

AN ABSTRACT OF THE THESIS OF

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Police officers are frequently viewed as being unable to perform the duties assigned to them by society. Criticism has focused on inappropriate reaction to social unrest and an inability to control crime. Improving the selection process of police officers has been proposed as an appropriate means of improving police officer performance. The problem is how to improve the selection process to select individuals who will perform at the highest level.

This study attempted to determine if personality traits of standout police officers, as measured by psychological tests, differ significantly from personality traits of recruit police officers.

Considerable research in Oregon has been done on

personality traits of police officers. The research has dealt with testing police officer applicants and recruit police officers. This study compared the psychological profile of police academy trainees with the psychological profile of standout police officers. The standout police officers were identified in a study by John Koroloff.

The standard t test was used for a comparison of personality traits based on test scores from the Law Enforcement Assessment and Development Report (LEADR), the Psychopathic Deviate scale (PD) and the MacAndrew Alcoholism scale (MA) of the Minnesota Multiphasic Personality Inventory (MMPI), and the Wonderlic Personnel Test. The LEADR consists of the 16 Personality Factors (16PF), the Clinical Analysis Questionnaire (CAQ), and second-order factors. A comparison was also made of the age difference between the two groups.

The hypothesis that there is no statistically significant difference between the two groups was only partially supported. Statistically significant differences were found on the Intelligence, Low Energy Depression, Paranoia, Psychasthenia, Depression, and Psychoticism scales of the LEADR; on the Psychopathic Deviate and MacAndrew Alcoholism scales of the MMPI; and on the age difference.

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of Standout Police Officers and  
Oregon Police Academy Trainees

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A COMPARISON OF PSYCHOLOGICAL CHARACTERISTICS OF STANDOUT  
POLICE OFFICERS AND OREGON POLICE ACADEMY TRAINEES

**INTRODUCTION**

The role assigned to police in our society is to enforce the laws and protect society from deviant, anti-social individuals and groups. The perception, reinforced daily, is that the police officers who currently serve society are not effective in fulfilling the role they have been assigned.

The decade of the 1960's was marked by dramatic social upheaval in the United States. The reaction of police to this upheaval was often excessive and violent.

Social reformers and critics asked why the officers reacted so inappropriately. Several lawsuits against police agencies based on the conduct of their officers caused police leaders and politicians to look for better selection procedures. They began to look at how police officers are selected.

Historically, police officer selection has ranged from a reliance on volunteers (watch and ward system), to political appointment (spoils system), to very limited minimum qualifications (early civil service systems).

Most police officer selection currently relies on civil service systems. These methods of police officer selection have been criticized by reformers from within these systems as well as those from outside these systems.

No one can rationally argue that the social, criminal, and other problems seemingly overtaking society are the fault, or even the sole responsibility, of the police. However, all cultures assign the responsibility of enforcing their rules to a certain segment of their social structure. They expect those persons assigned the responsibility of policing to perform their tasks effectively and efficiently.

Reformers advocated increased standards for police officers to include higher educational achievement, physical fitness, and unquestionable moral rectitude. The historical argument is that adopting higher qualifications for police officers would lead to lower crime rates, higher conviction rates, and a safer society.

The reformers have achieved the adoption of minimum standards for police officers that are mandated at the state level. These standard qualifications have produced a homogeneous group of police officers who generally are from the middle class, with Anglo-Saxon morals, values,

and attitudes.

The combination of lawsuits against police officers and police agencies and the perception that police officers are ineffective in fulfilling their role has led to the extensive, but not universal, use of psychological tests for pre-employment screening.

#### Problem Statement

Police officers are frequently viewed as being unable to perform the duties assigned to them by society. Criticism has focused on inappropriate reaction to social unrest and an inability to control crime. Improving the selection process of police officers has been proposed as the appropriate means of improving police officer performance. The problem is how to improve the selection process to select individuals who will perform at the highest level.

#### Purpose of the Study

This study attempted to determine if personality traits of standout police officers, as measured by psychological tests, differ significantly from personality traits of recruit police officers.

## Background and Significance of the Study

Pre-employment psychological screening of candidates for employment as police officers serves a very important purpose. An agency's ability to predict an individual's probability of future behavior can save valuable public resources including department training time, resources, and money. The prediction of possible future performance that is above average could lead to more efficient and effective use of shrinking resources.

Psychological testing instruments have been used to a varying extent throughout the United States during police applicant screening since 1917. The application of psychological screening has evolved haphazardly.

As of 1985, 11 states required psychological testing of police officer applicants by law. Some states have gone so far as to require psychological testing of all applicants prior to appointment as police officers. California requires two tests to discern pathology and to assess normal personality traits. In New Mexico, a psychologist must certify a candidate is psychologically able to be a police officer.

The use of psychological tests to screen applicants for police positions is widespread. Recent estimates

suggest that at least 50 percent of the major police agencies in this country now use some psychological screening process (Wyatt and Lavern, in Inwald and Kenney, 1989).

The acceptance of psychological tests for police applicants has not yielded a predictive validity sufficient to establish them as a primary screening method. They are used in conjunction with other more traditional screening strategies. Most of the psychological tests used identify police personality characteristics or personality traits.

Can these tests be used to increase the effectiveness and efficiency of police officers? This question is one that does not lend itself to simple, easy, or specific answers. The resolution, or solution, is realistically a long-term project that must be addressed from several perspectives.

One approach would be to identify the characteristics of individuals who are considered to be superior in their ability to perform the tasks they are assigned by virtue of their position as police officers. Although many studies have been completed to identify police personality characteristics, none of these studies have dealt with preferred or standout police officer characteristics.

Psychological and intelligence testing based on studies that have been done using various standardized personality and intelligence tests have yielded useful correlations between certain test dimensions and job performance. A study of standout police officers could refine this selection. This refinement could contribute significantly to the selection process for police officers in Oregon by looking for characteristics of individuals who perform at the highest level in law enforcement.

A cadre of standout police officers has been identified in Oregon in research completed by John Koroloff (1989). Koroloff conducted the research in conjunction with the Oregon Board on Police Standards and Training (BPS&T).

#### Definition of Terms

Standout, as used in this study, means an empirical performance significantly above the performance of peer police officers. Standout police officers were identified by Koroloff from six police departments throughout Oregon. These departments reflect the norm for police agencies in Oregon. Koroloff, in his study, described how he used a method of job competing

assessment described by McClelland (1973) to identify superior performance. The standout performers were identified by peers, supervisors, chief executive officers, and District Attorney staffs who work directly with the individual officers (Koroloff, 1989).

Police academy trainees, as used in this study, means law enforcement trainees attending the Oregon Police Academy for an eight-week basic police academy from April 1986 to April 1987.

The normative mean is a mean score derived from general population samples. This normative mean applies to all instruments used in this study.

#### Objective of the Study

The objective of this study was to determine if a statistically significant variance in test dimensions could be identified. The strategy for the current study was to administer a battery of psychological tests to the standout police officers identified in the Koroloff study.

The test battery consisted of the Psychopathic Deviate (PD scale) and MacAndrew scale of the Minnesota Multiphasic Personality Inventory (MMPI), the Law Enforcement Assessment and Development Report (LEADR),



and the Wonderlic Personnel Test (form IV). These tests were used because they were used in a study by Ernest Ogard and Chadwick Karr (1989), to establish a norm based on police academy trainees at the Oregon Police Academy from April 1986 to April 1987. One year after testing, BPS&T, which administers the Oregon Police Academy, obtained supervisor's ratings on these trainees. Ogard and Karr established test score profiles of police officers who had been rated satisfactory or better by their supervisors.

This validity study has made it possible for police agencies to use the profile derived from the same selection instruments for screening police applicants. This profile was used in this study as the norm.

The dimension identified in the statistical analysis of the instruments completed by standout police officers can be used by police agencies to help in selecting potential police officers who have a greater chance of exceeding the performance of their peers.

The methodology used in this research was to (1) have the population of standout police officers complete the psychological test battery, (2) compare the results of each instrument to the normative profile established in the Ogard and Karr study, (3) identify statistically significant profile differences for each instrument, and

(4) identify the possible practical significance of these profile differences in the pre-employment screening process for police officers.

If statistically significant differences were found between the police academy trainees and the standout police officers, these findings could be used to identify traits desirable in police applicants. These desirable traits should improve officer selection in such a way that officer performance would improve. Improved performance by police officers should result in an improved public perception of officer effectiveness and efficiency and in fewer and more defensible lawsuits.

#### Limitations of the Study

The study did not include officers from the Oregon State Police or the Portland metropolitan area. Portland is the only major metropolitan area in Oregon. This limitation reduced the possibility of bias due to over-representation by any agency.

The standout police officer group of 25 was relatively small but is a statistically valid number. Those officers in the standout population who did not agree to be tested did so for their own reasons. Those who did respond participated with the full knowledge,

cooperation, and support of their Chiefs of Police.

Any psychological study of successful applicants has the built-in problem of range restriction. The numbers of potentially successful applicants who are screened out by the psychological assessment screening is unknown. No department will hire an applicant disqualified by the psychological screening. This translates into no research on job performance of applicants who are screened out by the psychological assessment.

The norm established by the Ogard and Karr study was based on an intact group whose selection was based on individual department criteria. This may or may not have included a pre-employment psychological screening. This condition could mean the norm was representative of the population as a whole, or it could mean the norm represented only the police population. The group tested in the Ogard and Karr study excluded the largest departments in the state as did the Koroloff study. This condition may or may not be significant.

The selection process for the standout police officers also was dependent on the individual department process. This condition may or may not be significant, but it did contribute to the validity of the study in that each group represents similar random sampling in the selection of the study groups.

The population has been identified through a selection process established by each agency, independent of other agencies. However, the basic criteria and minimum qualifications are set by the Oregon Board on Police Standards and Training. This condition could result in a highly homogeneous sample. The variance between the police academy trainees and the standout police officers was the focus of this study. The degree of differences and their statistical significance was the major research question this study addressed.

The use of psychological screening for police officer applicants needs the support of studies to establish validity, reliability, and norms. One strategy for establishing norms is to test officers already on the job who have been identified as effective and efficient by obtaining and comparing performance data with test results to determine if certain personality traits are predictive of performance as a police officer.

#### Research Question

Are there statistically significant differences between police academy trainees and standout police officers as measured by certain psychological characteristics?

### Hypothesis

There will be no statistically significant differences between the psychological traits of police academy trainees and standout police officers at the .05 level of significance.

### Alternate Hypothesis

There will be statistically significant differences between the psychological traits of police academy trainees and standout police officers at the .05 level of significance.

## LITERATURE REVIEW

Psychological testing instruments have been used in the United States for pre-employment screening of police applicants since 1917. Their use has not been universal, and the departments who use the instruments vary widely in size and tenure.

The primary emphasis for the use of pre-employment psychological testing comes from the events of the 1960's and 1970's. With the changes in the social and political environment in the United States, the police role was increasingly scrutinized. Another development was the dramatic influence the use of television was having on every aspect of American life.

Conflicts between police and citizens were being broadcast into American homes on a daily basis. The unrest of the 1960's was a major part of the evening news broadcast into most homes. The image of the police as a reactionary force was reinforced by the action seen on the evening news.

The disastrous civil disorders of the 1960's added emphasis to the public outcry for effective, responsive handling of public grievances against police action that involved perceived misconduct. Dramatic incidents like

the riots of New Jersey, Watts, Chicago, and Miami portrayed the police in a very negative light. Police were seen as reactionary and poorly disciplined individuals.

The "War on Crime" founded by the federal government in the 1960's emphasized the inadequacies of police in preventing and controlling crime. Crime rates soared and police were unable to explain their inability to control the situation. Society had assigned the role of crime prevention and crime control to police, and the police could not fulfill their role satisfactorily.

In response to the demand for a solution to the problem, President Lyndon Johnson appointed the National Advisory Commission on Criminal Justice Standards and Goals to study the problem and recommend solutions. The Commission produced a series of documents including the "1980 Standards and Goals--Police". This Commission recommended that all police officers undergo thorough entry-level physical and psychological examinations to insure detection of conditions that might prevent maximum performance.

Not all reformers advocating change in the selection of police officers were in agreement that psychological tests would be beneficial, but the majority view was that using psychological and intelligence tests

in conjunction with other selection criteria could be beneficial. Most of the research that was done during the 1960's and early 1970's was paid for with federal funds.

Additional money was earmarked for education of police. Over 400 million dollars was spent by the Law Enforcement Educational Assistance Program (LEEAP) for education for police officers. A considerable portion of these funds went for advanced study. Those officers taking advanced studies often involved themselves in the study of selection criteria and pre-employment screening. Most of the research was conducted by sociologists and political scientists (Lefkowitz, 1977). This early research, though important and enlightening, was often flawed. Researchers were inadequately prepared for the task by education and experience. Police are difficult subjects, often refusing to cooperate or purposely trying to skew the results.

The research methodology often was inadequate to the task of supporting reasonable inferences. However, in reviewing this early literature, a common theme emerged. Police officers seem to self-select from a restricted population of predisposed personality types.

Organizational selection tends to screen out any deviants from a pre-determined "type" of individual.



This results in a homogeneous group dominated by white males from the lower to lower-middle class socio-economic groups. Non-white and female police officers are also predominately from the lower to lower-middle class socio-economic groups.

