

**US Store Detectives: The Relationship between  
Individual Characteristics and Job Performance**

Thesis submitted for the degree of  
Doctor of Philosophy  
at the University of Leicester

Read Hayes

November 2001

UMI Number: U151031

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI U151031

Published by ProQuest LLC 2013. Copyright in the Dissertation held by the Author.  
Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against  
unauthorized copying under Title 17, United States Code.



ProQuest LLC  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

## **ABSTRACT**

### **US Store Detectives: The Relationship between Individual Characteristics and Job Performance**

**by  
Read Hayes**

US retailers lose over \$30 billion in merchandise annually. Merchants also suffer billions more in losses of cash, supplies, time, equipment, and growing civil liability costs. In order to control these losses, retail companies use a combination of people, programs, and systems. A review of the literature indicates specialized loss prevention employees are an important part of many asset protection programs.

A major interest of managers is improving the efficiency of their crime and loss control processes, including loss prevention store detective programs. Retail managers commonly use job performance reviews to gauge the individual efficacy of store detectives. In addition to job training, and job output supervision, research has indicated certain stable characteristics of individuals helps explain actual job performance, making pre-employment selection a critical part of process improvement. However, relatively little attention has been devoted to the selection of in-store detectives in the literature.

Qualitative research was used to identify critical job tasks in order to develop and validate a specialised job performance instrument. The preliminary research with subject matter experts indicated four distinct job roles of store detectives. This job analysis also resulted in a new job performance rating instrument later tested in the quantitative phase of the project.

Subsequently, a quantitative study of 201 US store detectives (using the performance instrument in a concurrent validity design) developed four distinct selection models designed to help explain role-specific job performance variance. Four hypotheses regarding the relationship between biographical data, personality traits, cognitive ability and the four measures of job performance were tested using multiple and logistic regression. The four resulting models explained between 13% and 23% of the variance in detective job performance measures.

Implications of the project's findings, and suggestions are also discussed in context to the current sample, as well as prior work in pre-employment selection research.

## ACKNOWLEDGEMENTS

As an American working toward a PhD at a British university, while living, working, and studying in the US, proved to be an interesting but positive challenge, and I wish to express my deep appreciation to my supervisors and advisors: Professor Joshua Bamfield, Professor David Smith, and University of Florida Professor Barton Weitz, all of whom provided me focus, support, and many valuable comments. Also, much thanks to Dr. Stephen Swailes and Amitav Chakravarti for their input and critique on the analysis procedures. This is also an opportunity to acknowledge the guidance and support in learning research methods provided by Dr. Richard Hollinger as well.

It has been a long journey from store detective to loss prevention consultant for international retail operations, and now to trained researcher. I gratefully acknowledge the support and assistance of my wife Cindy, Carrie and Bryan, my extended family, fellow consultant Robert Blackwood, the executives and participants from the two participating retail companies, and many, many others. I sincerely hope this project provides further, usable information and support for both future researchers and innovative retailers alike.



## **DECLARATION OF AUTHENTICITY**

This thesis is the result of work done during the period of registration, and is wholly the work of the author. No part of this work was submitted for another degree. This thesis may be made available for consultation, photocopying, and for use at other libraries, in accordance with the regulations of the University of Leicester.

## TABLE OF CONTENTS

<b>ABSTRACT.....</b>	<b>I</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>II</b>
<b>DECLARATION OF AUTHENTICITY .....</b>	<b>III</b>
<b>TABLE OF CONTENTS .....</b>	<b>IV</b>
<b>LIST OF TABLES.....</b>	<b>VII</b>
<b>LIST OF FIGURES .....</b>	<b>VIII</b>
<b>CHAPTER 1 .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 OVERVIEW .....	1
1.2 THE RESEARCH PROBLEM.....	6
1.3 RELEVANCE OF THE STUDY .....	13
1.4 CONTRIBUTION .....	15
1.5 RESEARCH HYPOTHESES AND MODEL .....	16
<b>CHAPTER 2.....</b>	<b>20</b>
<b>STORE DETECTIVES AND LOSS PREVENTION .....</b>	<b>20</b>
2.1 INTRODUCTION .....	20
2.2 RETAIL CRIME AND LOSS.....	20
2.3 RESPONSES TO RETAIL CRIME AND LOSS.....	22
2.4 THE ROLE OF STORE DETECTIVES .....	27
2.5 THE PRIMARY FOCUS OF STORE DETECTIVES .....	35
2.6 TRAINING STORE DETECTIVES.....	36
2.7 THE EFFECTS OF EMPLOYEE TURNOVER .....	40
2.8 CIVIL LIABILITY AND STORE DETECTIVES.....	42
2.9 THE IMPORTANCE OF CAREFULLY SELECTING STORE DETECTIVES.....	44
2.10 SUMMARY .....	46
<b>CHAPTER 3.....</b>	<b>49</b>
<b>EMPLOYEE SELECTION AND PERFORMANCE.....</b>	<b>49</b>
3.1 INTRODUCTION .....	49
3.2 HISTORICAL REVIEW OF EMPLOYEE SELECTION IN THE UNITED STATES.....	50
3.3 LEGAL ISSUES IN EMPLOYEE SELECTION .....	52
3.4 JOB SELECTION METHODS .....	58
3.5 GENERAL COGNITIVE ABILITY .....	61
3.6 GENERAL COGNITIVE ABILITY (G) .....	63
3.7 PERSONALITY TRAITS IN THE WORKPLACE .....	81
3.8 USE OF BIOGRAPHICAL DATA FOR SELECTION .....	95
3.9 SUMMARY OF THE LITERATURE.....	96
<b>CHAPTER 4.....</b>	<b>101</b>

