible to analyze the concurrent validity (i. e., the statistical relationship between test scores and a measure of job performance, when both sets of information are collected at about the same time on incumbent personnel) as well as the cross-validity (i. e., the extent to which a set of weights attached to test scores are useful in predicting performance for a sample other than the one on which the weights are initially developed) of the test battery.

The validation analysis relied principally upon a set of statistical procedures known as multiple regression analysis. In actual implementation, multiple

TABLE SIX  
DEPARTMENTS PARTICIPATING IN TEST VALIDATION PHASE  
OF PROJECT AND TOTAL NUMBERS OF POLICE OFFICERS  
COMPLETING BATTERY OF TESTS

REGION	CHICAGO		
	METRO	NORTH	SOUTH
Total N = 563	(N = 307)	(N = 149)	(N = 107)
LARGE	Aurora Evanston Skokie	Peoria Rockford	Decatur E. St. Louis Springfield
	Large N = 189	(N = 86)	(N = 62)
MEDIUM	Arlington Heights Chicago Heights Des Plaines Elgin Elmhurst La Grange Niles Park Ridge	Bloomington Champaign Rock Island	Alton Belleville Granite City
	Medium N = 221	(N = 138)	(N = 55)
SMALL	Elk Grove Village Hinsdale Lansing Maywood Western Springs Wheaton Wilmette Winnetka	Belvidere E. Moline Freeport Loves Park Normal Pekin	Carbondale Centralia Charleston Collinsville Jacksonville Mattoon Mt. Vernon
	Small N = 153	(N = 83)	(N = 32)

S  
I  
Z  
E  
O  
F  
D  
E  
P  
A  
R  
T  
M  
E  
N  
T

regression analysis is a complex form of statistical treatment. It is possible, however, to describe in a fairly straightforward manner the essential steps of this process. The starting point is to determine the correlation coefficient between each test scoring category, or "test variable," and the job performance criterion in question (i. e., the paired-comparisons rating). A number of test variables in the battery may show a significant statistical relationship to the criterion. The test variable exhibiting the strongest relationship with the criterion is used as the first element of a "prediction equation."

For example, one of the twenty-four scores on the Temperament Comparator may show the highest correlation in the set of test variables with the measure of patrolman performance, and therefore be, in itself, the single best predictor of patrolman performance.

The multiple regression analysis process then identifies the test variable showing the next highest correlation with the performance criterion, checks to determine the extent to which this variable overlaps or correlates with the first, and, if it is acceptably independent of the first test variable, adds the second variable to the "prediction equation."

For example, one of the scoring categories on the Test of Listening Comprehension may show a significant correlation with the job performance measure, yet be fairly independent of or uncorrelated with the variable on the Temperament Comparator discussed above.

In each step of this process, a weighting factor is attached to the test variable to maximize its contribution to the prediction equation's correlation with job performance. This process--i. e., identifying the most highly correlated test variable, checking to determine correlation with the prediction equation as it stands, and then adding or rejecting the variable on the basis of its unique contribution--continues until adding further variables does not result in any significant increase in predictive power. Adding other variables beyond this point might in fact begin to deteriorate the predictive power of

the equation. The resulting product, the "prediction equation" consists of a select set of test variables, each of whose relative importance to the prediction process is indicated by the magnitude of the standardized weight attached to it.

#### RESULTS OF THE ANALYSIS OF THE RELATIONSHIP BETWEEN TEST SCORES AND PATROLMAN JOB PERFORMANCE

Table Seven presents the results of the initial multiple regression analysis. The multiple correlation coefficient indicates the relationship between the weighted test variables in the prediction equations and the paired-comparisons performance criterion. These results are considered not only significant but also most encouraging, since it was possible to establish the concurrent validity of the test battery on a statewide basis and, in addition, in each of the cells of the data sampling design.