The major argument among researchers focuses around personality characteristics like "dogmatism," "authoritarianism," and "political conservatism" that are exhibited by police officers. Are these traits developed after an individual works as a police officer for some time, or are these traits merely reinforced by their service as a police officer? The question has not been answered by any study. Several studies that were completed in an effort to answer the question have reached different conclusions. Studies by Regoli and Schrink (1977) and Smith, Locke, and Fenster (1970) have shown that police score rather high on the dogmatism and authoritarian scales of personality tests.

The instruments used in pre-employment screening of police officer applicants are various and varied. The most widely accepted is the Minnesota Multiphasic Personality Inventory (MMPI). Studies of the MMPI have reported significant relationships between MMPI scales and several significant evaluation criteria for police. These criteria include job tenure (Saxe and Reiser,

1976), supervisor ratings (Gottlieb and Baker, 1974), academy performance and attrition (Eisenberg and Dowdle, 1981), promotions (Peterson and Strider cited in Institute for Personality Testing, 1981), job problems (Hiatt and Hargrave, 1988), and predicting job performance (Ogard and Karr, 1989).

The MMPI is widely used to determine individual pathology. It has validity and reliability established over years of use and extensive validation studies. Merian, Stefan, Schoenfeld, and Kobos (1980) concluded from their study of 401 acceptable and 23 unacceptable police officers in the San Antonio, Texas, police department that the MMPI could be used for pre-employment screening of police officers and have predictive validity.

Dralle and Baybrook (1985) attempted to replicate the findings of Merian et al. (1980) in a similar police department. Their findings did not support the findings of the earlier study regarding the validity of the MMPI as a pre-employment screening device. Dralle and Baybrook found no consistent relationship between scores on the MMPI and any of the screening decisions.

In a long-term study conducted between 1975 and 1982 of "small town" police officers, Bartol reported that the MMPI does have the power to differentiate between small

town police officers who perform satisfactorily on the job and those who did not.

Bartol (1982) concluded that successful police officers tend to be less tense, anxious or worrisome, recover more quickly from stress and threat, and demonstrate better social skills in dealing with the public. Successful police officers feel more physically competent, more accepting of society's values and standards, have few problems with authority and supervision, and are generally more guarded about revealing themselves than unsuccessful officers. This study is especially significant because the definition of "small town" in Bartol's study includes over 90 percent of the police departments in Oregon.

The Law Enforcement Assessment and Development Report (LEADR) was developed by the Institute for Personality and Ability Testing, Inc., of Champaign, Illinois. This instrument was prepared in response to the need for improved law enforcement selection procedures. The test is designed to measure maturity and control related to critical aspects of law enforcement performance.

The LEADR consists of three parts: the 16 Personality Factors (16PF), the Clinical Analysis Questionnaire (CAQ), and second-order factors. The LEADR

measures psychological dimensions that have the highest potential to yield job-relevant information. These dimensions include emotional adjustment, integrity/control, intellectual efficiency, and interpersonal relations. The section on emotional adjustment deals with self-confidence, stability, tension levels, coping skills, and clinical signs and syndromes.

The results provide a basis to describe the individual's ability to cope with stress, tension, and overall adjustment. It also is used to analyze degree of emotional stability and level of self-reliance.

The integrity/control section describes the extent to which the individual feels it necessary and appropriate to conform to group standards of conduct. It also is used to describe the individual's attentiveness to task and details. The characteristics addressed in this section include self-control, conformity, perseverance, and proneness to accidents and/or error.

The intellectual efficiency section is used as a basis for describing the general ability of the individual to show good judgment and handle situations requiring effective problem-solving. The characteristics addressed by this section of the test include intelligence, shrewdness, and creativity.

The section on interpersonal relationships contains

information on the individual's ability to relate both to peers and to the public. These issues are addressed by looking at the characteristics of assertiveness, extrovertism, leadership, independence, and sociability.

Performance indicators derived from certain personality factors are addressed in the final section of the LEADR. These individual characteristics include reserve, intelligence, low impulsivity, conformity, tough-mindedness, low suspiciousness, low insecurity, personal adjustment, and clinical signs and syndromes.

The development of the LEADR was based on the conclusion that personality characteristics play a significant role in effective law enforcement performance. The reliability of the LEADR has been established by numerous studies. According to the LEADR manual (1981), reliability has been established using the Fisher's Z coefficient and the standard error of measurement (p. 19). The validity of the LEADR has been established through a testing process involving over 2,000 police officers. The emphasis was on construct validity.

According to Topp and Kardash (1986), the findings of Cattell, Eber, and Tatsuoka (1970) using the Sixteen Personality Factor Questionnaire (16PF) portray superior police officers as bright, assertive, autonomous, success-oriented individuals who exercise substantial

self-control while adhering to traditional values.

In their comparison of police recruits with population norms, using the 16PF, they characterized police officer recruits as emotionally more stable, mature, and calm; more conscientious and moralistic; self-reliant and realistic; as having practical, down-to-earth concerns; more self-assured, secure, and serene; more traditional and conservative in their thinking; more relaxed, tranquil, and composed in character; and more controlled and socially precise.

These findings tend to lend support to the notion of a unique police personality. This description is antithetical to the stereotype of police officers as aggressive, domineering, and suspicious.

The literature indicated that research in areas of police personality traits and the resulting personality type is equivocal. Police personality may be a product of self or occupational selection or the influence of the work environment of the police officer. Using psychological tests to identify these traits does little more than reinforce the status quo.

The data in the studies tended to be consistent with suggestions that there is a strong socializing influence within the police experience. Standout police officers have effectively negotiated their socialization process.

Hogan (1971) cited earlier studies by Baehr, Furcon, and Froemel that related "good performance" with "early marriage and establishment of family," "interest in family activities," "development of positive attitudes in childhood," "satisfactory relationships with family (in childhood)," and a "happy and comfortable homelife." Hogan concluded these variables suggested that highly rated policemen were stable, well-socialized, and family-oriented (p. 680).

Pugh (1985) concluded that the predictability of police work to personality variables changes over time. He also concluded that personality qualities required for high performance during initial phases of a police career differ from the qualities required later.

Inwald and Shusman (1984) suggested that hired police officers may change their behaviors and attitudes as they learn to adapt to the law enforcement environment. They suggested that comparing trained and seasoned police officers with untrained and perhaps more naive police officer candidates may not be the most effective approach to determining which candidates will eventually succeed as police officers.

Hiatt and Hargrave (1988) concluded that a predictive validity of .69 can be achieved by using a battery of psychological tests and a semi-structured

interview with a clinical psychologist.

Several researchers have warned that applicants for the position of police officer are subjected to the untested biases of personnel screeners because of a lack of knowledge of what personality characteristics define "qualified" or "suitable" police officers.

It is difficult to define those negative characteristics of police performance that make for a composite picture of an unsuccessful police officer (Costello, Schoenfeld, and Kobos, 1982). A study by Mills and Bohannon (1980) showed highly rated Maryland police officers as being more tolerant, socialized, conventional (communality), and considerably more flexible than their peers who were the subject of a study in 1969. Their research supported previous research that police officers are characterized as bright, assertive, autonomous, self-assured, responsible, and level-headed. These findings contrast sharply with the stereotypes of police officers as super-macho, authoritarian, inflexible, and thrill-seeking.

Mills and Bohannon (1980) also found that highly rated Maryland police officers in 1979 showed some common characteristics with a sample from R. Hogan's 1971 study. Mills and Bohannon reported that highly rated Maryland police officers could be characterized as being



achievement oriented and functionally intelligent (intellectual efficiency).

The results of the foregoing studies support work done in Oakland, California, in 1974 by Hogan and Kurtines who found the best predictors of performance in the classroom were self-confidence and social poise (capacity for status), motivation for independent accomplishment (achievement via independence), and practical, functional intelligence (intellectual efficiency).

Hogan and Kurtines (1975) stressed that their study (and the 1971 Maryland police study) showed the typical policeman was neither more nor less socially mature than the average man. They also showed that experienced policemen seem to have considerable force of character and leadership potential.

Hogan and Kurtines concluded that good police officers in Maryland exhibited the same stable personological core as good police officers in California. Good police officers shared many common characteristics that transcend situational constraints. The "best" officers exhibited traits of masculinity, self-confidence, and social competence and were characterized by practical intelligence, achievement motivation, and interpersonal effectiveness.

Murrell, Lester, and Arcuri (1978) reported that the

"police personality" as measured by the Adjective Check List (ACL) may exist, but it is not unique. Prison guards and security guards scored similarly on more scales of the ACL than they scored differently.

The 1985 study by Beutler, Storm, Kirkish, Scogin, and Gaines presented evidence that the potential predictability of officer performance does exist when a broad based, multiple dimension assessment procedure is used. The results can be usefully applied to predicting a wide range of officer performance. The task of assessing police performance has so many variables that association with psychological test scores is often low.

Jack Aylward, Executive Director of the Plainfield Consultation Center, Plainfield N.J., has proposed that psychological assessments of police officer applicants focus on psychological strengths and positive abilities. This kind of information could be helpful to both the candidate and to the department's supervisory personnel. This information could be used in guiding the early training and educational phases of a trainee's progress in the initial stages of a career in law enforcement (Aylward, 1985).

Topp and Kardash (1986) proposed that modern applicant screening strategies coupled with larger applicant pools and rising benefits have resulted in a

unique recruit population. Kleiman and Faley (1986) concluded that raters combine at least three or four separate behaviors to arrive at an overall judgment on a performance dimension. Significant differences undoubtedly exist in the way raters weight various behaviors. This variability reduces interrater reliability.

Shusman, Inwald, and Fratz (1987) pointed out that while the MMPI appears to be an excellent gauge of pathological behaviors, it is not always helpful in identifying the more "characterological" behavior patterns within the less pathological range that also appear to impair law enforcement performance. They also concluded that behavioral difficulties and an uneasiness with physical surroundings and others may be among the best indicators of future police performance.

Carpenter and Raza (1987) concluded that police applicants differ from the normative population in several ways. Police applicants are somewhat more psychologically healthy than the normative population, they have a greater tendency to present a good impression of themselves, and they are more homogeneous than the normative group.

Research by Beutler, Nussbaum, and Meredith (1988) supported the hypothesis that police service is

associated with adverse psychological changes among police officers. The longitudinal study conducted over a four-year period suggested that police officers who responded negatively to the demands of the police social system scored higher on the MacAndrew Alcoholism scale of the MMPI.

Inwald (1988) found that computer selected scales from the Inwald Personality Inventory (IPI) and the MMPI were the most successful predictors of officers who were subsequently terminated. The results produced a 75 percent accuracy in predicting success of police officers in completing a probationary period.

Pynes and Bernardin (1989) concluded that the assessment center is not a valid, cost effective alternative to the use of other types of screening instruments which measure cognitive ability. Many agencies are using the assessment center process to select entry level police officers. Assessment centers are also currently widely used for selection of officers above the rank of police officer.

Inwald (1987) concluded that there are few departments who have completed job analyses for their officers and even fewer who have developed performance evaluations based on these job analyses. Job analyses that have been done do not include the psychological

characteristics judged necessary for the performance of the various tasks of law enforcement officers. Rather, they focus on the knowledge and skills necessary to perform specific job tasks.

As a generalization, the literature supported the view that there are personality traits which are typical of most police officers. These traits have been used to describe the police personality. These traits have been defined by some researchers as "authoritarianism, suspiciousness, physical courage, cynicism, conservatism, loyalty, secretiveness, and self-assertiveness" (Lefkowitz, 1971; Butler and Cochrane, 1977). The literature reviewed for this study supported the view that police personality traits include self-confidence, self-control, social control, political conservatism, social conservatism, physical competence, and loyalty to peers.

While these traits may not be universally accepted, the literature demonstrated that none of these traits is unique to police officers.

## METHODOLOGY

### Profile of Standout Police Officers

The subjects of this study were 24 male police officers and one female police officer from municipal police agencies in Oregon. These officers are a population identified by John Koroloff as standout police officers in a study he completed in 1989. The mean age of the standout police officers was 38.52 years. The age range was from 31 to 46 years. The mean years of experience of the standout police officers was 12.72 with a range from 9 to 18 years total law enforcement experience.

Eleven of the standout police officers have a four-year college degree. Two of the eleven standout police officers have done post-graduate work. Twelve of the standout police officers have some college, and two have not completed any college courses.

### Profile of Police Academy Trainees

The police academy trainees included law enforcement trainees attending the Oregon Police Academy

from April 1986 to April 1987. A total of 123 law enforcement trainees were included in the testing.

The police academy trainees included 106 male police officers and 17 female police officers from police agencies in Oregon. The mean age was 29.382 years. The age range was from 21 to 46 years. The officers' years of experience and years of college was not available.

The police academy trainees represented city police officers and county deputy sheriffs. Portland city police officers were excluded from the study. This prevented over-representation by a single agency since Portland is the largest municipal police agency in Oregon.

All police trainees must attend an eight-week basic police course at the Oregon Police Academy during their first year of employment as police officers. The police academy trainees were tested while they were attending the Oregon Police Academy in Monmouth, Oregon.

Selection of trainees is determined by each law enforcement agency. The minimum qualifications for law enforcement officers in Oregon is set by the Oregon Board on Police Standards and Training. These qualifications include: U.S. citizenship; 21 years of age; graduation from an accredited high school or

successful completion of the General Education Development (GED) test; meet applicable physical and medical requirements; be of good moral fitness with no criminal record to include no felony convictions and no convictions for crimes involving controlled substances, narcotics, or dangerous drugs (Standard 255 08 010 Oregon Board on Police Standards and Training Administrative Manual). All trainees must meet the minimum qualifications prior to admission to the police academy.