<b>RESEARCH DESIGN .....</b>	<b>101</b>
4.1 INTRODUCTION .....	101
4.2 OVERVIEW OF THE STUDY'S RESEARCH PROCESS.....	102
4.3 THE STORE SAMPLE .....	103
4.4 EXPLORATORY JOB ANALYSIS.....	103
4.5 QUANTITATIVE ANALYSIS .....	122
4.6 THE STORE DETECTIVE SAMPLE .....	126
4.7 DATA COLLECTION .....	130
4.8 PROCEDURES.....	149
4.9 DATA ANALYSIS.....	152
4.10 LIMITATIONS OF THE STUDY .....	155
4.11 SUMMARY OF THE RESEARCH DESIGN .....	157
<b>CHAPTER 5.....</b>	<b>158</b>
<b>DATA SCREENING AND INSTRUMENT RELIABILITY .....</b>	<b>158</b>
5.1 INTRODUCTION .....	158
5.2 RELIABILITY .....	158
5.3 FACTOR ANALYSIS OF THE PERFORMANCE INSTRUMENT .....	165
5.4 VALIDITY .....	168
5.5 SUMMARY OF FINDINGS .....	171
<b>CHAPTER 6.....</b>	<b>173</b>
<b>PREDICTION OF STORE DETECTIVES' PERFORMANCE.....</b>	<b>173</b>
6.1 INTRODUCTION .....	173
6.2 THE PREDICTION OF JOB PERFORMANCE .....	174
6.3 PROCEDURE USED TO CREATE THE PREDICTIVE MODELS .....	177
6.4 VARIABLE 1: TOTAL JOB PERFORMANCE CRITERION.....	182
6.5 VARIABLE 2: HIGH EXTERNAL THEFT RESOLUTION PRODUCTIVITY .....	186
6.6 VARIABLE 3: FUTURE LP SUPERVISOR.....	189
6.7 VARIABLE 4: TOP GUN TYPE.....	193
6.8 CHAPTER SUMMARY .....	196
<b>CHAPTER 7 .....</b>	<b>198</b>
<b>EXPLORING THE PERFORMANCE OF STORE DETECTIVES .....</b>	<b>198</b>
7.1 INTRODUCTION .....	198
7.2 PREDICTIVE VALIDITY OF INDEPENDENT VARIABLES .....	198
7.3 OVERVIEW OF THE STUDY AND PERFORMANCE CONTRIBUTIONS .....	207
7.4 CHAPTER SUMMARY .....	209
<b>CHAPTER 8.....</b>	<b>212</b>
<b>CONCLUSIONS .....</b>	<b>212</b>
8.1 INTRODUCTION .....	212
8.2 SUMMARY OF THE STUDY AND FINDINGS .....	212
8.3 STUDY OBJECTIVES.....	215
8.4 IMPLICATIONS.....	216
8.5 LIMITATIONS.....	223
8.6 SUMMARY .....	226
8.7 RECOMMENDATIONS.....	228
<b>APPENDIX A.....</b>	<b>232</b>
STORE DETECTIVE PROGRAM SITUATIONAL AND TASK FORM.....	232

<b>APPENDIX B .....</b>	<b>242</b>
STORE DETECTIVE TASK FORM .....	242
<b>APPENDIX C .....</b>	<b>247</b>
STORE DETECTIVE SITUATION FORM.....	247
<b>APPENDIX D .....</b>	<b>257</b>
STORE DETECTIVE TASK LISTING .....	257
<b>APPENDIX E .....</b>	<b>263</b>
STORE DETECTIVE SITUATION LISTING .....	263
<b>APPENDIX F .....</b>	<b>271</b>
STORE DETECTIVE KNOWLEDGE, SKILLS, ABILITIES, AND OTHER CHARATERISTICS (KSAO's) LISTING .....	271
<b>APPENDIX G.....</b>	<b>274</b>
TASK AND KSAO MATRICES .....	274
<b>APPENDIX H.....</b>	<b>282</b>
STORE DETECTIVE JOB PERFORMANCE ASSESSMENT .....	282
<b>APPENDIX I .....</b>	<b>285</b>
STORE DETECTIVE JOB PROFILER .....	285
<b>APPENDIX J.....</b>	<b>288</b>
STORE DETECTIVE INDIVIDUAL CHARACTERISTIC SHEET .....	288
<b>APPENDIX K.....</b>	<b>289</b>
SUPERVISOR INDIVIDUAL CHARACTERISTICS .....	289
<b>APPENDIX L .....</b>	<b>290</b>
COVER LETTER FROM RESEARCHER .....	290
<b>APPENDIX M.....</b>	<b>291</b>
COVER LETTER FROM LP EXECUTIVE TO SELECTED STORE DETECTIVES .....	291
<b>APPENDIX N.....</b>	<b>292</b>
REGRESSION MODELS .....	292
<b>APPENDIX O.....</b>	<b>295</b>
WONDERLIC PERSONNEL TEST .....	295
<b>APPENDIX P .....</b>	<b>297</b>
NEO PI-R.....	297
<b>APPENDIX Q.....</b>	<b>301</b>
GLOSSARY OF TERMS .....	301
<b>REFERENCES.....</b>	<b>303</b>

## LIST OF TABLES

TABLE 4.1: DEMOGRAPHICS OF THE INITIAL RESEARCH PARTICIPANTS .....	114
TABLE 4.2: INITIAL RESEARCH PARTICIPANTS' STATISTICS.....	114
TABLE 4.3: JOB PROFILER PARTICIPANT STATISTICS.....	118
TABLE 4.4: CURRENT JOB SATISFACTION AND SELF-RATED PERFORMANCE OF NEO JOB PROFILER PARTICIPANTS.....	118
TABLE 4.5: JOB RELEVANT PERSONALITY FACETS.....	120
TABLE 4.6: DESCRIPTIVE STATISTICS OF DETECTIVE PARTICIPANTS (IN YEARS).....	129
TABLE 4.7: SAMPLE DEMOGRAPHICS OF DETECTIVE PARTICIPANTS.....	129
TABLE 4.8: SUMMARY OF QUANTITATIVE RESEARCH AND COLLECTION .....	147
TABLE 4.9: MEASUREMENT OF INDEPENDENT AND DEPENDENT VARIABLES.....	148
TABLE 5.1: INTER-CORRELATIONS AMONG TOTAL JOB PERFORMANCE REVIEW INSTRUMENT ITEMS .....	160
TABLE 5.2: INTER-CORRELATIONS AMONG JOB KNOWLEDGE SCALE ITEMS.....	161
TABLE 5.3: INTER-CORRELATIONS AMONG JOB SKILLS SCALE ITEMS .....	161
TABLE 5.4: INTER-CORRELATIONS AMONG JOB PRODUCTIVITY SCALE ITEMS .....	162
TABLE 5.5: INTER-CORRELATIONS AMONG PROFESSIONAL RELIABILITY SCALE ITEMS .....	163
TABLE 5.6: INTER-CORRELATIONS AMONG PROFESSIONAL JUDGEMENT SCALE ITEMS .....	163
TABLE 5.7: INTER-CORRELATIONS AMONG INTERPERSONAL JOB SKILLS SCALE ITEMS .....	164
TABLE 5.8: INTER-CORRELATIONS AMONG FUTURE PROMOTABILITY SCALE ITEMS	164
TABLE 5.9: SUMMARY OF INTER-CORRELATION ANALYSIS .....	165
TABLE 5.10: SUMMARY OF PERFORMANCE SECTIONS WITH FACTOR ANALYSIS.....	167
TABLE 5.11: SELECT PERFORMANCE CRITERION CORRELATIONS.....	170
TABLE 6.1: CORRELATION OF JOB PERFORMANCE MEASURES .....	179
TABLE 6.2A: LABELLING OF FINAL INDEPENDENT VARIABLES .....	181
TABLE 6.2B: LABELLING OF DEPENDENT VARIABLES .....	182
TABLE 6.3: COEFFICIENTS OF MODEL EXPLAINING TOTAL JOB PERFORMANCE RATING .....	183

**TABLE 6.4: COEFFICIENTS OF MODEL EXPLAINING TOTAL JOB PRODUCTIVITY  
(EXTERNAL THEFT RESOLUTION) PERFORMANCE RATING ..... 187**