The interpretation of the results of the multiple regression analysis is a highly complex activity. A variety of statistical tests and indices must be considered in addition to the information presented in Table Seven to fully evaluate the significance of the results. For example, the highest multiple correlation in the table was established for the southern area of the state. However, based upon the relatively small number of cases (70) and relatively high number of test variable predictors (16), it is likely that this result is spuriously high, and must therefore be greatly discounted. On the other hand, the statewide multiple correlation, although much lower numerically, is actually much more significant in the light of the large number of cases and relatively low number of predictors.

In addition to the purely quantitative factors discussed above, a great deal of attention must be paid to the qualitative factors involved in the prediction equation. Each test was carefully selected on the basis of the occupational analysis, and as a result, a hypothesis or expectation exists concerning how the variables on each test will relate to the job performance criterion.

TABLE SEVEN

Multiple Correlations of Test Battery with Paired-Comparisons Performance Ratings for the Total Statewide Sample and for Selected Geographical and Departmental Size Samples (Results of Initial Multiple Regression Analyses)

	Statewide	Chicago Metropolitan Area	Northern Region	Southern Region
Multiple Correlation	.37***	.53***	.55***	.83***
No. of Variables	18	19	12	16
No. of Cases	457	266	130	70

	Combined North and South Regions	Small Departments	Medium Departments	Large Departments
Multiple Correlation	.48***	.55***	.46***	.55***
No. of Variables	14	10	13	11
No. of Cases	200	130	189	147

\*\*\*correlation is statistically significant at the .001 level of confidence

It was, in fact, possible to rank order the multiple regression results on the basis of the qualitative interpretation of the weighting of the test variables, and the results of this subjective analysis are presented in Table Eight. This table should not be interpreted as reflecting upon the quality of the departments included in the lower ranked samples, but rather should be understood as an indication of the limitations of the multiple regression technique itself. For example, the regression analysis on the South region sample, already identified as suspect simply on the basis of low number of cases, exhibits a great deal of qualitative inconsistency as well.

Results such as those presented in Table Eight were considered in developing the final recommended procedures for implementation of project results. The principal problem facing project staff at this point in the analysis was "which categorization of the data is likely to lead to the optimal application of project results?" Specifically, we had to decide whether to recommend size-specific prediction equations (i. e., different prediction equations for each size category of department), geographic region specific equations, some combination of size and region, or simply recommend a statewide equation.

Based upon additional statistical analysis and qualitative review, we concluded that a single statewide prediction equation could be established, but that most accurate prediction of applicant potential was likely to result if two prediction equations were developed--one for use in the Chicago Metropolitan Area, and one for use statewide outside the Chicago Metropolitan region.

Following the selection of key variables for each prediction equation, a cross-validity analysis was conducted. The value of this procedure lies in determining whether a prediction equation developed using half of the cases in a sample shows any value at all when applied to predicting the current job performance of the other half of the sample. For example, the statewide sample was randomly divided into two groups, A and B. A primary regression analysis was conducted independently on each set of data, resulting in

TABLE EIGHT  
 Ranking of Multiple Regression Analyses  
 in Terms of Percentage of Variables in the Regression Model  
 Consistent with Hypotheses or Test Rationale

SAMPLE	% of variables in regression model consistent with hypotheses
1. Chicago Metropolitan Area	94%
2. Statewide Total	83%
3. Small	80%
4. Medium	77%
5. North	75%
6. Large	73%
7. Combined North and South Regions	71%
8. South	56%

the multiple correlations reported in Table Nine. The prediction equation developed using the data of group A was then used on group B data, attempting to predict the current performance of group B personnel. A non-significant coefficient of cross-validity would indicate that the prediction equation did not predict very well; a statistically significant coefficient would further evidence the utility of the variables in predicting the potential of police applicants. As is indicated in Table Nine, the cross-validity analysis strongly confirmed the value of the recommended batteries.

Table Ten presents the results of the final multiple regression analyses. The final multiple correlations were not only statistically significant but also quite meaningful, and were thought to more than amply evidence the validity of the final test batteries (described in the following section) for the screening of police applicants in the State of Illinois.