The standout police officers were given the battery of tests at their place of employment during their normal duty hours. This procedure provided a minimum of deviance from usual work and rest routines for the officers. This procedure also resulted in a minimum impact on department resources. The writer administered the tests to 23 of the officers in the standout group. Two of the officers in the standout group were tested by a trained test administrator using the same criteria.

Each of the standout police officers signed an informed consent form that was patterned after the informed consent form used in the Ogard and Karr study (Appendix). The testing took place between September 1989 and November 1990.

The following evaluation instruments were



administered to members of the police academy trainees and to the standout group: The Law Enforcement Assessment and Development Report (LEADR) 16PF and CAQ psychological test designed to identify individuals who can become successful law enforcement officers; the Minnesota Multiphasic Personality Inventory (MMPI) Psychopathic Deviate (PD) Scale designed to measure anti-social tendencies; the Minnesota Multiphasic Personality Inventory (MMPI) MacAndrew Alcoholism Scale believed to measure past or present substance abuse or dependence; and the Wonderlic Personnel Test, a 12-minute test of general intelligence.

All evaluations of standout police officers were conducted individually or in groups of no more than four persons. Each session was completed in less than three and one-half hours with rest breaks permitted on an individual basis, as needed.

No specific instructions were given to the participants on how to take the tests other than as described in the instructions for each instrument. Participants were assured that the results would be held in the strictest confidence and that individual evaluations would not be provided to department administrations. (This possibility seemed to be a genuine concern for some officers.)

Each officer was advised that the purpose of the study was to attempt to identify personality characteristics of police officers. Most of the participants were familiar with the MMPI by name. Several of the participants had taken the MMPI during their pre-employment screening at their current department or at a previous employment.

A "quasi-experimental" research model was used to compare the two pre-selected groups. Membership in each group was arbitrary. Each officer in the departments selected by Koroloff had an equal chance to be selected as a member of the standout police officer group. Research was completed in 1991 by Ogard and Karr to verify that the police academy trainees represent a valid cross section of police officers in Oregon.

#### Data Analysis Method

The writer hand scored all instruments using procedures provided by the Law Enforcement Assessment and Development Report manual and handbook and by the Portland State University Assessment Office. Statistical analysis was completed by Chadwick Karr using the SYSTAT computerized statistical analysis package. The statistical analysis carried out included

the following:

1. Descriptive statistics on all scales including means, standard deviation, and range.
2. Pearson product-moment correlation coefficients among all scale factors.
3. t tests of differences between standout police officers and Oregon Police Academy Trainees

#### Minnesota Multiphasic Personality Inventory Test Results

The MMPI is the most commonly used psychological instrument for police agencies nationwide (according to Bartol and several other researchers). The MMPI has a reliable and valid trio of validity scales that are sensitive to attempts to deceive or to fake responses to items.

The Psychopathic Deviate (PD) Scale of the MMPI is linearly related to the trait of conformity. A low score indicates a conventional, moralistic, and conforming personality. A high score depicts a person who is highly rebellious and non-conformist. The Psychopathic Deviate (PD) Scale of the MMPI is designed to measure anti-social tendencies. According to Kleiman and Gordon (1986), empirical justification for this

interpretation has been provided by studies of Hovey (1949), the Institute of Personality Assessment Research (1952), Cervin (1956), and Pearson and Swanson (1967).

The police academy trainees raw score mean on the Psychopathic Deviate (PD) Scale was 17.057 with a standard deviation of 4.473 and a range of 9 to 28. The standout police officers had a raw score mean of 14.520 with a standard deviation of 2.756 and a range of 11 to 19. (Table 4)

The MacAndrew Alcoholism Scale from the MMPI is a good measure of past or present substance abuse or dependence. Research has established a raw score above 26 as a strong indication of susceptibility to substance abuse or dependence.

The police academy trainees mean on the MMPI MacAndrew Alcoholism Scale was 20.569 with a standard deviation of 4.169 and a range of 8 to 28. The standout police officers had a raw score mean of 23.40 with a standard deviation of 3.00 and a range of 18 to 28. (Table 4)

#### Wonderlic Personnel Test Results

The Wonderlic Personnel Test is used to measure general intelligence. The police academy trainees mean

on the Wonderlic Personnel Test was 23.967 with a standard deviation of 5.743 and a range of 11 to 42. The standout group mean was 24.720 with a standard deviation of 5.28 and a range of 19 to 40. These means represent an IQ of approximately 115 for both the standout police officers and the police academy trainees. (Table 5)

#### Law Enforcement Assessment and Development Report Results

The LEADR was selected as a trait measure for the Ogard and Karr study. The LEADR is a narrative and score report based on 44 scales derived from a self-report pencil-and-paper test with 331 items. The instrument is designed to measure a variety of personality traits, both normal and abnormal. A detailed description of the test is provided in the Manual for the Law Enforcement Assessment and Development Report (LEADR) (Krug and Cattell, 1987). A complete comparison of the results from the LEADR are presented in Table 1 (16PF), Table 2 (CAQ variables), and Table 3 (second-order factors).

TABLE 1

## 16 PERSONALITY FACTOR VARIABLES

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
A Warmth	P.A.T.	123	4.472	1.839	-0.021	0.984
	Standout	25	4.480	2.044		
B Intel- ligence	P.A.T.	123	6.085	1.665	-3.154	0.002*
	Standout	25	7.280	2.011		
C Stabil- ity	P.A.T.	123	6.202	1.692	1.070	0.286
	Standout	25	5.800	1.826		
E Domin- ance	P.A.T.	123	6.524	1.710	-1.301	0.195
	Standout	25	7.000	1.443		
F Impuls- ivity	P.A.T.	123	6.103	1.773	1.096	0.275
	Standout	25	5.681	1.701		
G Conform- ity	P.A.T.	123	5.999	1.463	-1.009	0.315
	Standout	25	6.320	1.376		
H Boldness	P.A.T.	123	5.633	1.905	-0.926	0.356
	Standout	25	6.040	2.458		
I Sensi- tivity	P.A.T.	123	4.910	1.849	0.651	0.516
	Standout	25	4.640	2.079		
L Suspiciousness	P.A.T.	123	4.886	1.646	0.203	0.839
	Standout	25	4.960	1.695		
M Imagin- ation	P.A.T.	123	4.602	1.932	0.387	0.699
	Standout	25	4.440	1.758		
N Shrewd- ness	P.A.T.	123	5.964	1.883	-0.290	0.772
	Standout	25	6.080	1.441		
O Appre- hensive- ness	P.A.T.	123	4.771	1.639	0.604	0.547
	Standout	25	4.560	1.325		
Q1 Experi- menting	P.A.T.	123	4.901	1.884	0.354	0.724
	Standout	25	4.760	1.640		
Q2 Self-Suf- ficiency	P.A.T.	123	6.492	1.906	0.316	0.753
	Standout	25	6.360	1.890		

TABLE 1 (cont)

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
Q3 Self-discipline	P.A.T.	123	6.471	1.650	-1.061	0.290
	Standout	25	6.840	1.214		
Q4 Tension	P.A.T.	123	5.227	1.743	0.687	0.493
	Standout	25	4.960	1.904		
FG Faking good	P.A.T.	123	5.834	1.764	-0.968	0.335
	Standout	25	6.200	1.500		
FB Faking bad	P.A.T.	123	4.260	2.275	0.832	0.407
	Standout	25	3.840	2.427		

Note. The pooled variance t was used to compare means. Separate variance t was used when one variance was twice as large as the other.

MEAN scores for 16PF Variables, CAQ Variables, and second-order factors are shown in STENS. STENS are a standard score with a mean of 5.5 and a standard deviation of 2.0.

\* Indicates a statistically significant difference between the two groups.

TABLE 2

## CLINICAL ANALYSIS QUESTIONNAIRE VARIABLES

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
D1 Hypo- chond- riasis	P.A.T.	123	4.008	1.534	1.529	0.128
	Standout	25	3.520	1.963		
D2 Suicidal depres- sion	P.A.T.	123	4.065	1.593	1.748	0.083
	Standout	25	3.480	1.122		
D3 Agita- tion	P.A.T.	123	5.909	1.651	-0.472	0.638
	Standout	25	6.080	1.656		
D4 Anxious depres- sion	P.A.T.	123	4.698	1.810	0.764	0.446
	Standout	25	4.400	1.581		
D5 Low energy depression	P.A.T.	123	4.089	1.573	2.641	0.009*
	Standout	25	3.200	1.323		
D6 Guilt & resent- ment	P.A.T.	123	4.333	1.936	1.742	0.084
	Standout	25	3.600	1.826		
D7 Boredom & With- drawal	P.A.T.	123	5.185	1.662	1.627	0.106
	Standout	25	4.600	1.528		
PA Paranoia	P.A.T.	123	5.414	1.706	3.070	0.003*
	Standout	25	4.240	1.921		
PP Psycho- pathic deviation	P.A.T.	123	6.296	1.726	-0.485	0.629
	Standout	25	6.480	1.759		
Sc Schizo- phrenia	P.A.T.	123	4.405	2.027	1.504	0.135
	Standout	25	3.760	1.535		
As Psychia- sthenia	P.A.T.	123	4.918	1.563	1.936	0.055*
	Standout	25	4.280	1.137		
Ps Psycho- logical inadaquacy	P.A.T.	123	4.122	1.677	1.693	0.093
	Standout	25	3.520	1.295		



TABLE 3

## SECOND-ORDER FACTORS

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
TP Tough poise	P.A.T.	123	6.712	1.785	-0.051	0.959
	Standout	25	6.732	1.674		
IN Indepen- dence	P.A.T.	123	5.831	1.700	1.062	0.290
	Standout	25	5.448	1.317		
DP Depres- sion	P.A.T.	123	4.041	1.420	3.208	0.002*
	Standout	25	3.084	1.005		
AX Anxiety	P.A.T.	123	4.703	1.697	-0.517	0.606
	Standout	25	4.892	1.479		
NE Neuroti- cism	P.A.T.	123	4.789	1.473	-0.880	0.380
	Standout	25	5.068	1.311		
PM Psycho- ticism	P.A.T.	123	5.130	1.748	2.868	0.005*
	Standout	25	4.036	1.688		
SO Socio- pathy	P.A.T.	123	4.886	1.399	-0.807	0.421
	Standout	25	5.132	1.334		

TABLE 4

MINNESOTA MULTIPHASIC PERSONALITY  
INVENTORY SCALES

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
PD Psycho- pathic deviant	P.A.T.	88	17.057	4.473	-2.689	0.008*
	Standout	25	14.520	2.756		
MA MacAnd- rew Alcoholism scale	P.A.T.	123	20.569	4.169	3.998	0.001*
	Standout	25	23.400	3.000		

TABLE 5

## WONDERLIC PERSONNEL TEST

GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
P.A.T.	123	23.967	5.743	0.640	0.526
Standout	25	24.720	5.280		

TABLE 6

## AGE COMPARISON

GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
P.A.T.	123	29.382	5.874	9.029	0.001*
Standout	25	38.520	4.312		

Note. Mean scores are raw score means for MMPI scales, Wonderlic Personnel Test scores, and age.

\* Indicates a statistically significant difference between the two groups.

## FINDINGS

The data derived from the battery of tests were subjected to analyses to establish the differences between the means of each group in each dimension measured by the test battery. A  $t$  test was used to identify specific differences between the means. The homogeneity of the variance was tested using Fisher's ratio of the variance formula. Where the variance is 2.0 times as large in one group as it is in the other group it is sufficient to reject the hypothesis of a common variance. Common variance indicates that the samples are from a common population and the difference between the two groups is a result of chance.

In this study, the data indicated that the standout police officers and the police academy trainees (P.A.T.) differ significantly on several traits measured by the Law Enforcement Assessment and Development Report (LEADR). The Law Enforcement Assessment and Development Report consists of three divisions. These divisions are: (1) the 16 Personality Factor Questionnaire (16PF) that measures normal personality traits; (2) the Clinical Analysis Questionnaire (CAQ) that measures personality traits considered outside the "norm"; and (3) second-

order factors from the 16PF and the CAQ to provide information useful in further interpretation of the test results.

#### Significant Differences on the 16 Personality Factor Scales

The test results (Table 7) showed a statistically significant difference on the Intelligence Scale (B) of the 16 Personality Factor Questionnaire (16PF) characteristics.

Table 7. Significant 16 Personality Factor scale.

	SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
B	Intel- ligence	P.A.T. Standout	123 25	6.085 7.280	1.665 2.011	-3.154	0.002

#### Significant Differences on the Clinical Analysis Questionnaire Scales

A statistically significant difference was found on three of the Clinical Analysis Questionnaire (CAQ) scales: (1) Low Energy Depression (D5); (2) Paranoia (PA); and (3) Psychasthenia (As) (Table 8).

### Significant Differences on Second-order Factors

Two second-order factors showed a statistically significant difference: (1) Depression (DP); and (2) Psychoticism (PM) (Table 9).

Table 8. Significant Clinical Analysis Questionnaire scales.

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
D5 Low energy depression	P.A.T.	123	4.089	1.573	2.641	0.009
	Standout	25	3.200	1.323		
PA Paranoia	P.A.T.	123	5.414	1.706	3.070	0.000
	Standout	25	4.240	1.921		
As Psychasthenia	P.A.T.	123	4.918	1.563	1.936	0.055
	Standout	25	4.280	1.137		

Table 9. Significant Second-order factors.