**TABLE 6.5: COEFFICIENTS OF MODEL EXPLAINING POTENTIAL FUTURE SUPERVISOR 190**

**TABLE 6.6: STEPWISE LOGISTIC REGRESSION RESULTS FOR TOP GUN MODEL..... 194**

**LIST OF FIGURES**

**FIGURE 1: A MODEL OF THE RELATIONSHIP OF COGNITIVE ABILITY, PERSONALITY,  
AND BACKGROUND ITEMS TO JOB PERFORMANCE. .... 17**

**FIGURE 2: THE STORE DETECTIVE JOB TASK AND SITUATION ANALYSIS PROCEDURE  
..... 105**

**FIGURE 3: A REVISED MODEL OF THE RELATIONSHIP OF COGNITIVE ABILITY,  
PERSONALITY, AND BACKGROUND ITEMS TO JOB PERFORMANCE. ....207**

# CHAPTER 1

## INTRODUCTION

### 1.1 OVERVIEW

Retailing is a critical part of the world's economy. After services, retailing is the largest employer in the United States, accounting for over 21 million American jobs or 18 % of non-agricultural employment. Mega retailer Wal-Mart with over \$150 billion in annual sales and over 3500 stores is now the largest United States employer- with over 750,000 associates and growing. Retail sales in the United States easily exceeds \$1.54 trillion annually (National Retail Institute, 1999). Further, the dynamics of retailing continue to change. Retailers are forced to deal with increased competitive pressure which is reducing profit margins (discussed by the U.S. Council of Economic Advisors, 1999) at the same time as losses from crime, negligence, apathy, errors, and operational and customer service processes severely impact business operating costs and profits. Hollinger et al. (2000) discuss the tremendous cost of crime to American retailers based on the findings of a large a cross-sectional survey. Bamfield and Hollinger (1996) estimate that in 1993-1994 error and thefts by staff, customers and through the supply chain cost retailers in both the United States and the United Kingdom between 1.6 % and 2 % of their sales or \$26 billion per year. The British Retail Consortium's Retail Crime Survey (1999) estimates UK retailers lost approximately 1.6 billion pounds sterling in 1998. US merchandise loss estimates are just over \$26 billion in 1999 (Hollinger et al.,

2000). This significant inventory loss is equivalent to a quarter of all US and UK annual retail profits (Bamfield and Hollinger, 1996).

While the present study was conducted in the United States by an American, it is acknowledged that the problems faced by both American and UK retailers are surprisingly similar. This perception was supported by the findings of Bamfield and Hollinger (1996). The importance of crime and loss control has grown to the point where a recent article indicated the world's largest retail company Wal-Mart now views loss prevention as a key part of its business strategy (Porter, 1999).

Until recently, retailers often tolerated a given amount of loss from theft and wastage (usually termed 'shrinkage') as a peripheral and difficult to control cost of doing business. However, as Johnson and Outcalt (1996) argue, the net margins of retail firms are likely to worsen under the pressures of high levels of competition and a change in consumer behaviour involving consumers in all social groups patronizing low-cost stores. Alternative retailing formats such as on-line shopping and auctions, catalogues by mail, and interactive television also continue to grow in size and diversity. In addition, current US tax laws make it more difficult to write-off losses from theft and error against federal taxes, while the growing practice of company self-insurance precludes easy risk or loss transference to external insurance businesses.



In this highly competitive, dynamic atmosphere, crime and loss control takes on a new priority. Retailers have achieved major cost reductions and productivity gains through automation (particularly related to information systems); changes in store location selection modelling, and by operating large numbers of retail outlets in order to take advantage of volume merchandise and advertising buying. Despite Wal-Mart's position mentioned above, a review of the retail literature reveals losses from theft and error are one of the few areas of significant cost that have not received much serious attention from many retail businesses. In the US, losses as a percentage of sales have not fallen over the last decade (Hollinger et al., 1999). It seems likely therefore that retailers will increasingly focus upon this important opportunity to reduce their direct and indirect costs.

In addition to the direct costs of ongoing loss such as multiple inventory counts, inventory replenishment, loss prevention payroll, training, and technology, are the indirect costs. Crime and loss not only decrease profits by adding expense, they can significantly reduce operating revenues. Sales can be reduced in stores identified as unsafe by negative publicity since customers may limit their shopping times to daylight hours and may even switch to competing retailers or shopping formats.

Another growing problem facing US retailers is the risk of personal injury liability. Customers and staff who feel they were wrongly accused of theft, who believe their physical apprehension or sanction was mishandled, or store employees or

bystanders who were injured or killed during a crime incident are increasingly seeking civil remedies (Federal and Fogelman, 1986; Laska, 2000). Often these civil awards are in six and even seven figures. At least one US retail company was subjected to criminal action by the state of Florida for the actions of its employees during a shoplifting apprehension, which resulted in the alleged offender's death (Diggen, 1995). While this is an exceptional incident, it indicates the potential difficulties facing US retailers, who, in common with large-scale, chain retailers in most countries of the world, need to invest wisely in crime and loss control technology and staff to protect their assets from theft and error (Bamfield, 1997; Beck and Willis, 1995). Retailers thus face a three-dimensional pressure: increasing and/or costlier losses; the inability to pass on or absorb these financial losses easily; and increasing risk for inept crime and loss control efforts.

This three-dimensional pressure implies that individual retail companies wishing to mitigate at least some of these costs need to learn how they can better prevent and handle loss and crime situations. They should also strive to better predict the causes and demographics of their particular crime and loss problems.

Retailers often employ a combination of people, programs, procedures, and technologies to reduce the frequency and severity of their crime and loss. Research indicates a retailer's employees are generally regarded as being the best defence against costly crime and loss (Butler, 1994; Carroll and Weaver, 1986; Cox et al., 1990; Hayes, 2000; Schlueter et al., 1989). This implies that staff members need to

be trained and motivated to avoid errors, follow company procedures, prevent theft, and handle crime incidents skilfully. Central to superior job performance by staff is combination of the recruitment and selection policies followed by retailers, the level and quality of loss prevention training, and ongoing, sound leadership. A study by Hayes (1997b) indicated that 93% of the sample of US retailers were giving some training to their loss prevention employees, although the content, amount, and method of training varied considerably between companies.

However, training may only improve the achievement of some employees since it accounts for a relatively small amount of the variance in job performance. Fleishman and Mumford (1989) found there were individual characteristics affecting an individual's capacity to respond well to training, while Robertson and Downs (1979) found great differences in training outcomes based on individual mental and physical abilities.

While many factors help explain the variance in job performance (e.g. job tasks, supervisor competence and style, workplace stress and norms), selecting new employees may be as important as training them (Salgado, 1999). Effectively matching people with positions can maximize an organization's success and profitability. Mills (1985) found that 72 % of companies that routinely practiced human resource planning (in this case, focused selection and training) associated these concentrated practices with subsequent improvements in profitability. Companies struggling to select better performing individuals are also searching for

the best selection techniques. Some research indicates testing may provide better accuracy in predicting desirable personality traits than traditional interviewing (Caliguiri, 2000; Oakes, 1999; Salgado, 1999). Work is becoming more dynamic and less easily described by a particular job description, resulting in the need for workers with more general competencies (Arvey and Murphy, 1998; Ilgen and Pulakos, 1999). In addition, when valid and reliable test instruments are combined with background checks and structured interviewing techniques, the accuracy of predicting eventual job performance becomes stronger still (Rosse and Levin, 1996).