FINAL RECOMMENDED TEST BATTERIES

The final recommendations for composition of the police applicant screening batteries are presented in Table Eleven. Also included are a number of recommendations concerning tests which show some relationship to police officer job performance, but which did not enter into the final prediction equations.

It should be noted at this point that while the positive evidence of concurrent validity is sufficient to warrant use of the prediction equations developed in the project, the project results should by no means be considered the final word on police selection testing in Illinois. Further evaluation and refinement of the test batteries and the prediction equations is an absolute necessity if the achievements of the project are to be maintained and used as a foundation for further improvements in the selection process. Nor should the adoption of these testing procedures by a community result in the elimination of other valid aspects of the screening process. The test battery developed in the project is intended for use at the screening step

TABLE NINE  
Results of Analysis of Cross-Validity  
of Recommended Test Batteries

SAMPLE	No. of Cases	Multiple Correlation	Coefficient of Cross-Validity
Statewide "A"	245	.40***	.24***
Statewide "B"	236	.36***	.25***
Chicago Metro "A"	138	.51***	.31***
Chicago Metro "B"	135	.50***	.24**

\*\*correlation is statistically significant at the .01 level.  
\*\*\*correlation is statistically significant at the .001 level.

TABLE TEN  
Multiple Correlations of Final Recommended Test Batteries  
with Paired-Comparisons Performance Ratings

	Statewide	Chicago Metropolitan Area
Multiple Correlation	.36***	.46***
No. of Variables	15	15
No. of Cases	487	268

\*\*\*correlation statistically significant at the .001 level.

TABLE ELEVEN

Recommendations for Illinois Police Applicant  
Screening Test Batteries and for Continuing Police Selection Research

TEST	RECOMMENDED FOR		
	Statewide Battery	Chicago Metro Battery	Continued Research Use
1. Personal Background Inventory	X	X	X
2. Work Interest Index	X	X	X
3. Non-Verbal Reasoning		X	X
4. Understanding Communication			X
5. Brown-Carlson Listening Comprehension	X	X	X
6. Closure Flexibility			X
7. Perceptual Speed			X
8. Closure Speed			X
9. Chapin Test of Social Insight*			
10. Cassel Test of Social Insight	X	X	X
11. Arrow-Dot Test	X	X	X
12. Press Test	X		X
13. Temperament Comparator	X	X	X

\*no positive indication of validity established in the project

of the selection process, and background investigation, oral interview, polygraph, "in-depth" psychological assessment, and other selection procedures should be continued provided that the validity of these procedures has been established in the community. A multi-faceted screening procedure is one likely to deliver the most thoroughly assessed and best qualified applicants for police service.

NOTE ON THE INCLUSION OF  
RACIAL MINORITY-ORIGIN POLICE OFFICERS  
IN THE PROJECT

One of the major goals of the project not adequately met was the goal of including a sufficient number of minority officers so that race-specific statistical analyses could be carried out. Of the 7800 police officers in the state outside the City of Chicago, approximately 340 were black and 40 were members of other minority groups (source--1972 Census of Local Law Enforcement Officers, compiled by the Illinois Local Governmental Law Enforcement Officers Training Board). Black officers of all ranks and assignments therefore constituted four per cent of the manpower of local community departments. Complete test and job performance data was available on less than thirty black officers, in spite of all efforts to include a greater number of officers from this group.

The collection of race-relevant data therefore remains as a high priority need for continued work in this area, and should be included as a part of future test evaluation and validation work. For the present, the validation analyses conducted without regard to race, in which all possible minority cases were included, constitute as fair and as equitable a testing procedure as was possible to develop within the time and budget constraints of the project.

DEVELOPMENT OF STANDARDS  
IN THE APPLICATION OF THE VALIDATED TEST BATTERIES

One of the most critical questions related to the application of the validated performance prediction equations is concerned with the issue of standards. Rather than dealing with standards in the abstract, however, the analysis of the results of the project makes it possible to estimate the probability of successful police performance of an applicant, given his predicted performance score. This issue is typically resolved by developing an expectancy table from project results.