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
DP Depression	P.A.T.	123	4.041	1.420	3.208	0.002
	Standout	25	3.084	1.005		
PM Psychoticism	P.A.T.	123	5.130	1.748	2.868	0.005
	Standout	25	4.036	1.688		

Significant Differences on the Minnesota  
Multiphasic Personality Inventory

Statistically significant differences were found on the two scales from the Minnesota Multiphasic Personality Inventory (MMPI). These scales were the Psychopathic Deviate Scale (PD) and the MacAndrew Alcoholism Scale (MA) (Table 10). The Psychopathic Deviate Scale is a measure of gross deviance. The MacAndrew Alcoholism Scale is a measure of proneness toward substance abuse or dependence.

Table 10. Significant Minnesota Multiphasic Personality Inventory scales.

SCALE	GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
PD Psycho- pathic deviant	P.A.T.	88	17.057	4.473	-2.689	0.008
	Standout	25	14.520	2.756		
MA MacAnd- rew Alcoholism Scale	P.A.T.	123	20.569	4.169	3.998	0.001
	Standout	25	23.400	3.000		

Age Comparison

The age difference between the standout police officers and the police academy trainees (Table 11) was statistically significant. This was the only demographic

characteristic available for both the standout police officers and the police academy trainees.

Table 11. Age Comparison.

GROUP	<u>N</u>	MEAN	SD	<u>t</u>	PROB
P.A.T.	123	29.382	5.874	9.029	0.001
Standout	25	38.520	4.312		

The primary traits measured by the 16PF scales are the normal personality scales of warmth, intelligence, emotional stability, dominance, immaturity, conformity, boldness, sensitivity, suspiciousness, imagination, shrewdness, insecurity, radicalism, self-sufficiency, self-discipline, and tension.

The clinical scales measured by the CAQ scales include hypochondriasis, suicidal depression, agitation, anxious depression, low energy depression, guilt and resentment, boredom and withdrawal, paranoia, psychopathic deviation, schizophrenia, psychasthenia, and psychological inadequacy.

The second-order factors include extroversion, anxiety, tough poise, independence, intelligence, super-ego strength, discreetness, general depression, psychoticism, and neuroticism.

Normative scores on the Law Enforcement Assessment and Development Report 16 Personality Factor Question-

naire (16PF), Clinical Analysis Questionnaire (CAQ), and second-order factors are shown in STENS (standard ten scores). STENS have a mean of 5.5 in the reference population, with a standard deviation of 2 and a range of 1 to 10.

The two groups did not vary significantly on normal personality factors as measured by the 16 Personality Factor Questionnaire (16PF). Standout police officers showed less tendency toward general depression as measured by a second-order factor of the LEADR. The score for depression has a substantial correlation with the score for anxiety.

#### Findings from the 16 Personality Factor Scales

According to Krug and Cattell (1980), persons who score high on the Warmth Scale (A) are usually found to be warm-hearted, personable, and easy to get along with. They also tend to be open in sharing their feelings with others. The police academy trainees scored 4.472 and the standout police officers scored 4.480. This was below the normative group mean of 5.5 on this personality dimension. These scores were one full STEN below the population norm. There was no statistically significant difference between the two groups in this study.



The standout police officers scored significantly higher on the Intelligence Scale (B) than the normative mean of 5.5. The police academy trainees mean score was 6.085. The standout police officers mean score was 7.280. The  $t$  test results showed a statistically significant difference between the standout police officer's mean score and the police academy trainee's mean score at the .01 significance level.

Although intelligence is not strictly a personality trait, it has become an integral part of the 16PF profile. It is not intended to supplant the more refined measures of intelligence that can be obtained from longer and more reliable measures (Krug and Cattell, 1980).

Implications drawn from this statistically significant difference should be cautiously interpreted. Intelligence test scores predict academic performance fairly well, but nothing else. Intelligence measures are viewed with suspicion and have been openly criticized as inaccurate and often biased. The results, however, can be interpreted as an indicator of relative intelligence. The results on this scale correlate with the results from the Wonderlic Personnel Test.

The Emotional Stability Scale (C) is a measure of an individual's stress tolerance. The higher the score, the more resources the individual has available to meet the

challenges of the day. The standout police officers' mean score of 5.800 and the police academy trainees' mean score of 6.202 were both higher than the normative group mean of 5.5 on this trait. The difference between the standout police officers and the police academy trainees was not statistically significant.

Persons who score high on the Dominance Scale (E) are generally self-assertive, aggressive, and competitive. They tend to be very direct in their relationships with other people. The standout police officers' mean score of 7.000 and the police academy trainees' mean score of 6.524 were both above the normative group mean of 5.5 on this trait. The difference between the two groups in this study was not statistically significant.

The Impulsivity Scale (F) is a measure of a person's extroversion characteristics. Persons who score high on this trait tend to be happy-go-lucky, lively, and enthusiastic. The police academy trainees' mean score of 6.103 and the standout police officers' mean score of 5.681 were slightly above the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

On the Conformity Scale (G), individuals who score high tend to be more persistent, more respectful of authority, and more conforming to the standards of the

group. The standout police officers' mean score of 6.320 and the police academy trainees' mean score of 5.999 were above the normative group mean of 5.5 on this scale but the difference between the two groups in this study was not statistically significant.

Persons who score high on the Boldness Scale (H) are typically adventurous, bold, and energetic. The standout police officers' mean score of 6.040 and the police academy trainees' mean score of 5.635 were above the normative group mean of 5.5 on this test but the difference between the two groups in this study was not statistically significant.

Trait descriptions associated with high scores on the Sensitivity Scale (I) are tender-minded, dependent, over-protected, frigid, clinging, and insecure. The standout police officers' mean score of 4.640 and the police academy trainees' mean score of 4.910 were below the normative group mean of 5.5 on this trait. The difference between the two groups in this study was not statistically significant.

High scores in the Suspiciousness Scale (L) indicate a person is suspecting, jealous, dogmatic, critical, and irritable. This is not a measure of the pathological extension of this characteristic, but rather a measure of this dimension as a factor in the normal personality

spectrum. The standout police officers' mean score of 4.960 and the police academy trainees' mean score of 4.886 were below the normative group mean of 5.5 on this trait. The difference between the two groups in this study was not statistically significant.

The characteristics of a high-scoring individual on the Imagination Scale (M) include unconcern about everyday matters, a tendency to forget trivial things, and they do not enjoy hearing details of an accident. These are not characteristics a police administrator would consider desirable attributes for a police officer.

High scores on the Imagination Scale have also been correlated with automobile accidents, changing jobs, and receiving few job promotions (Barton and Cattell, 1972, in Krug and Cattell, 1980). The standout police officers' mean score of 4.440 and the police academy trainees' mean score of 4.602 were below the normative group mean of 5.5 on this trait. The difference between the two groups in this study was not statistically significant.

Shrewdness (N) is not simply a dimension of sophistication, but is also one of socialization and behavior control (Krug and Cattell, 1980). High scoring individuals are not easily swayed, they are polite and diplomatic about handling other people, and

they prefer to keep problems to themselves. The standout police officers' mean score of 6.080 and the police academy trainees' mean score of 5.964 were above the normative mean of 5.5 on this scale.

The Apprehension Scale (O) is related to the concept of super-ego. It is sometimes described as insecurity. High scoring individuals tend to be worried, guilty, moody, and depressed. They may be accident prone, anxious, brooding, down-hearted, fearful, lonely, self-deprecating, self-reproaching, easily upset, or cry easily. The standout police officers' mean score of 4.560 and the police academy trainees' mean score of 4.771 were below the normative group mean of 5.5. The difference between the two groups in this study was not statistically significant.

Scores on the Experimenting Scale (Q1), or radicalism, indicate a willingness to be the problem solver in the group. Persons with high scores tend to be analytical, liberal, and innovative. The standout police officers' mean score of 4.760 and the police academy trainees' mean score of 4.901 were below the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

People who score high on the Self-sufficiency Scale

(Q2) usually prefer to be alone. They tend not to need the support of the group. The standout police officers' mean score of 6.360 and the police academy trainees' mean score of 6.492 were higher on this scale than the normative group mean of 5.5. The difference between the two groups in this study was not statistically significant.

The factor of Self-discipline (Q3) has been described as the ability to bind anxiety. Persons who score high on this dimension generally have strong control over their emotional life and behavior in general. The standout police officers' mean score of 6.840 and the police academy trainees' mean score of 6.471 were above the normative group mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

High scores on the Tension Scale (Q4) may be associated with frustrated motivation. Tension also is used as a principal contributor to second-order patterns of anxiety. The standout police officers' mean score of 4.960 and the police academy trainees' mean score of 5.227 were just below the normative group mean of 5.5 on this dimension. The difference between the two groups in this study was not statistically significant.

### Findings from the Clinical Analysis Questionnaire Scales

To this point the characteristics have been what are considered normal personality traits. The following dimensions are clinical factors. Clinical factors were measured by the Clinical Analysis Questionnaire (CAQ) of the Law Enforcement Assessment and Development Report. Clinical factors show characteristics that may be associated with personality traits outside the norm.

Persons who score high on the Hypochondriasis Scale (D1) are usually depressed and preoccupied with bodily disfunction. Hypochondriasis also is a major element in the second-order factor of depression. The standout police officers' mean score of 3.520 and the police academy trainees' mean score of 4.008 were below the normative group mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

The Suicidal Depression Scale (D2) centers around thoughts of self-destruction. High scores on this dimension indicate a disgust with life and thoughts of death as a viable alternative to their present situation which they consider hopeless. This factor is a strong contributor to the second-order factor of depression.

The standout police officers' mean score of 3.480 and the police academy trainees' mean score of 4.065 were below the normative group mean of 5.5 on this dimension. The difference between the two groups in this study was not statistically significant.

Persons who score high on the Agitation Scale (D3) say they like adventurous jobs and jobs that require that they have to take charge. They may even crave excitement. The standout police officers' mean score of 6.080 and the police academy trainees' mean score of 5.909 were slightly above the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

Those persons who score high on the Anxious Depression Scale (D4) describe themselves as clumsy and shaky in handling things, lacking in self-confidence, and they seldom speak out. The standout police officers' mean score of 4.400 and the police academy trainees' mean score of 4.698 were below the normative group mean of 5.5 on this dimension. The difference between the two groups in this study was not statistically significant.

High scoring individuals on the Low Energy Depression Scale (D5) report frequent feelings of sadness and gloom. They are not usually sound sleepers and rarely wake up full of energy. Low energy depression



also is a major factor in the second-order factor of depression. The police academy trainees' mean score of 4.089 was below the normative mean of 5.5 on the Low Energy Depression Scale. The standout police officers' mean score of 3.200 was also significantly below the police academy trainees' score on the Low Energy Depression Scale. The t test showed the difference between the standout police officers and the police academy trainees was statistically significant at the .009 level.

According to Krug and Cattell (1980), persons who score high on the Low Energy Depression Scale tend to be male alcoholics. The MMPI MacAndrew Alcoholism Scale relates to alcohol or substance dependence or abuse. The mean score for the standout police officer group on the MacAndrew Alcoholism Scale was closer to the usually accepted score of 26 that is associated with susceptibility to substance abuse or dependence than was the mean score for the police academy trainees. The low mean score on the Low Energy Depression Scale of the CAQ does not show a positive relationship to the relatively high mean score (raw score mean of 23.4) for standout police officers on the MMPI MacAndrew Alcoholism Scale.

Guilt and Resentment (D6) is an aspect of depression associated with a sense of having committed the un-

pardonable and having experienced the sense of utter worthlessness that follows (Krug and Cattell, 1980). Persons who score high on this dimension are troubled by feelings of guilt, are self-critical, and are inclined to blame themselves for everything. The standout police officers' mean score of 3.600 and the police academy trainees' mean score of 4.333 were below the normative group mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

The factor of Boredom and Withdrawal (D7) is characterized by a feeling that life is too pointless and silly to care at all, and by a tendency to avoid people. The standout police officers' mean score of 4.600 and the police academy trainees' mean score of 5.185 were below the normative group mean of 5.5 on this dimension. The difference between the two groups in this study was not statistically significant.

The Paranoia factor (PA) is a pathological extension of the suspicion dimension. Persons who score high on this dimension are suspicious, have a sense of injustice and persecution, are jealous with respect to others, and have some cynicism about human nature.

The police academy trainees' mean score of 5.414 was near the mean on this dimension. The standout police

officers' mean score of 4.240 was significantly below the mean on this scale.

The t test results showed a difference between the standout police officers and the police academy trainees that is statistically significant at the .003 level of significance. This result indicates that the standout police officers are significantly less paranoid than police academy trainees. Both groups scored below the normative mean of 5.5 on the 16PF scale of Suspiciousness (L) (4.960 for the standout police officers and 4.886 for the police academy trainees) as a personality characteristic, but the police academy trainees are less free of paranoia (suspiciousness) as a clinical factor, than the standout police officers.

Persons who score high on the Psychopathic Deviation Scale (PP) of the CAQ are generally less inhibited by physical danger or pain, or by the criticism of society than the average citizen. They do not mind being the center of attention or the butt of jokes. They enjoy emergencies and quarrels. The standout police officers' mean score of 6.480 and the police academy trainees' mean score of 6.296 were above the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

Persons who score high on the Schizophrenia Scale

(Sc) have difficulty getting their ideas into words, have strange impulses, feel the world is unsympathetic, and feel rejected and pushed around by other people. They also experience bizarre feelings of being of little importance to others, have memory lapses, have feelings of unreality, and have hallucinatory experiences. The standout police officers' mean score of 3.760 and the police academy trainees' mean score of 4.405 were below the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

Psychasthenia (As) is characterized by obsessional types of behavior over which the individual apparently has little control. This behavior includes counting objects unnecessarily, having ideas or phrases that run through the mind for days without apparent reason, and worrying about seemingly unimportant things. The police academy trainees' mean score of 4.918 and the standout police officers' mean score of 4.280 were below the normative mean of 5.5 on this scale. The t test showed the difference between the police academy trainees and the standout police officers was statistically significant at the .055 level of significance. The standout police officers exhibited a statistically significant lower level of psychasthenia than the police

academy trainees.