## **1.2 THE RESEARCH PROBLEM**

Retailers should achieve incremental workplace improvement by enhancing their new-hire selection process. Security supervisors are looking for ways to identify individuals likely to be excellent workers in their organization before hiring them (Leeds, 1997). This research attempts to analyse the person-position match for retail security officers. Since the time of Parsons (1909), some US companies have sought to determine the characteristics (factors) needed to perform well in individual positions. They have attempted to use these factors to achieve a good person-position match through tests and assessment centres believing good person-job fits mean more productivity and ultimately profit. In this process, desirable personal traits are identified for each job position in a specific setting. Weinrach (1979, p. 68) reports that industrial psychologist Hugo Munsterberg began testing job applicants for this purpose in 1912. Trait-factor testing continued

to grow steadily in the US until the early 1970s when the landmark US Supreme Court ruling Griggs vs. Duke Power Company (1971) declared the North Carolina Power Company used employee selection tests in an unfair and discriminatory manner. This ruling combined with other concerns about testing slowed down the practice of pre-employment and job promotion testing. Similar issues have risen in Britain concerning the 'norming' of tests covering individuals from different cultures (McHenry, 1997), and court cases involving British Rail and the London Borough of Brent where staff who were refused promotion took the matter to court claiming unjustified discrimination (Equal Opportunities Review, 1996).

Today US retailers screen prospective shop floor and supervisor employees using various methods, but much of the selection is based upon interviews and limited background checking. Most selection testing often focuses on identifying potentially dishonest applicants (Hollinger et al., 1996) rather than person-position matching. However, for security or loss prevention staff, concerns about productivity, rising liability problems, and high staff turnover mean companies may become increasingly interested in better matching job traits and factors.

It is clear that employee selection is important to individual and company performance, and the academic literature indicates certain stable individual differences may predict important employee attitudes and behaviour (Costa, 1996; Gottfredson, 1998; Ree and Earles, 1996). These individual differences, and their role in explaining job performance variance, are part of what has been labelled the

psychometric model of selection (Iles and Salaman, 1995). While much of the preliminary work in the area of individual differences in psychometric properties was conducted in the UK, the US was largely responsible for the mass use of these properties to aid in better job selection during World War I (Oakes, 1999). The model's utility to managers remains important today, and has been identified as a good professional practice in many human resource and industrial/organizational psychology publications (Iles and Salaman, 1995). A person's knowledge, skills, abilities, and other characteristics are used to predict outcomes such as job performance rating using standardized tests, BioData, and structured interviews. In US studies, this process is usually carried out with a criterion-related validity format expressed in correlation coefficients (Caliguiri, 2000).

Like any model, the use of psychometric measurements to predict workplace performance relies on several important, and potentially vulnerable, assumptions (Iles and Salaman, 1995). The first is that a person's characteristics such as attitudes, abilities, and tendencies remain relevantly stable over time. This stability allows managers to predict future workplace behaviour based on certain traits. Next, this method assumes that these stable constructs or traits are accurately, consistently, and objectively measurable. Also, to use this model, managers expect that a job's most common tasks and situations can be identified, and that these tasks remain stable over time as well. The psychometric model also assumes that job performance itself is objectively measurable. Performance may be measured directly (work output), or using some subjective measure such as supervisor

ratings. The final assumption of the model is that the true intention of psychometric assessment is to predict future individual job performance.

While an individual's traits help explain work performance variance, individual job performance is also influenced by many other factors including specific job characteristics, workplace norms, management/leadership competence and style, an individual's job success history, and perceived workplace discrimination (Iles and Salaman, 1995). However many of these constructs are not as useful in predicting how a job candidate will perform in a certain job prior to making a job offer. It is a strength of the psychometric selection approach that individual differences in work performance do contribute to overall organizational performance and success, and that there is much evidence that much of the difference in performance is explained by certain individual traits (Iles and Salaman, 1995).

Organizations are often dynamic, constantly changing to adapt to external and internal factors. This situation can mean individuals' jobs, and their task components, change as well. Individual selection criteria must be constantly updated to reflect the current or anticipated changes in a job's unique demands. Many jobs today are arguably less suited to the psychometric characteristic/trait selection approach than others are. Examples might include self-directed work teams where traditional job tasks do not appear to exist, and job performance is measured against less rigid criteria. This is not the case with store detectives.

Individual detectives are assigned to carry out well-defined tasks and handle a variety of specified job situations. A review of the literature reveals store detective functions have changed little over the last 40 years (Edwards, 1958; Hayes, 1991, 2000).

Also of significance are the subtle differences in the European social psychology approach to fitting individuals to organizations and their distinct environments, and the US approach, which often seeks to understand the psychological differences of individuals, and how this affects their work performance in the organization (Arthur, 1998; Iles and Salaman, 1995). The current study is a US-based project, and employs the latter philosophy. It is proposed that individual traits are measurable, and help predict an individual's work performance in a stable, specific job and work setting.

One such trait is a person's general cognitive ability. Spearman (1927) refined Sir Francis Galton's concept of individual intelligence by specifying that IQ comprises at least two kinds of mental abilities: a general ability (referred to simply as *g*) and specific mental abilities (labelled *s*). He felt that general ability (*g*) was required for the performance of high-level tasks involving complex information processing. Specific mental abilities were required for performing single or more specific tasks. Individual general cognitive ability (*g*) has a long, well-documented history of research and many authors argue that it reliably predicts job performance in various settings and jobs, including those considered similar to security officers-



such as police officers, Air Force pilots, and soldiers (e.g., Dreher and Bretz, 1991; Gottfredson, 1986b; House et al., 1992; Olea and Ree, 1994; Schmidt et al., 1992). But despite significant empirical support for using g to help predict job behaviour, there are major criticisms of using the measure to select for job performance: measures of g are fundamentally biased; links between g and work outcomes are an artefact of the relationship between intelligence and socio-economic status; and finally, g is not as powerful a predictor of eventual job performance as testing for very specific aptitudes or measures of 'tacit knowledge' or common sense (Sternberg et al., 1995; Sternberg et al., 2000; Sternberg and Wagner, 1993).

Despite these criticisms of using measures of general cognitive abilities to select for high performance, the preponderance of evidence suggests the statistically significant relationship among these variables is not biased or spurious. High g has been held to predict an individual's ability to learn key tasks and to perform them at a high level (Barrick and Mount, 1991; Gottfredson, 1997; Ree and Earles, 1993, 1994, 1996,).