To develop such a table, a point on the scale of observed job performance (in this case, the paired-comparisons rating) is identified which separates the "successful" from the "less-successful" job incumbents. Then, the proportion of persons in the validation sample who meet or exceed this point is noted for each predicted score. These proportions are refined by a statistical process known as PROBIT analysis, which has the effect of removing sampling fluctuations and fitting the observed function to a smooth curve. The resulting table of fitted or smooth proportions shows the expected probability of successful performance given each predicted performance score.

However, supervisory ratings such as the paired-comparisons technique do not usually presuppose a point which optimally differentiates between successful performers. In order to locate that critical point, we rely upon the fact that the sample proportions will be fitted to a normal distribution. Each observed criterion score is considered in the analysis as a tentative splitpoint; the performance rating level where the sample proportions best fit the hypothetical population then becomes the final split point. For the results of the project, the observed paired-comparisons rating of 49 appeared to be the optimal split point for both the statewide and the Chicago Metropolitan Area prediction equations. The resultant probabilities of success are shown in Table Twelve. This expectancy

TABLE TWELVE  
Expected Probability of Success  
for Various Predicted Performance Scores  
Based on the Statewide and Chicago Metropolitan Area  
Performance Prediction Equations

Predicted Score	Statewide Equation	Chicago Metro Equation
43		.16
44	.26	.20
45	.30	.25
46	.35	.31
47	.40	.37
48	.45	.43
49	.51	.50
50	.56	.56
51	.61	.62
52	.66	.69
53	.70	.74
54	.75	.79
55	.79	.84
56	.82	.87
57	.86	.90
58	.88	.93
59	.91	.95

table may then be used to determine the lowest acceptable predicted score (or "passing" score) based on a desired probability of success.

For example, if 49 is set as the passing score for applicants, the probability of job success of an applicant who just meets this score is .51 with the statewide prediction equation. "Success" is defined as his performing in the top 54 per cent of currently employed officers. Another way of considering this "passing" point is to observe that 54 per cent of currently employed officers would meet or exceed the "passing" point; 46 per cent of currently employed officers would not.

GENERAL DESCRIPTION OF TEST FACTORS  
ASSOCIATED WITH POLICE OFFICER SUCCESS  
IN LOCAL COMMUNITIES IN THE STATE OF ILLINOIS

This chapter would be incomplete without a concise statement of the test factors found to be associated with police officer job success in the Illinois communities represented in the project. This description not only characterizes the attributes associated with the success of currently employed officers--it also indicates the factors which will characterize applicants for police service who perform satisfactorily or better on the occupational selection test battery.

Several key motivational factors were found to be associated with police officer success. First and foremost was a consistent pattern of stability across past achievements and current endeavors--personal stability, family stability, occupational stability, and financial stability. This pattern of stability was accompanied by meaningful preparation for police service and with a drive to achieve success. Work satisfaction and effective performance were not likely to result from an interest in personal recognition and acclaim, but rather from a practical and concrete work orientation toward people.

In the area of intellectual qualification, problem-solving ability and the ability to hear and use spoken material were found to be particularly

important. The ability to deal effectively and constructively with interpersonal problems involving people was a critical aptitude in determining police officer success.

The area of personal behavior and personality functioning also provided several key determinants of police officer success. The effective control of emotional expression and impulses under the pressure of solving problems was a principal requirement. Interpersonal spontaneity, self-assurance and personal confidence, and a desire to achieve satisfaction through getting the job done were the other critical behavioral attributes identified in the analysis of project results.

It is important to note that this description of attributes goes far beyond a mere literary portrayal of "ideal" traits. Professionally developed written tests are currently available to measure or assess the strength of these critical determinants in the screening of candidates for police service. The batteries of tests recommended for use are considered to provide both a wider scope of assessment and a more rigorous or intensive evaluation of the identified critical requirements than do the written entry tests traditionally used to screen police applicants. Based upon project results, it is our conclusion that the proper implementation of these test batteries will permit the screening of police applicants in a truly professional and job-related manner, significantly improving the means and significantly upgrading the nature of the standards employed by local communities in the State of Illinois in their hiring of police officers.