Persons with a high score on the Psychological Inadequacy Scale (Ps) describe themselves as no good for anything (Krug and Cattell, 1980). This dimension is an important facet of the second-order factor of depression. The standout police officers' mean score of 3.520 and the police academy trainees' mean score of 4.122 were below the normative mean of 5.5 on this dimension. The difference between two groups in this study was not statistically significant.

#### Findings from the Second-order Factors

According to Krug and Cattell (1980), second-order factors do not supply new information about the person or group that is not contained in the primary scores. Second-order factors serve to organize the primary score information in useful ways for test interpretation.

Second-order factors are found by factor analyzing the correlations among primary scale scores. Each second-order factor is calculated by factoring its association with the clinical factors of the CAQ. This intercorrelation is determined by negative and positive weighting of clinical factors.

The factor labelled Tough Poise (TP) is calculated

using primary trait factors of sensitivity and imagination. High scoring individuals tend to be alert and able to deal with problems dispassionately. The standout police officers' mean score of 6.732 and the police academy trainees' mean score of 6.712 were above the normative mean of 5.5 on this scale. The difference between the two groups in this study was not statistically significant.

The second-order factor of Independence (IN) involves the major primary factors of dominance, imagination, radicalism, self-sufficiency, and tension. Persons who score high on this factor prefer to take command of their own destiny. The standout police officers' mean score of 5.448 and the police academy trainees' mean score of 5.831 were close to the normative mean of 5.5 on this factor. The difference between the two groups in this study was not statistically significant.

The second-order factor of Depression (DP) is a general depression factor. It is based on six depression primaries. It has a significant correlation with anxiety. The standout police officers' mean score of 3.084 was more than two standard deviations below the normative mean of 5.5 on this factor. The police academy trainees' mean score of 4.041 was below the normative

mean of 5.5 on this factor.

The t test showed that the difference between the means of standout police officers and the police academy trainees was statistically significant at the .001 level of significance. This result can be interpreted as an indication that standout police officers suffer less from general depression than police academy trainees.

Anxiety (Ax) has several contributing clinical scale scores. These clinical scales include guilt and resentment, paranoia, and psychasthenia. The primary factors contributing to the second-order factor of anxiety include emotional stability and self-discipline (control). Suspiciousness, tension, and insecurity are also considered in calculating anxiety. The mean score of 4.892 for the standout police officers and the mean score of 4.703 for police academy trainees was below the normative mean of 5.5 on this factor. The difference between the two groups in this study on this factor was not statistically significant.

The second-order factor of Neuroticism (NE) is a factor based on the primary factors of assertiveness, boldness, insecurity, and tension. Krug and Cattell (1980) described this factor as a complicated pattern and identification as neuroticism should be considered tentative for the time being. The standout police

officers' mean score of 5.068 and the police academy trainees' mean score of 4.786 were below the normative mean of 5.5 on this factor. The difference between the two groups in this study was not statistically significant.

Psychoticism (PM) is a second-order factor based on paranoia, schizophrenia, psychasthenia, and psychological inadequacy. This is a general psychosis factor that correlates highly with depression. The standout police officers' mean score of 4.036 was below the normative mean of 5.5 on this factor. The police academy trainees' mean score of 5.130 was below the mean on this factor. The t test showed a statistically significant difference between the mean scores of the standout police officers and the police academy trainees at the .005 level of significance. Standout police officers exhibit fewer signs of psychoticism than the police academy trainees and the general population.

The second-order factor of Sociopathy (SO) involves agitation, psychopathic deviation, and shrewdness. The standout police officers' mean score of 5.132 and the police academy trainees' mean score of 4.886 were slightly below the normative mean of 5.5 on this factor. The difference between the two groups in this study was not statistically significant.



## Findings from the Minnesota Multiphasic Personality Inventory Scales

The Minnesota Multiphasic Personality Inventory is a widely used and accepted test. It is often the standard to which other personality measures are held. The original study conducted by Ogard and Karr included two scales from the Minnesota Multiphasic Personality Inventory. These two scales were the Psychopathic Deviate (PD) Scale and the MacAndrew Alcoholism Scale (MA). In this study a comparison of the standout police officers and the police academy trainees showed a statistically significant difference on both scales.

The Psychopathic Deviate (PD) Scale of the Minnesota Multiphasic Personality Test (MMPI) is a measure of repeated and flagrant disregard for social customs, emotional shallowness, and an inability to learn from punishing experiences (Aiken, 1985). The normative raw score mean is approximately 13.21 for male and female population combined. The standout police officers' mean was 14.52 and the police academy trainees' mean was 17.057. The difference between the means of standout police officers and the police academy trainees was statistically significant at the .008 level of significance. The results indicate that the standout police officers were significantly less deviant than

police academy trainees.

The MacAndrew Alcoholism Scale (MA) from the MMPI is one of our best measures of past or present substance abuse or dependence. Research has established a raw score above 26 as a strong indication of susceptibility to substance abuse or dependence (Ogard and Karr, 1989). The standout police officers' mean score was 23.400 and the police academy trainees' mean score was 20.569.

The  $t$  test showed the difference between the standout police officers and the police academy trainees was statistically significant at the .001 level of significance. This result is an indication that standout police officers are more prone toward substance abuse or dependence than the police academy trainees.

#### Findings from the Wonderlic Personnel Test

The Wonderlic Personnel Test provides a highly accurate estimate of individual adult intelligence. The test is an indication of the person's general mental ability and his or her ability to solve problems (Wonderlic, 1983). A 1983 normative study of 126,324 job applicants resulted in a raw score mean of 22 on the Wonderlic Personnel Test with a standard deviation of 7.70 (Wonderlic, 1983).

The Wonderlic Personnel Test results show a group mean of 24.72 for the standout police officers. This is just slightly higher than the group mean of 23.967 for the police academy trainees. The difference between the two groups in this study on the Wonderlic Personnel Test was not statistically significant.

The range of raw scores on the Wonderlic Personnel test for standout police officers was from 19 to 40. This result can be interpreted as a range of intelligence quotient scores from equivalent to the mean for high school graduates to well above the central tendency for graduate students (Wonderlic, 1983).

In the Ogard and Karr study, 11 of 12 males who scored 28 or higher on the Wonderlic Personnel Test were terminated in the first year following training. The significance of this unexpected outcome is that there is a need for a follow-up study on the relationship of personnel test scores and job performance as rated by supervisors.

#### Findings from the Age Comparison

In looking at the demographic characteristics of the standout police officers and the police academy trainees, age was the only characteristic where adequate data were

available to make a comparison. Age has been shown to be a factor in the decline in pathology levels over the years, and age can also be a factor in an increase in behavioral control. In large research projects, particularly longitudinal studies, age effects may need to be precisely controlled by experimental design of statistical methodology. In no case does the proportion of variance attributable to age exceed .10 and, on the average, less than two percent of the variation in test scores is attributable to the influence of age (Krug and Cattell, 1980). This rationale is used to justify the lack of separate norm tables for different age groups on the Law Enforcement Assessment and Development Report, 16 Personality Factors (16PF), the Clinical Analysis Questionnaire (CAQ), and second-order factors.

The Institute for Personality and Ability Testing (IPAT) has selected age 30 as near the mid-point of the age range in which the CAQ would be most widely used. This is a valid assumption for the police academy trainees in this study whose mean age was 29.382. The standout police officers had a mean age of 38.52 years. This is a statistically significant difference at the .001 level of significance.

The significance of the age difference for this study should be viewed in a conventional perspective.

The chronological maturity and the job maturity probably contributed significantly to the rating as standout police officers.

## **SUMMARY, CONCLUSIONS, and RECOMMENDATIONS**

### Summary

The overall objective of this study was to add to the body of knowledge, and to the validity, of pre-employment screening of police applicants. The hypothesis that there is a statistically significant difference between the police academy trainees and the standout police officers was partially supported by this study. Differences which were found may be attributed in part to the difference in mean age of the two groups.

The use of psychological tests to identify normal and pathological characteristics of police officers and police applicants has increased dramatically since their first use in 1917. The most dramatic increase in the use of psychological tests occurred after the social turmoil of the 1960's.

Politicians, police reformers, and police administrators were looking for a method of decreasing the liability incurred when police officers engaged in deviant behavior. Two separate federal commissions recommended upgrading the standards for entry level police officers as a strategy for overcoming problems

perceived within police organizations. Part of the recommendation was the use of psychological tests to screen police applicants. The assumption was that identifying deviance before hiring would benefit both the police and society.

Pre-employment screening of police applicants has become a very comprehensive process. States have adopted minimum qualifications for entry level police officers and have standardized training for recruit police officers. As one aspect of this process, pre-employment psychological screening has become widespread. The evolution has been haphazard. The instruments used vary from measures of clinical scale factors to measures of normal personality traits.

The Minnesota Multiphasic Personality Inventory (MMPI) is the most commonly used psychological test in pre-employment screening. It is designed to identify abnormal behavior or pathology. Other instruments have been developed and widely used to measure normal personality traits, or a combination of normal traits and deviant characteristics. These include the California Personality Inventory (CPI) and the Law Enforcement Assessment and Development Report (LEADR).

The standardization of police applicant qualifications has not been extended to the test

instruments used in pre-employment psychological screening. The instrument that each agency uses is determined by the test evaluator (psychologist or psychiatrist) and the agency.

Pre-employment psychological tests can be used to screen out police officers with potentially undesirable characteristics. Psychological tests could also be used to assist in predicting success for police applicants. Psychological tests with acceptable predictive validity are still in the experimental development stage. The process of validating these instruments for predictive validity is both tedious and time consuming.

A major step in the process of validating the predictive validity of screening instruments is to first identify and define "success." One method has been developed by D.C. McClelland and his associates. Their procedure is to identify members of a particular group who are regarded as "superior" by peers, supervisors, and associates. Their success is identified by empirical performance significantly above the performance of peers. Their procedure identifies members of the group who are classified as "superior".

After the superior members of the group have been identified, evaluators can use test instruments to identify which characteristics separate members of the



superior group from the other members of the population. After these characteristics have been identified, the information can be used to select new members of the group who possess the desired amount of these same characteristics. This procedure should increase the likelihood of success for new employees. This assumption was the premise of this study.

For this study, superior was labelled as standout. A cadre of standout police officers identified by Koroloff using the McClelland method was compared with the profile of entry level police officers established by Ogard and Karr. Ogard and Karr developed a profile of entry level police officers by testing Oregon Police Academy trainees over a one-year period at the Oregon Police Academy. The instruments used in the Ogard and Karr study to develop the profile of police academy trainees were administered to the standout population. Mean scale scores for the standout police officers and the police academy trainees were compared using the standard  $t$  test.

Improving the ability of police agencies to screen out less suitable applicants will contribute to the improvement of the service provided by police in our society. The assumption is that the perception by the members of our society that police officers are generally

ineffective in fulfilling their role, and that the police agencies are unable to control crime and deviance in society, can be changed by raising the minimum standards for police applicants.

A battery of psychological tests that measure 40 personality traits was used to answer the research question regarding statistically significant differences between police academy trainees and standout police officers. A statistically significant difference between the two groups was found on eight of the 40 scales.

### Conclusions

As with all studies based on data from a small sample, these findings require verification or replication with other representative groups before they can be considered generally applicable.

A statistically significant difference between the police academy trainees and the standout police officers was found on the factor of Intelligence (16PF Scale B). The significance of this factor was not supported by the results on the Wonderlic Personnel Test. The scores on the Wonderlic Personnel Test (figure 5, page 81) showed no significant difference between the two groups. The Wonderlic Personnel Test is more discriminating on the

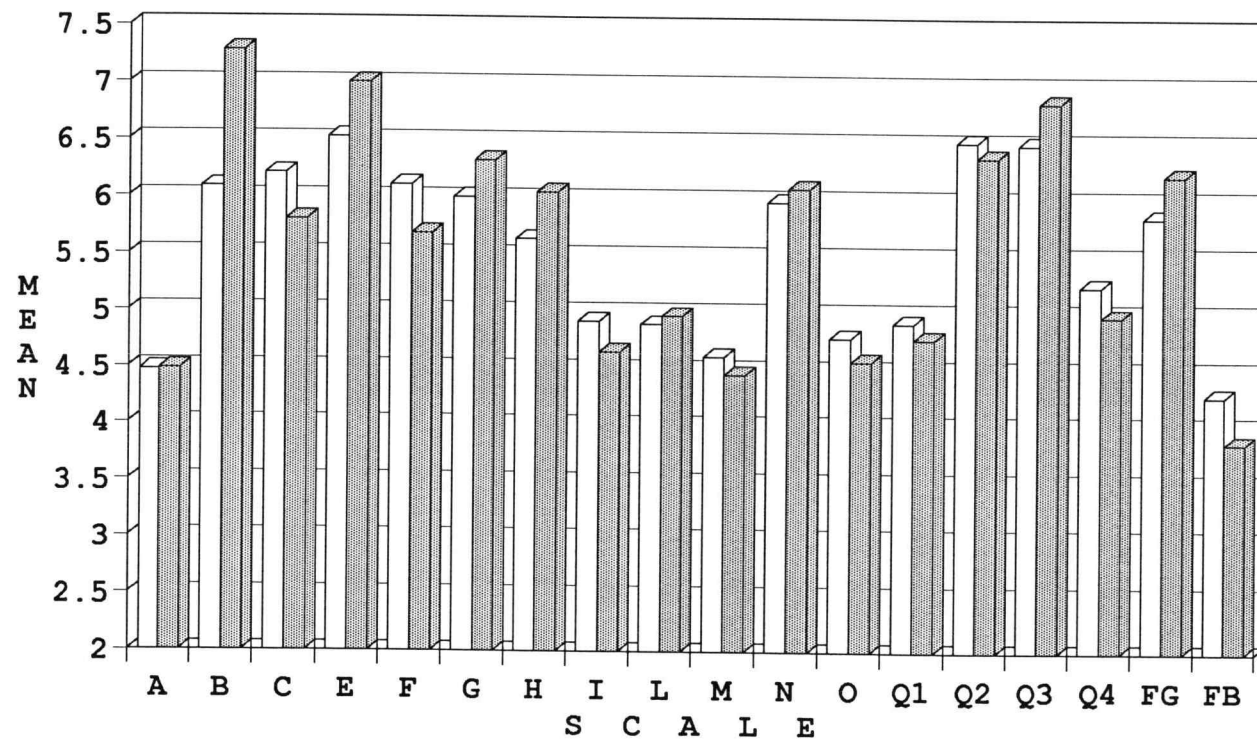
intelligence dimension.