While g is indicated as a predictor of job performance, it is not the only one. The *ability* or *capacity* to perform (as partially predicted by g) appears to be enhanced by the actual *inclination* to perform. Research shows the personality trait 'conscientiousness' may represent stable individual differences of motivation (Goldberg, 1993) and on job performance (e.g., Barrick and Mount, 1991, 1993). The personality trait conscientiousness is one of five in the "Big Five" lexical

personality taxonomy. This important taxonomy also includes: neuroticism (the tendency to experience anxiety, depression and hostility), extraversion (the quantity and intensity of interpersonal interaction), openness (the proactive seeking and appreciation of new experiences), and agreeableness (the quality of one's interpersonal interactions along a continuum from compassion to antagonism) (Piedmont and Weinstein, 1994). The conscientiousness domain is described as the need for achievement, self-discipline, order, dutifulness, competence and commitment to work (Costa et al., 1991).

Using personality trait measures to select for job performance also has its critics. One problem with the research to date is the fact that the empirical studies in the literature are usually limited to simple bivariate designs, while real job situations are much more complex (Adler, 1996). Others (Ellingson et al., 2001; Hogan and Nicholson, 1988; Nunnally, 1978; Zerbe and Paulhus, 1987) are concerned that prospective employees distort their personality test responses in order to get the job. In their studies, Ones et al. (1996) found that response distortion or 'social desirability' does not generally function as a worthwhile suppressor variable however.

Based on this evidence, it is proposed that retailers can improve the performance of their loss prevention staff by implementing more rigorous pre-employment selection methods. This study will conduct exploratory research to determine if personal characteristics can help an employer better predict a future store

detective's job performance. This research program was designed to investigate the following research questions:

- To what extent can store detectives' job performance (as reported by supervisors) be predicted or explained by using personality traits, general cognitive ability, and personal characteristics data?
- What is the relationship between job performance as defined by the supervisor and the following: personality traits, cognitive ability, and individual characteristics such as age, gender, race, prior loss prevention experience and years of formal education?

These questions are addressed by the hypotheses outlined at the end of this chapter.

### **1.3 RELEVANCE OF THE STUDY**

According to the literature, previous research indicates the primary role retail employees play in a company's loss prevention efforts (Carroll and Weaver, 1986; Cox et al., 1990; Hayes, 2000; Hollinger and Dabney, 1996; Schleuter et al., 1989). Retailers ask their staff to prevent losses by complying with company procedures and maintaining security systems. Since retail loss prevention (LP) employees are in an excellent position either to save their company money or to create tremendous liability, LP and training would seem to be a critical topic. A review

of the literature reveals the essential role careful selection of employees plays in their ultimate job performance (Barrick and Mount, 1991; Gottfredson, 1984, Hunter, 1986; Sackett et al., 2001; Schmidt and Hunter, 1998; Schmidt et al., 1992). According to some researchers, selection is becoming increasingly important with fewer training resources and expected increases in job complexity (Olea and Ree, 1994).

Although there is an increasingly substantial body of criminological, psychological, sociological, and business administration literature concerned with crime and criminals, retail loss prevention, and particularly the work of security staff, has been comparatively ill served (see editor's comments in Gill, 1994, pp. 1-9, where the author points out several large gaps in research specifically dedicated to evaluating the causes and effects of retail crime and loss; as well as the real effectiveness of various prevention initiatives and technologies). While there are a number of texts on both sides of the Atlantic dealing with general advice for security managers, no current PhD-level study on the work of loss prevention staff or their recruitment was found in the available literature. This makes the study an important resource for retailers looking for evidence of the relationship between better selection and job performance. There have been few refereed journal articles on the topic of security staff selection or performance (Leeds, 1997). Yet, this is a vital area for business. Since a review of the literature indicates a relative lack of research in this area, this research project explores the differences in individual

ability and personality traits between high performing loss prevention staff and other levels of performers.

Extensive discussion with senior loss prevention decision-makers at several large US and UK retailers, personal participation at numerous loss prevention conferences over the last 15 years (including the National Retail Federation, International Mass Retailers Association, and the Food Marketing Institute), and interrogation of electronic databases including *PsychInfo*, *Nexis*, and the University of Florida's *WebLuis*, shows there has been little publicized work carried out on LP staff selection. While most companies with which this researcher is familiar follow general company guidelines regarding the development of job descriptions, many decisions about individual recruitment and selection are made on an almost purely intuitive basis. Formal job analysis, or other systematic research of the position's priority tasks and situations, are not always a prerequisite to developing a store detective selection and development program.

#### **1.4 CONTRIBUTION**

As previously mentioned in the relevance section, the topic of loss prevention is considered increasingly critical in light of growing crime, loss, and civil liability. The literature on LP employee selection is scarce. It is the intention of this thesis to advance the understanding of selecting personnel for this important position in the business, criminological, and psychological literatures. Thus, the study makes a

contribution to the areas of crime, loss, and civil liability in general, and to the area of LP employee selection, specifically.

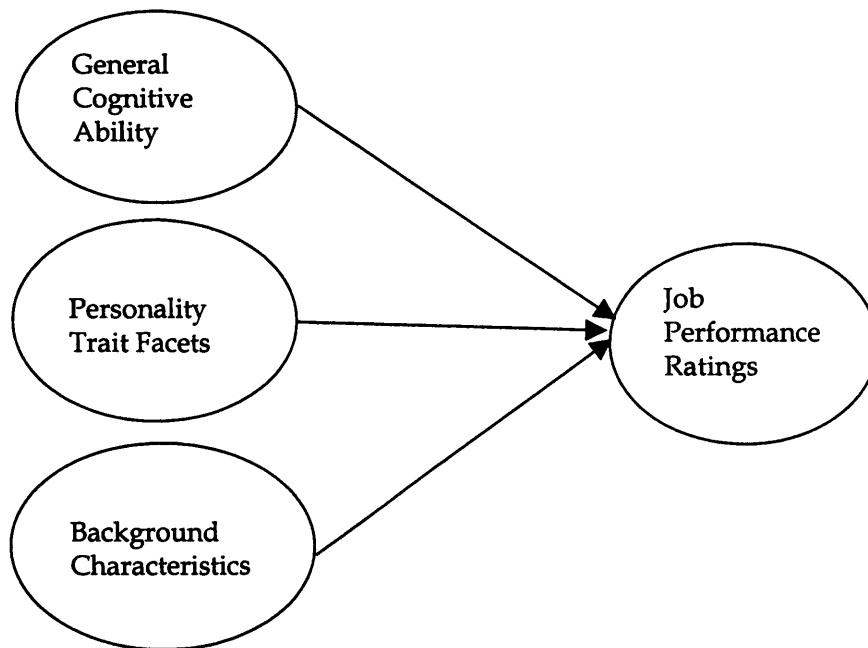
Since this topic has not been heavily researched, it is also anticipated that the research will contribute to the existing knowledge of the relationship between retail store detectives and loss prevention in several other areas as well. These include identification of priority job tasks and situations unique to retail store businesses; development and validation of a store detective job performance instrument that can be used by other studies; and development of a store detective selection model which may be adapted for use by retail companies.