CHAPTER V--RECOMMENDATIONS FOR IMPLEMENTATION  
OF PROJECT RESULTS AND FOR CONTINUED  
PERSONNEL RESEARCH AND DEVELOPMENT WORK

RECOMMENDATIONS TO THE CHIEFS OF POLICE  
IN THE STATE OF ILLINOIS

The material presented in the preceding chapters clearly documents the decisive role of a great number of Illinois Chiefs of Police in the successful completion of this project. In many ways, the validation model simply served as a means of formalizing or gathering data concerning the collective experience and judgment of a large number of Chiefs and command officers in the state. If the project has succeeded, a large measure of the success is due to this strong support.

In the vast majority of Illinois communities whose municipal police staffing function is related to the scope of this project, an agency other than the police department itself is charged with the overall responsibility for police hiring. Most communities have established a Police and Fire Commission to serve this function; a number of larger communities have a Civil Service Commission or some type of Merit Board which manages the hiring function. For this reason, recommendations for implementation are made in the following section, which is addressed to Police and Fire Commissioners. However, project results have led to the development of several recommendations which are germane to the personnel administration of police departments, and these are presented below:

It is recommended that:

1. Serious consideration be given to the adoption of the paired-comparisons rating technique for use in the job performance assessment of police officers and other specialities and ranks in Illinois police departments.

2. The value of the Job Performance Description Scales for the assessment of police officer job performance be realized in the use of these scales for diagnosis of individual and group training needs, in police personnel research, and in the development of more effective in-service training programs.
3. The results of the police officer occupational analysis be used in planning manpower requirements and services to be made available to the community in day-to-day supervision, and in the preparatory and in-service training of police officers and police supervisors in the state.

RECOMMENDATIONS TO POLICE AND FIRE COMMISSIONERS  
IN THE STATE OF ILLINOIS

At the start of the project in 1971, it was clear that Chiefs of Police and police personnel would be the principal contributors of time and effort in the actual conduct of project activities. Police and Fire Commissioners aided in the set-up and coordination of activities, but it was not until the end of the project, when the issue of implementation became salient, that the focus of attention shifted to the role of the Commissioners in the utilization of project results.

The Police and Fire Act grants the authority for police hiring to an appointed Board of Commissioners in most communities in the state whose population exceeds 5,000 persons. For this reason, it is clear that the Commissioners in the state are the critical factor in the successful implementation of project results in the hiring of police officers. A number of recommendations related to the implementation of project results for this purpose are presented below:

It is further recommended that:

4. Serious consideration be given both immediately and in a continuing manner, to the proper professional handling of testing procedures and provision of test results based on

- the application of the test batteries developed in the project. The proper administration and scoring of tests, along with the provision of test results in a manner consistent with professional psychological principles are of the highest concern in the proper implementation of project results.
5. Every possible step be taken to safeguard the integrity of the testing materials recommended for use, and to maintain the integrity and security of the patrolman prediction equations developed in the project. Access to testing materials by applicants or unqualified users would compromise the integrity and effectiveness of the assessment process. Access to the performance prediction equations themselves would permit an applicant to distort his qualifications and would permit an unethical user to manipulate the results provided by the system.
  6. A program of follow-up evaluation and validation be immediately implemented, to monitor the effectiveness of the prediction equations and to make possible the modification of procedures when indicated. A concurrent validation model of the type employed in this project is ordinarily followed up by a predictive validation study, which considers test performance at one point in time in relation to subsequent job performance. The concurrent validation is sufficient to justify the implementation of project results, but the finalization of project performance prediction models would depend upon longer-term research and evaluation efforts.
  7. The coordination and control of testing activities related to project results be centralized to minimize opportunities for misapplication of project findings or opportunities

where the security of project materials and results could be compromised, and to maintain both the consistency and continuity of such testing activities.