The results of the comparison of all the scales of the 16PF (figure 1) showed that the standout police officers scores and the scores of the police academy trainees are not significantly different. The hypothesis that there is no significant difference between the standout police officers and the police academy trainees is supported by these findings.

A statistically significant difference was found between the two groups in this study on the clinical Scale of Low Energy Depression (D5) of the Clinical Analysis Questionnaire (CAQ). This difference was not supported by the score on the MacAndrew Alcoholism Scale of the MMPI. Standout police officers scored low on the Low Energy Depression Scale of the CAQ and higher on the MacAndrew Alcoholism Scale. These results were contradictory.

The results of the comparison of all the scales on the CAQ (figure 2) showed that the standout police officers scores and the scores of the police academy trainees varied significantly on only five factors. However, the overall difference was not statistically significant. These findings supported the hypothesis that there is no significant difference between standout police officers and police academy trainees.

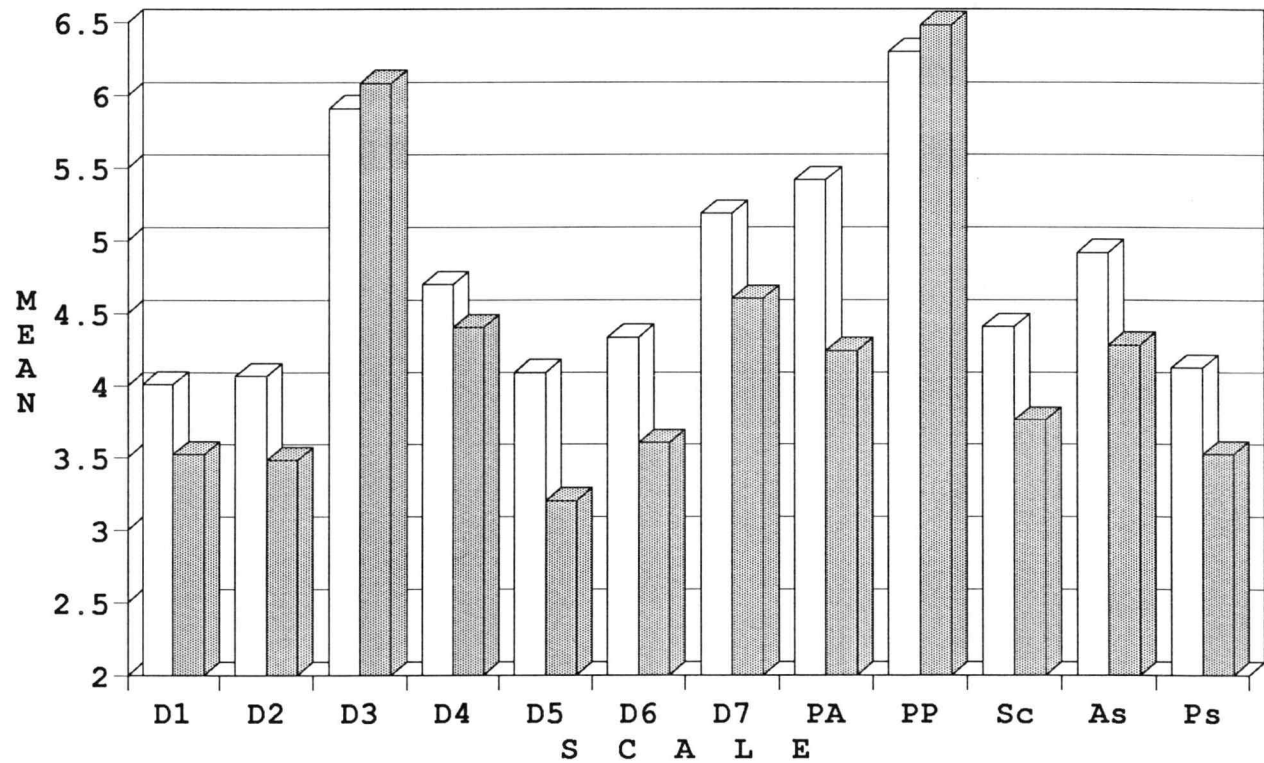
Normative  
Mean  
5.5



□ P.A.T.  
■ Standout

Figure 1. 16 PERSONALITY FACTOR VARIABLES.

Normative  
Mean  
5.5



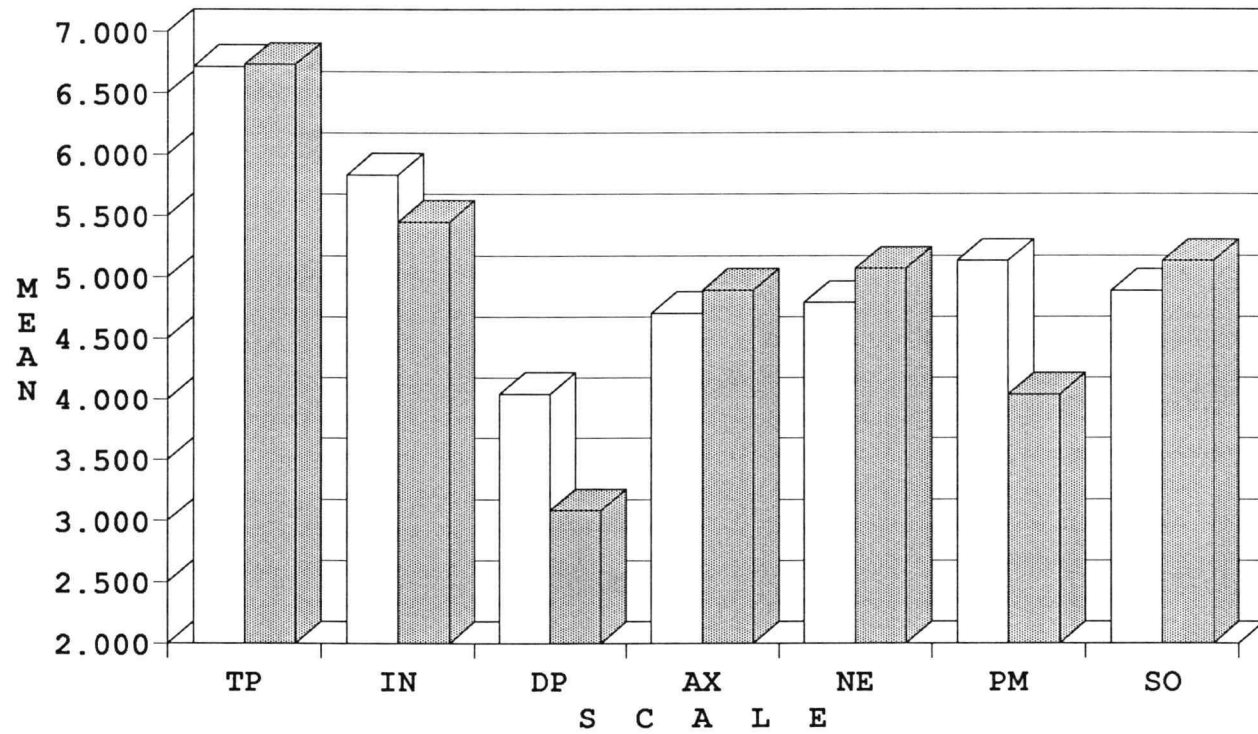
□ P.A.T.  
■ Standout

Figure 2. CLINICAL ANALYSIS QUESTIONNAIRE VARIABLES.

The statistically significant difference between the two groups in this study on the second-order factors of Depression (DP) and Psychoticism (PM) supports the alternative hypothesis that there is a significant difference between standout police officers and police academy trainees. According to Krug and Cattell (1980), depression and Psychoticism are closely related and the low mean score on the Depression Scale indicates that standout police officers have a happy, positive outlook and the low score on the Psychoticism Scale indicates that standout police officers are well integrated. Well integrated can generally be described as lacking any general psychosis. Figure 3 illustrates the relationship between the standout police officers and the police academy trainees on the Second-order factors.

The statistically significant difference between the police academy trainees and the standout police officers on the Psychopathic Deviate Scale (PD) of the MMPI supports the alternative hypothesis that there is a significant difference between the standout police officers and the police academy trainees. These results showed that standout police officers are more conforming to social customs and are emotionally stable. This may be a product of the maturation process. The relationship is illustrated on figure 4.

Normative  
Mean  
5.5



□ P.A.T.  
■ Standout

Figure 3. SECOND-ORDER FACTORS.

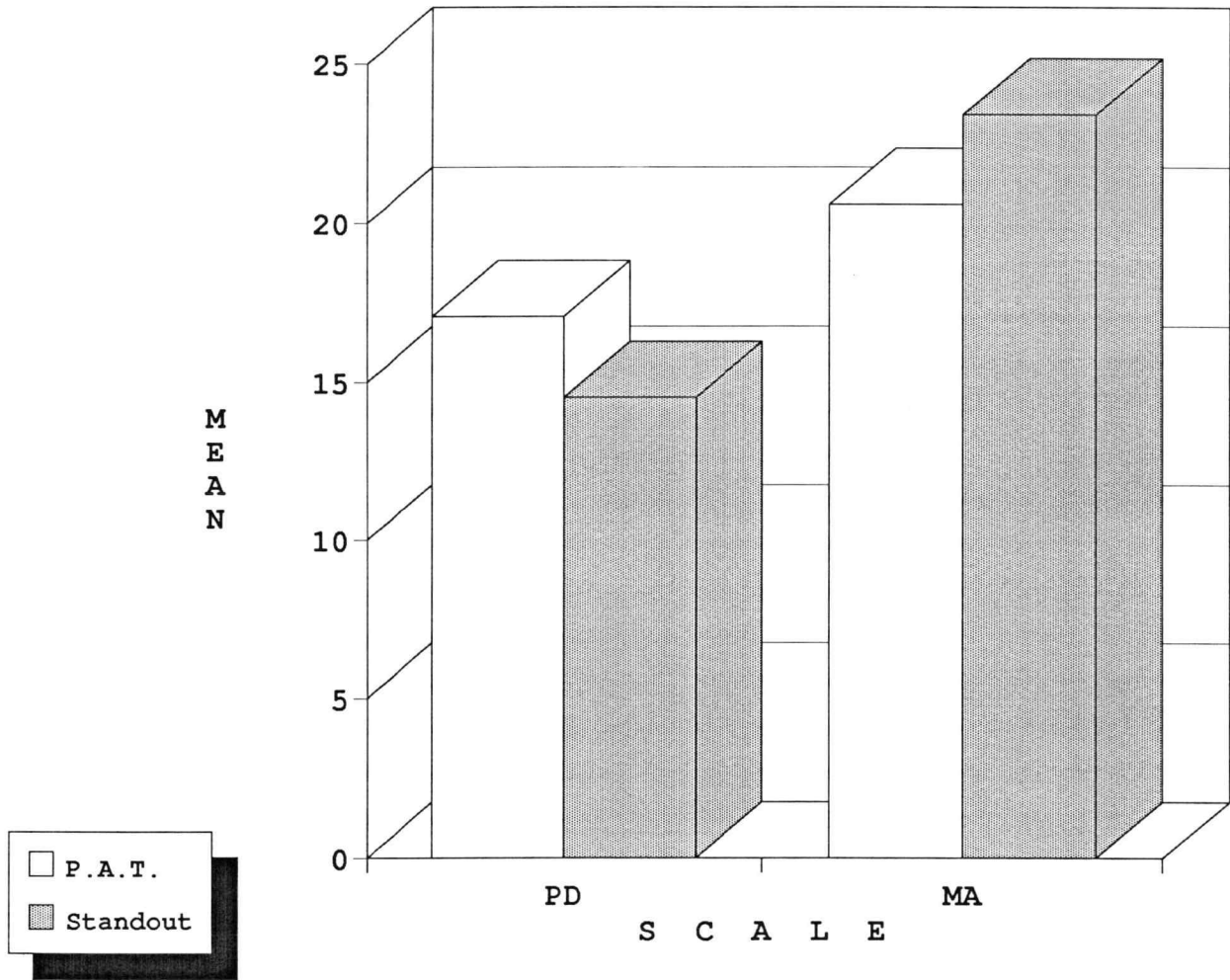


Figure 4. MINNESOTA MULTIPHASIC PERSONALITY INVENTORY SCALES.