The references and bibliography of this thesis are presented in a version of the APA or *American Psychological Association* style, and the approximate word count is 67,000.

## **1.5 RESEARCH HYPOTHESES AND MODEL**

Following from this literature review, a simple model showing the relationship of cognitive ability, personality traits, and biographical characteristics to job performance is presented in Figure 1.

**Figure 1: A model of the relationship of cognitive ability, personality, and background items to job performance.**



The propositions behind the model, and tested in this study are listed below. Based on the literature review, it was decided to evaluate the relationship between predictor and outcome variables in order to build selection models. This research process should be considered exploratory due to the lack of theory on which predictors, or their subset facets, will best predict performance, and the unknown direction of significant relationships. Therefore, the following model will guide the study's testing, and uses *all* the facets of the NEO PI-R, as well as g, and personal characteristics, which are determined to be significant using multiple and logistic regression analysis (Peidmont and Weinstein, 1994; Stewart, 1999; Tett et al., 1991).

Following an extensive review of the literature, and further modified by the exploratory research outlined in chapter four, the four hypotheses this study tested are as follows:

#### **Hypothesis One**

There is a significant relationship between a measure of general cognitive ability (g) with supervisor ratings of total store detective job performance, job productivity, future promotability, and being rated as a top performer.

#### **Hypothesis Two**

There is a significant relationship between personality trait measures with supervisor ratings of total store detective job performance, job productivity, future promotability, and being rated as a top performer.

#### **Hypothesis Three**

There is a significant relationship between biographical characteristics (age, race, gender, educational attainment, LP job experience) and supervisor ratings of total store detective job performance, job productivity, future promotability, and being rated as a top performer.

#### **Hypothesis Four**

There is a significant relationship between the combined measures of general cognitive ability (g), personality trait measures, and biographical characteristics,



with supervisor ratings of total store detective job performance, job productivity, future promotability, and being rated as a top performer.

## **CHAPTER 2**

### **STORE DETECTIVES AND LOSS PREVENTION**

#### **2.1 INTRODUCTION**

The main focus of this thesis is on improving retailing performance through the recruitment of more effective, better performing store detectives. This chapter discusses and describes retail crime and loss, how retailers attempt to control loss, and the important role of retail LP store detectives by reviewing the literature. Also covered is the training detectives' receive, and the types of job decisions they must routinely make. This discussion provides insight into store detective job tasks in order to investigate improving new hire selection.

#### **2.2 RETAIL CRIME AND LOSS**

The need for store security is believed to have increased after 1879 when Utica, New York merchant Frank W. Woolworth, determined to increase sales while reducing his labour costs, began the practice of openly displaying merchandise. The results were as Woolworth expected, sales rose; but presumably so did Shoptheft (Edwards, 1976).

Retailers the world over suffer theft and loss. While on average, retail companies universally lose approximately 1-2 % of their sales, and almost a quarter of their profit annually (Bamfield and Hollinger, 1996); their responses to theft vary

widely. Some businesses rely solely on procedures, training and customer service, others concentrate on prevention technologies such as electronic tag systems and cameras. Still others attack theft with store detectives who patrol the store on foot or with video camera systems searching for theft activity (Hayes, 1993; Jones, 1998,).

Before the large push into national chains, earlier retailers were often better positioned to deal with the financial fallout from store theft since there was less intense or national (and well-financed) competition. Retail businesses were typically focused locally with less incentive to match other's pricing. Now retail, like most business segments, has consolidated into regional and national power sellers. Volume merchandise and advertising buying means customers can benefit from lower pricing. Major retailers such as Wal-Mart and Target, large department stores such as Macys, and "category killers" like The Sports Authority and Home Depot are now battling for dominant market share in most significant U S Markets. Customers are often won by offering lower and lower prices. This struggle for customers means retailers are less able to raise prices to offset large inventory and cash losses (Hayes, 1997a). Meanwhile company shareowners, as investors, demand continued earnings growth. Earnings and share price growth result from profitable performance (usually the result of increased sales and tight expense control). The equation also includes the insistence of good customers and employees on relatively safe and crime-free stores. This dynamic may compel US retail organizations to increasingly confront retail crime and their over \$26 billion

in annual inventory losses (Hayes, 1997a). Currently retailers spend approximately .5 % of their annual sales on loss prevention efforts (Hollinger et al., 2000).

## **2.3 RESPONSES TO RETAIL CRIME AND LOSS**

Retailers facing pervasive crime and loss attempt to control their problems by applying some basic principles (Bamfield and Hollinger, 1996; Felson, 1996; Hayes, 1997a). In order to maximize shareowner value companies must increase sales while reducing operating and merchandise costs (Hayes, 1997a, 2000). Sound loss prevention helps these businesses accomplish both objectives. Loss prevention provides direct impact on a retailer's top-line (revenue), as much as their bottom-line (profits). Protected items mean more desirable assets remain available for sale, since thieves do not tend to target undesirable items (Hayes, 1997c). This product availability (the opposite of out of stocks) means more sales revenue, and satisfied customers. Protected cash receipts means hard-earned money can be leveraged to improve the organization, and likewise reward investors and staff. Another critical role for many LP departments is in increasing perceived "safeness" or the reverse of the fear of crime and victimization. A safe shopping and work atmosphere means customers and staff feel comfortable spending time, and money, or being productive, on company property. These actions are part of situational crime prevention.

Crime prevention can be described as a large set of actions and interventions designed to prevent crime events. One proposed model for crime control involves three major emphases: primary, secondary, and tertiary prevention (United Nations, 1999). Some crime prevention efforts are focused on the community as a whole; or specific places. These include programs such as public advertising, Neighbourhood Watch, efforts to install better lighting in parks or alleys, the use of CCTV surveillance in high-crime areas, and policing, and efforts to provide community support to families and youth believed to be most at risk of offending and victimization. These are often called "primary prevention" activities (Sherman et al., 1997; United Nations, 1999), or prevention efforts in Zones 1- 5 (Hayes, 1997a).

"Secondary prevention" targets potential offenders. School dropouts, abused children, and chronically needy people can be hooked up with appropriate services to reduce risk/need, thereby ultimately reducing crime (United Nations, 1999).

"Tertiary prevention" is similar to specific deterrence (mentioned later), and comprises efforts to prevent further crime(s) by someone who has been charged or convicted. This includes everything from diversion programs for first time offenders, to rehabilitation efforts aimed at more persistent offenders, to intensive surveillance of high-rate offenders (United Nations, 1999).

Generally, store detectives can be considered a part of primary prevention (within Zone 2 according to Hayes, 1997a), and are assigned to reduce crime events or attempts within a given location or store group. Some store detectives are assigned to track and affect the crime activities of high-rate offenders, also working into the tertiary prevention mode.