8. Given the importance of the police officer's job in our state, a high priority be placed on the timely provision of these testing procedures with the broadest possible application in the state, consistent with the safeguards and concerns listed in the preceding four recommendations.
9. Adequate recognition be given to the need for proper training of local officials in the management and utilization of test results obtained in an implementation of project results.

An extensive series of discussions, involving staff of the Illinois Association of Chiefs of Police, Illinois Association of Boards of Fire and Police Commissioners, Illinois Law Enforcement Commission, and the Industrial Relations Center, was held to consider alternative mechanisms in the implementation of project results. The needs for professional handling, security, follow-up research, coordination and control, timely application of results, and training were reviewed. Based upon these discussions, these four agencies concurred in the recommendation that:

10. A permanent agency be established to implement project results in the screening of police officers in the State of Illinois. This agency would consist of a professional staff, including a highly qualified psychologist, registered to practice in the state, as well as administrative and clerical staff needed to operate the agency. In addition, a professional advisory board, consisting of representatives from law enforcement, local government, industry, education, and professional psychology, would be created to monitor and assist the agency in the proper discharge of its responsibilities.

It is noteworthy that such an agency, the Bureau of Testing Services, has already been organized within the Illinois Association of Boards of Fire and Police Commissioners and has already initiated selection testing activities within the state, in response to the requests for this service received from a number of communities in the State of Illinois.

#### RECOMMENDATIONS TO THE ILLINOIS LAW ENFORCEMENT COMMISSION

Because of the statewide nature of the project and because of the numerous unexpected problems encountered in a pioneering project of this type, a great deal of assistance was received from ILEC staff in the conduct of the project and in the completion and proper discharge of project responsibilities. Because of its role as a state planning agency in the improvement of the criminal justice system in the State of Illinois, the following recommendations are made to the Illinois Law Enforcement Commission:

11. That a high priority be placed on providing financial support to sustain the set-up of the testing agency within the Illinois Association of Boards of Fire and Police Commissioners.
12. That continuing work be encouraged in the development and validation of job related selection testing procedures for occupational groups in law enforcement outside the scope of this project, such as sheriff's deputies and state police officers, as well as for other entry positions in the criminal justice system, such as penitentiary guard probation and parole caseworker, etc.
13. That special emphasis be placed on continued work in the development of valid selection procedures for "protected class" individuals, particularly racial minorities and women.

14. That the need for additional research in the development and validation of written tests for placement in special positions, such as detective or youth officer, and for promotion to higher ranks be recognized in law enforcement and that the necessary work be encouraged.
15. That proper dissemination of the results of this project be made to interested parties within and outside of the State of Illinois.

## REFERENCES

- Baehr, Melany E. The appraisal of job performance (with special reference to the use of the Comparator). (Occasional Paper No. 27) Chicago, Ill.: Industrial Relations Center, The University of Chicago, 1963.
- Baehr, Melany E. The appraisal of job performance (results of five years' use of the paired comparison performance appraisal for the validation of selection test batteries). (Occasional Paper No. 27-R1) Chicago, Ill.: Industrial Relations Center, The University of Chicago, 1968.
- Baehr, Melany E., Furcon, John E., and Froemel, Ernest C. Psychological assessment of patrolman qualifications in relation to field performance. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1969.
- Furcon, John, Froemel, Ernest C., Franczak, Ronald G., and Baehr, Melany E. A longitudinal study of psychological test predictors and assessments of patrolman field performance. Chicago, Ill.: Industrial Relations Center, The University of Chicago, 1971.
- Furcon, John. Some questions and answers about police officer selection testing. (Occasional Paper No. 35) Chicago, Ill.: Industrial Relations Center, The University of Chicago, 1972.
- Heckman, Robert W., Groner, Dennis M., Dunnette, Marvin D., and Johnson, Paul D. Development of psychiatric standards for police selection. Minneapolis, Minn.: Personnel Decisions, Inc., 1972.
- Tierney, John B. and Biggins, Peter A. The comparator (instrument, 1961; test administration manual, revised 1967). Chicago, Ill.: Industrial Relations Center, The University of Chicago.

**END**