The statistically significant difference between the two groups on the MacAndrew Alcoholism Scale is an indication that standout police officers may be more prone toward substance abuse or dependence than the police academy trainees. The comparison is illustrated in figure 4. This result was not consistent with the scores on the Low Energy Depression Scale on the CAQ variables. These findings require further study before a conclusion can be drawn.

As illustrated in figure 5, both the standout police officers and the police academy trainees scored high on the Wonderlic Personnel Test. These findings support the hypothesis that there is no significant difference between the standout police officers and the police academy trainees. The validity and reliability of intelligence measures is suspect, but compared to the normative population, both groups in this study scored well above average.

The statistical significance of the age difference between the police academy trainees and the standout police officers (figure 6) was an expected result. This finding supports the alternative hypothesis that there is a significant difference between the standout police officers and the police academy trainees. Conventional wisdom is supported by studies that show

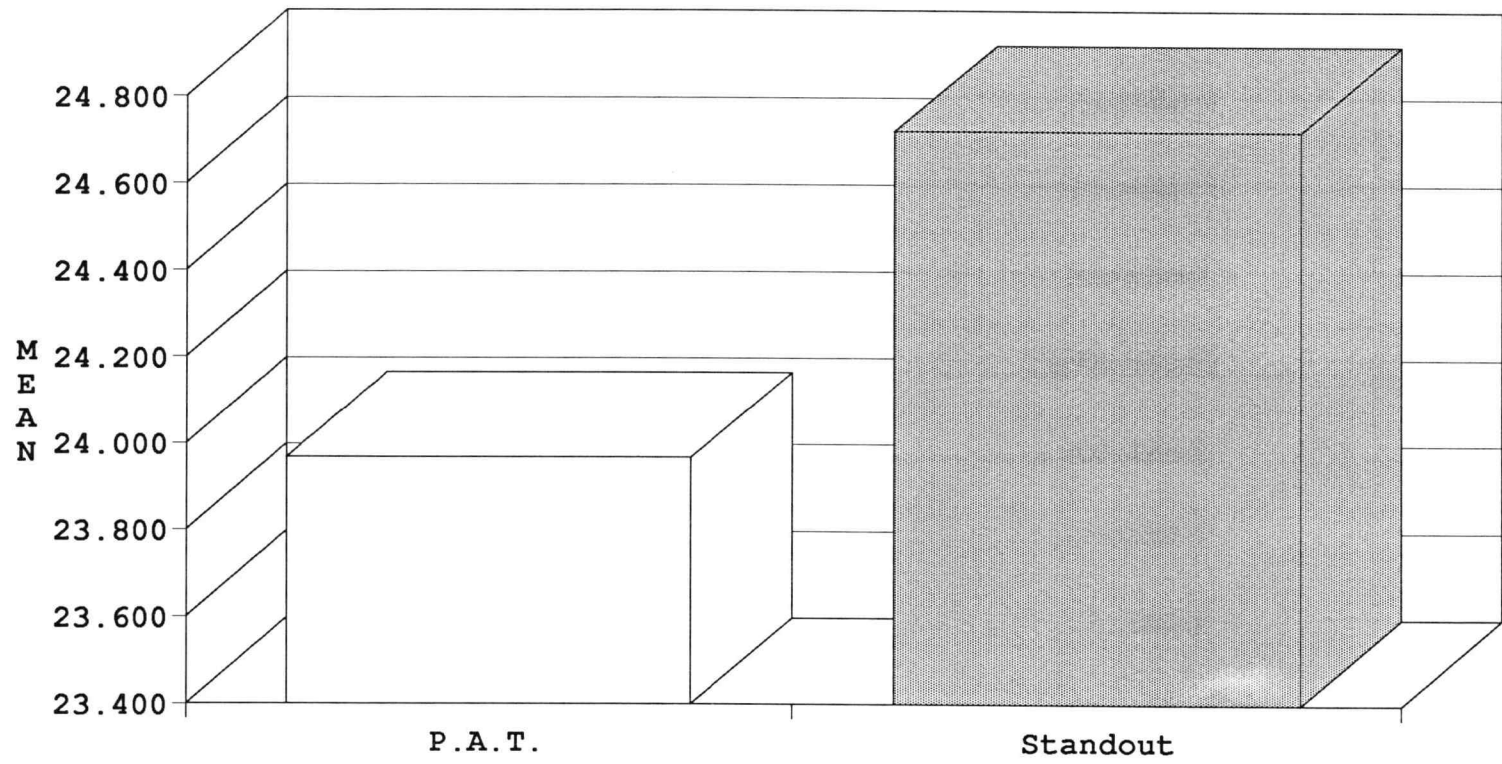


Figure 5. WONDERLIC PERSONNEL TEST.

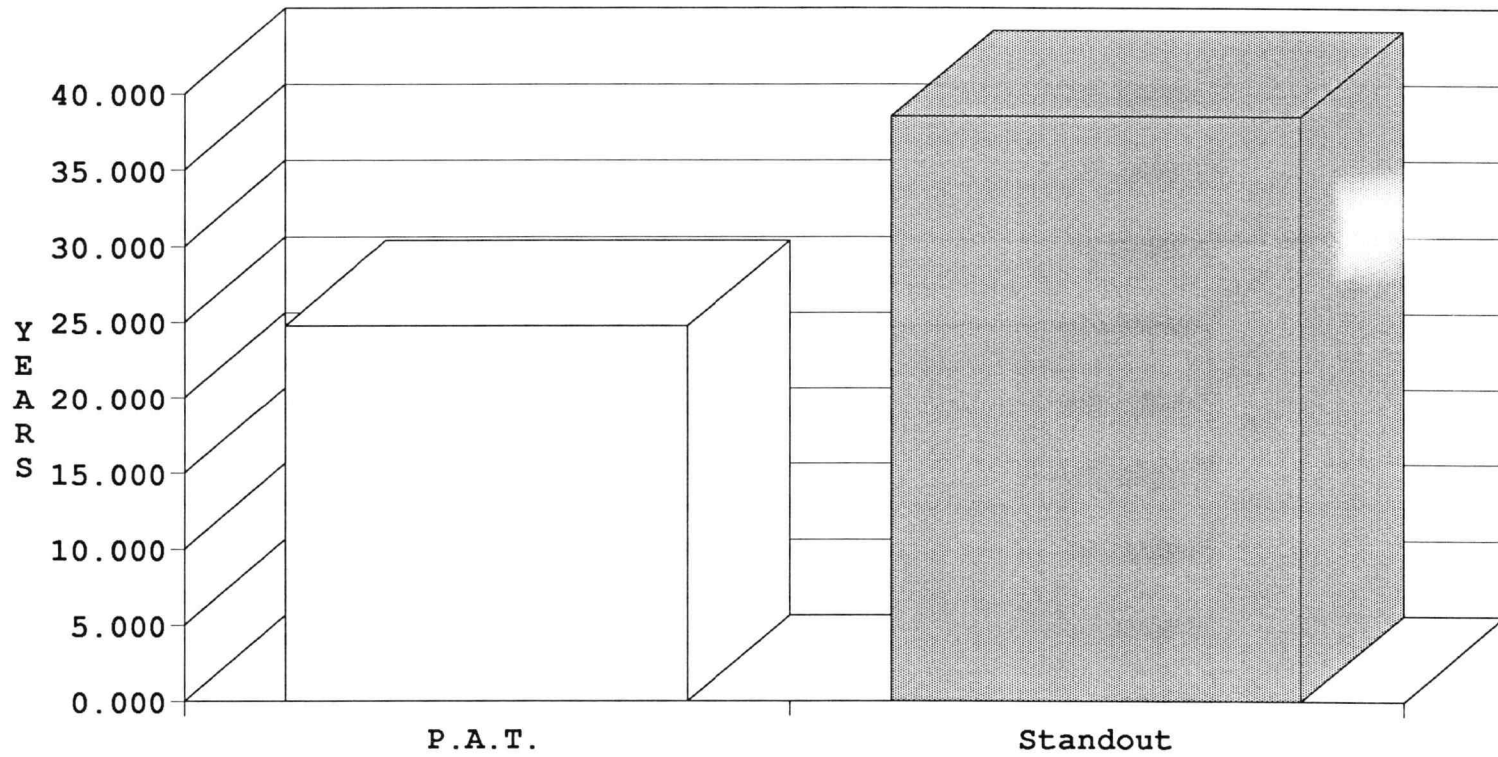


Figure 6. AGE COMPARISON.

chronological maturity and job maturity mitigate personality characteristics. Members of all societies show more conforming traits as they age within the society.

### Recommendations

In light of the psychological data concerning the police personality, serious doubt can be cast on the effectiveness of the typical bureaucratic controls exercised by most police agencies. This management style tends to ignore the strong influence of independent patterns of personality needs and values that police would encourage and develop the positive personality traits of police officers.

A more flexible management style should lead to an easier transition from the enforcement-oriented police agency to the community level police agency that is the stated goal of many progressive police agencies. Whether an agency subscribes to the community policing model or to the problem-oriented policing model, the benefits of an open police agency and a more open police personality would result in a positive perception of the police and their ability to fulfill the role they have been assigned in our society.

The selection process for police officers should consist of strategies that diversify the police population. The homogeneity of the population is reinforced with every study that is done on personality or psychological characteristics of police officers. If we want the police officers to be representative of the general population, then we must broaden the standards and work toward diversification.

Several studies have been completed that indicate police officers spend less than 20 percent of their time doing "law enforcement" activities. Over 80 percent of a police officer's time is spent performing public service or administrative duties.

Police officers are asked to perform every task that is found in the non-police population. This includes such tasks as paramedic, social worker, communication specialist, teacher and educator, planner, accountant, linguist, race car driver, vehicle repair technician, baby sitter, hospice counselor, physical fitness and nutrition advisor, and judge. The list goes on and on. If society expects this type of diversification from police officers, why do police agencies select group members with a uniform psychological profile?

### Recommendations for Further Study

1. Conduct additional research on depression. Determine if the results of this research indicating that standout police officers are more well integrated and have a more positive outlook than police academy trainees can be replicated.

2. Conduct additional research on emotional stability and social conformity. Determine if the results of this research indicating that standout police officers are more emotionally stable and socially conforming than police academy trainees can be replicated.

3. Research to explore the significance of the indication of alcohol or substance abuse or dependence. The research should focus on the question of why standout police officers scored high on the MacAndrew Alcoholism Scale.

4. Longitudinal studies on the consistency of various personality traits over time. The research should focus on the role age plays on the scores in personality trait measurement.

5. Research to measure the effect working as a police officer has on personality trait measurement scores. The research should include measures of

attitudes and prejudices toward ethnic and racial minorities and how police officers react to members of these groups.

#### Recommendations for Use of Psychological Tests

While the need for fully validated tests may be impossible to meet at the present time, it is possible to adopt guidelines for use of psychological tests that are realistic and progressive. These guidelines should include, but not be limited to:

1. The use of psychological screening as only one component of the overall selection process. Psychological screening results should not be used as the only basis for rejecting a police officer candidate.
2. The use of the results of the psychological screening to guide personal history (background) investigations. Properly used, the results of the psychological screening can provide valuable direction for personal history investigators during interviews with current and former peers, employers, supervisors, family friends, and acquaintances.
3. Provide proper training for personal history investigators in the discovery of information to support or refute negative psychological indications.

4. Provide psychological interviews for all candidates who complete written psychological evaluations.

5. Develop in-house validation projects for psychological screening and ratings. These validation projects can provide valuable data on the usefulness of psychological screening to the agency.

6. Select and use several psychological screening instruments and procedures. Different measures can often verify significant findings. Use instruments that are valid for a wide range of the population. The homogeneity of the population of police officers may contribute to the perception that police are a very closed sub-culture.

7. Do not use unvalidated cutoff scores based on psychological test scales. Use only those cutoff scores that are valid, and cross validated as an indication of gross deviance that could be detrimental to the police, or to the population they serve.

8. Psychological screening evaluations should include instruments that screen in applicants as well as those that screen out applicants.

9. Study and document all selection processes and procedures. Develop an information sharing clearing house that is highly visible and available to anyone



interested in the information, civilian or police, researcher or curious citizen. This will aid in developing understanding and comprehension of the role of police in our society by the members of the police population, researchers, and the general population. The primary goal should be to open-up the police sub-culture and encourage participation and understanding.

Although the selection of law enforcement officers will never be perfected, increasing the probability of accurate prediction is certainly desirable and may be helpful in further shaping selection policies (Inwald and Shusman, 1981). Written psychological tests are cost-effective instruments for obtaining data that can help identify personality characteristics and/or disorders. Test results can also be used to develop normative data and leads for follow-up investigations.

New procedures, validated through extensive research, need to be discovered that will assist police administrators in giving due consideration to all aspects of sound personnel administration. The research on psychological assessment of police officers is so mixed that it may be questionable to advance generalizations about possible discriminating characteristics of successful police personnel.

It is hoped that the findings reported here will

advance the current state of police officer selection and the use of psychological screening of law enforcement candidates and promote similar research.