As mentioned previously, in order to reduce loss, merchants strive to first reduce crime attempts. Generally, only negative outcomes flow from crime events (e.g. injury, physical damage, asset loss, bad publicity, civil and criminal liability, trauma, investor concern). In order to suppress crime activities, we need to better understand how and why they occur. Criminological theories provide explanatory tools for retailers to use for controlling crime events on their properties. A particularly useful theory for understanding crime in retail settings, termed routine activities, combines human ecology, rational choice, and deterrence components (Cohen and Felson, 1979; Hollinger and Dabney, 1999). Routine activities theory contains three primary elements: 1. A likely or motivated offender; 2. a suitable target (or desirable asset), and finally, 3. the absence of a capable guardian against the offence (Felson, 1998). A capable guardian can be described as a person or object, other than the victim, that is able to keep a watchful eye on a potential victim or asset, and may also act as a deterrent to offenders (Felson, 1998). Store detectives serve in the role of an organization's primary capable guardians, charged with actively reducing the opportunities for theft of

merchandise in their assigned store(s). These detectives primarily reduce crime attempts by promoting deterrence (Hayes, 2000).

To reduce crime attempts, a sense of control, or deterrence, must be established (Clarke, 1997; Hollinger and Dabney, 1999). Like many loss prevention tactics used by retailers to reduce unexplained losses of merchandise, store detectives are expected to deter would-be thieves by convincing them that stealing merchandise will result in their apprehension and sanction. The offender's sense of personal risk of detection, punishment, and humiliation, should be compelling enough to overcome their desire and ability to steal (Bamfield, 1994; Hayes, 1998).

Deterrence is believed to result from this perceived risk through both personal and vicarious observations (Piquero and Paternoster, 1998). Would-be shopthieves in part learn to avoid deviant behaviours such as stealing through direct positive, negative, or neutral experiences with their parents, police or other authorities before, during, and after an attempted negative behaviour. Some of an offender's activities are detected and acted on, while some were either not detected, or not acted on. A person's own experiences and perceptions can combine with those related by others, or the media, to provide a general sense of actual risk (Stafford and Warr, 1993). Some deterrence can be gained through specific crime suppression tactics. These tactics can be segmented based on how they affect an offender's perceptions and behaviours (Hayes, 1997a, 2000; Jones, 1998).

Clarke (1997) focuses the concepts of deterrence and routine activities by outlining the concept of situational crime prevention. He postulates 16 crime opportunity-reducing techniques, which includes **formal surveillance**. Store detectives are included under this technique. Detectives patrol stores on foot, or by using CCTV surveillance systems, searching for behaviours they believe indicate theft activity. If theft behaviour is detected, the detectives attempt a non-violent apprehension of the offender(s). The detention, processing, and financial and restrictive sanctions that should follow, are hypothesized to specifically deter the offender (specific deterrence), while demonstrating to others (general deterrence) the fruitlessness and risks of dishonesty in the store (Hayes, 2000). Just as crime can be displaced in time, geographically, to other targets, and even in intensity by situational protection efforts (Clarke, 1997), specific items or locations might be protected by crime prevention initiatives applied elsewhere. This proposed phenomenon is termed diffusion of benefits (Clarke, 1997), and implies that an LP effort to protect one object or place, may help protect a nearby or similar thing, which is not actually protected. Store detectives help promote diffusion of benefits (or a “halo effect”) by apprehending thieves, and gaining general deterrence when other would-be thieves see or hear about the detentions, and alter their behaviour for fear that that level of protection (and risk to them) exists in another location or time.

It is hoped that deterrence is gained by convincing potential shop thieves that stealing from their intended victim is too difficult, too risky (in this case via the



clear and present danger of detection and apprehension by store detectives), or is a fruitless exercise. Secondly, companies endeavour to reduce the amount of loss incurred from those theft attempts that do take place. Merchants attempt to reduce their average, or cumulative, loss amounts by increasing their ability to quickly detect theft, as well as the ability to quickly respond, apprehend offenders, and recover their assets in saleable or merchantable condition. Finally, retailers try to reduce the financial or emotional impact of their losses on the company. Businesses can reduce the negative impact of incurred loss by tax write-offs, insurance claims, asset recovery, rebates, and some civil actions such as theft damages recovery (Bamfield, 1998; Hayes, 1997a; Hayes, 1990).

## **2.4 THE ROLE OF STORE DETECTIVES**

As mentioned, part of a retailer's response to high loss problems, and pressure to control them, is the deployment of special loss prevention or asset protection employees. While all company employees are expected to help control and report crime and loss, as designated capable guardians, the primary role of loss prevention employees is generally to focus exclusively on asset protection. The term loss prevention, as opposed to loss reaction, implies that the role of LP personnel is a combination of preventive and reactive activities; with a focus on prevention. As well as investigating crimes, LP employees typically are solely charged with reducing crime and loss, although some companies also combine safety, procedural audit, or other similar functions into a loss control department. Loss prevention employees are expected to reduce organizational loss by

continually auditing loss prevention procedural compliance, creating loss prevention awareness at all corporate levels, and specifying and maintaining loss control programs and systems. Many prevention personnel also investigate theft incidents and apprehend suspected internal and external offenders (Hayes, 1991).

Like most organizations, retailers have hierarchical employee structures. In loss prevention, these positions are often defined by degrees of responsibility, store dispersion, geography, and actual job function (Brough and Brown, 1989; Hayes, 1991, 2000; Jones, 1998). At the top of the structure, some companies have vice presidents or directors of loss prevention (LP) who act as the primary security decision-makers. In the "field" (non headquarters-based LP managers) regional and district LP executives implement asset protection initiatives. Dishonest employees are often investigated by district or regional loss prevention managers, and by designated internal investigators.

Many companies (35 %) with large store formats, and a variety of LP problems, also employ store detectives to operationalize loss prevention initiatives in individual or small groups of stores (Hollinger et al., 1996). Companies with small store formats (often less than 10,000 square feet) tend to rely more on the store staff to control theft foregoing the use of LP detectives.

The role of the store detectives in the current study is to focus primarily on controlling losses from external or non-employee sources, with a particular

emphasis on shoplifting. They are expected to devote most of their time to detecting and apprehending thieves, but they also spend considerable time working with other employees, and LP systems, to reduce theft opportunities. They also consider apprehension to be part of a comprehensive prevention programme. Apprehension may appear to be reactive, but some general and specific deterrence can be gained through aggressive apprehension. Because of their role in deterring and apprehending dishonest customers, store detectives can add-value to an organization, or create serious liability.

This thesis is concerned with improving the job performance of store detectives; specifically by enhancing the selection process of new detectives by retailers. The selection process can be enhanced by identifying applicants who due to their personal mix of characteristics are particularly suited to the store detective position as defined in upcoming paragraphs. Job performance itself is a complex subject. But essentially can be viewed as a set of competencies/competences (Robertson et al., 1999). The more competent employees are at handling assigned job tasks, routine job situations, and dynamic workplace demands and cultures in general the better their performance. Job performance in today's highly competitive workplace environment is changing. Many jobs are becoming increasingly more complex. Employees are required to show more initiative, provide better customer service, and work in teams. It has been proposed that an individual's unique mixture of underlying traits such as cognitive ability and personality makes certain people better suited for certain positions. Because different jobs require differing

abilities and propensities, it is important to better define the store detective position.