## BIBLIOGRAPHY

- Aiken, L. R. (1985). Psychological testing and assessment (5th ed.). Boston: Allyn and Bacon.
- Anastasi, A. (1982). Psychological testing (5th ed.). New York: MacMillan.
- Aylward, J. (1985). Psychological testing and police selection. Journal of Police Science and Administration, 13, 201-210.
- Baehr, M. E. (1988). Criteria of police performance. Paper presented at the American Psychological Association annual convention, Atlanta, GA.
- Bartol, C. R. (1982). Psychological characteristics of small town police officers. Journal of Police Science and Administration, 10, 58-63.
- Barton, K., Bartsch, T., & Cattell, R. B. (1974). Longitudinal study of achievement related to anxiety and extroversion. Psychological Reports, 35, 551-556.
- Beutler, L.E., Nussbaum, P.D., & Meredith, K.E. (1988). Changing personality patterns of police officers. Professional Psychology: Research and Practice, 19(5), 503-507.
- Beutler, L. E., Storm, A., Kirkish, P., Scogin, F., & Gaines, J. A. (1985). Parameters in the prediction of police officer performance. Professional Psychology: Research and Practice, 16(21), 324-335.
- Broderick, J.J. (1987). Police in a time of change. Prospect Heights, IL: Waveland.
- Burbeck, E., & Furnham, A. (1985). Police officer selection: A critical review of the literature. Journal of Police Science and Administration, 13(1).
- Burkhart, B. R. (1980, February). Conceptual issues in the development of police selection procedures. Professional Psychology, 121-128.

- Butler, A.J.P., & Cochrane, R. (1977). An examination of some elements of the personality of police officers and their implication. Journal of Police Science and Administration, 5(4), 441-450.
- Carpenter, B. N., & Raza, S.M. (1987). Personality characteristics of police applicants: Comparison across subgroups and with other populations. Journal of Police Science and Administration, 15(1), 10-17.
- Cattell, R.B., Eber, H.W., & Tatsuoka, M. M. (1970). Handbook for the Sixteen Personality Factor Questionnaire (16PF). Champaign, IL: Institute for Personality and Ability Testing.
- Costello, R. M., Schoenfeld, L.S., & Kobos, J. (1982). Police applicant screening: An analog study. Journal of Clinical Psychology, 38(1), 216-221.
- Dralle, P. W., & Baybrook, R. M. (1985). Screening of police applicants: A replication of a 5-Item MMPI Research Index validity study. Psychological Reports, 57, 1031-1034.
- Dunham, R. G., & Alpert, G. P. (Eds.). (1989). Critical issues in policing: Contemporary readings. Prospect Heights, IL: Waveland.
- Dwyer, W. O., Prien, E. P., & Bernard, J. L. (1990). Psychological screen of law enforcement officers: A case for job relatedness. Journal of Police Science and Administration, 17(3), 134-136.
- Eisenberg, T., & Dowdle, M. D. (1981). Officer selection and performance study. San Jose Police Department Office of Criminal Justice Planning. LEAA Grant #7006-80.
- Flanagan, C. I. (1986). Legal issues between psychology and law enforcement. Behavioral Science and the Law, 4, 371-384.
- Friedland, D. L., & Michael, W. B. (1987). The reliability of a promotional job knowledge examination scored by number of items right and by four confidence weighting procedures and its corresponding concurrent validity estimates relative to performance criterion rating. Educational and Psychological Measurement, 47, 179-188.

- Furcon, J. (1979). An overview of police selection. In C. D. Sprielerberger (Ed.), Police Selection and Evaluation. Washington DC: Hemisphere.
- Gottlieb, M.C., & Baker, C.F. (1974). Predicting police officer effectiveness. Journal for Psychology, 6, 35-46.
- Hageman, M. J. C. (1979). Who joins the force and for what reasons: An argument for "the new breed". Journal of Police Science and Administration, 8(21), 206-210.
- Hargrave, G. E., & Hiatt, D. (1987). Law enforcement selection and the interview, MMPI and CPI: A study of reliability and validity. Journal of Police Science and Administration, 15(2), 110-115.
- Hattling, S.H., Engel, A.S., & Russon, P. A., Jr. (1983). Shades of blue: Toward an alternative typology of police. Journal of Police Science and Administration, 11(1), 54-61.
- Hiatt, D., & Hargrave, G. E. (1988). Predicting job performance problems with psychological screening. Journal of Police Science and Administration, 16(2), 122-125.
- Hochstedler, E. (1981). Testing types: A review and test of police types. Journal of Criminal Justice, 9, 451-466.
- Hogan, R. (1971). Personality characteristics of highly rated policemen. Personnel Psychology, 24, 679-686.
- Hogan, R., & Kurtines, W. (1975). Personological correlates of police effectiveness. The Journal of Psychology, 91, 289-295.
- Institute for Personality and Ability Testing (1981). Law enforcement assessment and development report manual. Champaign, IL: Author.
- Inwald, R.E. (1988). Five year follow-up study of departmental terminations as predicted by 16 pre-employment psychological indicators. Journal of Applied Psychology, 83(4), 703-710.

- Inwald, R.E. (1985). Administrative, legal, and ethical practices in the psychological testing of law enforcement officers. Journal of Criminal Justice, 13, 367-372.
- Inwald, R. E., & Brockwell, A.L. (1991). Predicting the performance of government security personnel with the IPI and MMPI. Journal of Personality Assessment, 56(3), 522-535.
- Inwald, R. E., & Kenney, D. J. (1989). Psychological testing of police candidates. In Kenney, D. J. (Ed.). Police and Policing: Contemporary Issues (pp. 34-42). New York: Praeger.
- Inwald, R. E., & Shusman, E. J. (1984). The IPI and MMPI as predictors of academy performance for police recruits. Journal of Police Science and Administration, 12(1), 1-11.
- Jacobs, J. B., & Magdovitz, S. B. (1977). At LEEAPS end?: A review of the law enforcement education program. Journal of Police Science and Administration, 5(1), 1-18.
- Kleiman, L. S., & Faley, R. H. (1986). Process-oriented variables and measurement of job performance: An examination of raters' weighting strategy. Psychological Reports, 59, 923-932.
- Kleiman, L. S., & Gordon, M. E. (1985). An examination of the relationship between police training academy performance and job performance. Journal of Police Science and Administration, 14(4), 293-299.
- Koroloff, J. M. (1989). A comparison between job competency and formal task analysis methods to validate police officer training curriculum for Oregon peace officers. Unpublished doctoral dissertation, University of Oregon, Eugene.
- Krug, S. E., Cattell, R. B., & IPAT Staff (1980). Clinical analysis questionnaire manual. Champaign, IL: Institute for Personality and Ability Testing.
- Lawrence, R. A., (1984). Police stress and personality factors: A conceptual model. Journal of Criminal Justice, 12, 247-263.

- Lefkowitz, J. (1977). Industrial-organizational psychology and the police. American Psychologist, 32, 346-363.
- Lefkowitz, J. (1975). Psychological attributes of policemen: A review of research and opinion. Journal of Social Issues, 31, 3-31.
- Lester, D. (1983). Type A personality in police officers. Psychological Reports, 52, 730.
- Mager, R. F., & Pipe, P. (1970). Analyzing performance problems. Belmont, CA: Fearon Pitman.
- Malouff, J. M., & Schutte, N. S. (1985, April). A review of validation research on psychological variables used in hiring police. Paper presented at the annual convention of the Rocky Mountain Psychological Association, Tucson, AZ.
- McClelland, D. C. (1973, January). Testing for competence rather than for "intelligence." American Psychologist, 1-14.
- McClelland, D. C., Baldwin, A. L., Bronfenbrenner, U., & Strodbeck, F. L. (1958). Talent and society: New perspectives in the identification of talent. Princeton, NJ: D. Van Nostrand.
- McLaughlin, V. & Bing, R. (1989). Selection, training, and discipline of police officers. In Kenney, D. J. (Ed.). Police and Policing: Contemporary Issues (pp. 26-33). New York: Praeger.
- McQuilkin, J. I., Russell, V. L., Frost, A. G., & Faust, W. R. (1990). Psychological test validity for selecting law enforcement officers. Journal of Police Science and Administration, 17(4), 289-294.
- Meier, R. D., Farmer, R. E., & Maxwell, D. (1987). Psychological screening of police candidates: Current perspectives. Journal of Police Science and Administration, 15(3), 210-215.
- Merian, E. M., Stefan, D., Schoenfeld, L. S. & Kobos, J. C. (1980). Screening of police applicants: A 5-item MMPI research index. Psychological Reports, 47, 155-158.

- Mills, C. J., & Bohannon, W. E. (1980). Personality characteristics of effective state police officers. Journal of Applied Psychology, 65(67), 680-684.
- More J. W., Jr. (Ed.). (1985). Critical issues in law enforcement. Cincinnati: Anderson.
- Muir, W.K. Jr. (1977). Police: Streetcorner politicians. Chicago: University of Chicago Press.
- Murrell, M. E., & Lester, D., & Arcuri, A. F. (1978). Is the "Police personality" unique to police officers? Psychological Reports, 43, 218.
- Ogard, O. E. & Karr, C. (1989). A criterion-related validity study using intelligence and personality testing to predict job performance of basic corrections and law enforcement class participants attending Oregon Police Academy from April 1986 to April 1988. Unpublished manuscript.
- Presidents Commission on Law Enforcement and Administration of Justice. (1967). The challenge of crime in a free society. Washington DC: U.S. Government Printing Office.
- Presidents Commission on Law Enforcement and Administration of Justice. (1967). Task force report: The police. Washington DC: U.S. Government Printing Office.
- Pugh, G. (1985). The California Psychological Inventory and police selection. Journal of Police Science and Administration, 13(2), 172-177.
- Pynes, J. E., & Bernardin, J. H. (1989). Predictive validity of an entry-level police officer assessment center. Journal of Applied Psychology, 74(5), 831-833.
- Reese, J. T., & Goldstein, H. A. (Eds.). (1986). Psychological services for law enforcement. Washington DC: U.S. Government Printing Office.
- Regoli, R.M., & Schrink, J. (1977). Dogmatism among law enforcement-oriented, corrections-oriented, and non-criminology students: An extension. Journal of Police Science and Administration, 5(2), 232-235.



- Renner, K. E. & Barrett, C. T. (1984). A conceptual framework for police functions and services. Journal of Criminal Justice, 12, 303-312.
- Richards, M. A. (1972). A study in psychological characteristics of students graduating from three types of basic nursing programs. Nursing Research, 21(3), 258-261.
- Robert, K. & Adlam, C. (1982). The police personality: Psychological consequences of being a police officer. Journal of Police Science and Administration, 10(3), 344-348.
- Saxe, S, J. & Reiser, M. (1976). A comparison of three police applicant groups using the MMPI. Journal of Police Science and Administration, 4(4), 419-425.
- Sheehan, R. & Cordner, G. W. (1989). Introduction to Police Administration (2nd ed.). Cincinnati: Anderson.
- Shusman, E. J., & Inwald, R. E., & Fratz, H. F. (1987). A cross-validation study of police recruit performance as predicted by IPI and MMPI. Journal of Police Science and Administration, 15(2), 162-169.
- Smith, A. B., Locke, B., & Fenster, A. (1970). Authoritarianism in police who are college graduates and non-college police. The Journal of Criminal Law, Criminology and Police Science, 1(9), 313-315.
- Spielberger, C.D. (Ed.). (1979). Police selection and evaluation: Issues and techniques. New York: Praeger.
- Stewart, R. A., & Liddell, J. M. (1976). Comparison of personal characteristics: High and low ability student nurses and year of training in New Zealand. Social Behavior and Personality, 4(2), 161-169.
- Stiffel, J., & Rossi, D. (1983). Vicarious liability: Psychological aspects of vicarious liability. The Police Chief, 50(3), 134-136.
- Stone, A. R., & De Luca, S.M. (1985). Police Administration. New York: John Wiley and Sons.
- Swansen, C. R., & Territo, L. (1983). Police administration: Structure, processes, and behavior. New York: MacMillan.

- Thibault, E. A., Lynch, L. M., & Mc Bride, B. (1990). Proactive police management (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Topp, B. W., & Kardash, C. A. (1986). Personality, achievement, and attrition: Validation in a Multiple-Jurisdiction Police Academy. Journal of Police Science and Administration, 13(3), 234-241.
- Wonderlic, E. F. (1983). Wonderlic personnel test manual. Northfield, IL.

## **APPENDIX**

## INFORMED CONSENT

I, \_\_\_\_\_, hereby agree to serve as a participant in a research project conducted by Carl Stevenson, Ph.D. candidate at Oregon State University.

I understand that the study involves taking paper-and-pencil tests, involving approximately three hours of time. The tests are the Wonderlic Personnel Test, the 16 Personality Factor Questionnaire (16PF), the Clinical Analysis Questionnaire (CAQ), the MacAndrew Scale, the PD Scale, the Tennessee Self Concept Scale and the Coopersmith Self-Esteem Inventories.

I understand that the purpose of this study is to conduct research toward development of a test battery to aid in the selection and training of individuals to serve as police officers. The study will also be used by Carl Stevenson to complete part of the degree requirements for a Ph.D. at Oregon State University.

I do not expect to receive any direct benefit from participation in this study, but I understand my participation may help to increase knowledge which may benefit others in the future.

Carl Stevenson will answer any questions I may have about this study. I have been assured that the information I give will be held in confidence and that I will not be identifiable in the findings.

I understand that I am free to withdraw from participation in this study at any time.

I have read and understand the foregoing information.

Date \_\_\_\_\_ Signature \_\_\_\_\_

Contact address: \_\_\_\_\_  
 \_\_\_\_\_