One important aspect of store detectives is the amount of autonomy they exercise on a daily basis (Hayes, 2000; May, 1978). Because of this freedom, store detectives, working within company guidelines, are free to creatively reduce theft and loss. Alternatively, these semi-autonomous LP detectives may create tremendous liability by apprehending individuals who did not actually steal anything or by botching the apprehension and processing of suspected thieves (Keckeisen, 1993).

Although there are thousands of retail companies- many employing store detectives in the US, they have not been a frequent topic of empirical research. Only rarely does the scholarly literature discuss store detectives and then usually only as a part of the research project and not as the subject of the study (Axelrod and Elkind, 1976; Bamfield and Hollinger, 1996; Baumer and Rosenbaum, 1984; Blaakenburg, 1976; Brodt, 1994; Buckle and Farrington, 1984; Butler, 1994; Carter et al., 1988; Cupchik, 1997; Farrell and Ferrara, 1986; Farrington and Burrows, 1993; Feuerverger and Shearing, 1982; Hayes, 1997a; Hayes, 1997b; Hollinger and Dabney, 1994; Keckeisen, 1993; Klemke, 1992; May, 1978; Murphy, 1986). A few of these academic projects provide some useful insight into the role of store detectives.

Axelrod and Elkind (1976), briefly discuss store detectives and their detection role in large stores. Primarily plainclothes operators, they observe that store detectives seem to react to shoplifting by apprehending offenders rather than somehow deterring them. The authors also noted that many retailers did not allow their non-security staff to apprehend shoplifters for civil liability concerns. This observation supports the idea that detectives are the primary capable guardians, of a company's assets (Felson, 1998). In this case by providing formal surveillance in the form of active detection and apprehension services to their assigned stores (Clarke, 1997). Eck (1995) describes employees that exercise surveillance and control over a specific location (such as a store) as place managers.

Feuerverger and Shearing (1982) analyse the decision processes of store detectives regarding sanctioning of apprehended store thieves. The authors point out that the decisions of store security personnel are primarily shaped by the desire to maximize company profitability. Because of this motivation, their actions may tend to support this end game by focusing more heavily on more costly theft situations (high cost merchandise rather than trivial items, etc.) An exception to this prioritisation tends to be that any "professional" shoplifter is considered very important.

Klemke (1992) briefly mentions store security agents, and that their role often lies primarily in detecting and apprehending shoplifters. The author provides advice to security personnel on detection cues to look for such as booster boxes that

enable the concealment of goods while in a store. He also comments on May's study that implies that security agents "create" shoplifting statistics by targeting juveniles for close surveillance since they are most prone to stealing. Klemke also points out Murphy's (1976) support for May's ideas about manufacturing shoplifting incidents. Finally, he notes that most apprehensions result from store staff reports and detective surveillance, rather than from customer reports.

Davis et al. (1991) discuss store detectives (described as private police) as a tool for demanding civil damages from apprehended shoplifters for their employers. The authors claim the detectives are agents of their organizations which skim money from affluent shopthieves, while turning over poor offenders to the police. As a note, 49 of 50 US states have specific statutes which allow victimised retailers to recover civil damages from apprehended shoplifters (Hayes, 1990).

As mentioned, another study (May, 1978) examines store detectives and their role in curbing juvenile theft. The author discusses the large amount of autonomy enjoyed by store detectives. The article discusses that this independence can work well if detectives are disciplined and focused on protecting high-loss, high-impact merchandise, but may be a problem if they concentrate on surveilling inexpensive, high loss items in order to catch high numbers of offenders. Juveniles are often apprehended stealing small popular products (Hayes, 1997c).

Murphy (1986) discusses two companies that use store detectives provided by an outside supplier to apprehend shoplifters. Murphy (1986) describes the utility of non-uniformed detectives to gain some additional deterrence over obvious staff or uniformed guards since they can create an impression that there is always someone surveilling the sales floor. He also points out that the Home Office (UK) issued a statement in support of the use of plainclothes store detectives to supplement uniformed personnel to aid in the control of professional thieves.

The lay literature, which primarily includes "how to" retail security books or manuals, includes references to store detectives (Brough and Brown, 1989; Curtis, 1983; Edwards, 1976; French, 1979; Ganton, 1990; Hayes, 1991; Hayes, 1993; Jones, 1998; Miller, 1993; Neill, 1981; Purpura, 1993; Rapp, 1989; Sandler, 1985; Sklar, 1982; Walker, 1996; Van Maanenbergh, 1995). The most useful work for this study, Brough and Brown (1989, pp. 9-10), summarise the lay perspective, and list the primary responsibilities of store detectives. According to their analysis, store detectives are responsible for the prevention of such crimes within the company as shoplifting, internal (employee) theft, check fraud, use of stolen credit cards, robbery, purse snatching, pick pocketing, indecent acts of various sorts, vandalism, and use of counterfeit money. The researchers add that store detectives are also responsible for dealing with people who are emotionally disturbed, under the influence of alcohol or drugs, violent, or who are carrying weapons. In addition, these personnel should be in charge of preventative measures - that is, prevention

of losses from carelessness, fire, poor safety policies, and/or outdated or inoperative alarm systems.

A number of other responsibilities may be considered either primary or secondary, in the view of Brough and Brown (1989). These include surveillance of criminals within the store and its attached parking lots, warehouses, etc.; arresting offenders; seizing and preserving exhibits; maintaining a filing system and preparing reports for police and court officials as well as maintaining a liaison with police, courts, and other agencies; presenting evidence and exhibits in court; investigating cases involving employees and seeking out dishonest employees; and reporting to management regarding lax store policies. It is not unusual for store detectives to also be asked to present educational programs to employees. These may consist of films, brochures, and lectures on a variety of topics such as customer and employee theft, check fraud, stolen credit cards, counterfeit money, suspicious refunds, fire safety, general store policies and systems, and emergency measures such as bomb threats, civil disturbance, robberies, floods, and blackouts, just to mention a few.

Of the greatest importance, however, is the primary duty of the store detective to act as a liaison between employees and management and between the company, the police, and court officials. From the above discussion, it is clear that the store detective's job responsibilities are varied and can be relatively complicated. In



order to carry out their responsibilities successfully, they must develop job-critical skills. These should include the following:

- Auditing of loss prevention programs, LP training initiatives, and LP systems for compliance to company operating standards. This process is supposed to be used as a tool for store managers;
- Training store staff on daily loss prevention tasks (and motivating them to carry them out);
- Developing a mental search image of potentially harmful situations, events, and people so these threats may be dealt with and diminished; and
- Thorough, safe investigative, and apprehension techniques.

## **2.5 THE PRIMARY FOCUS OF STORE DETECTIVES**

Of particular relevance to employee selection is how senior loss prevention decision-makers currently view the role of their store detectives versus how they want to evolve the store detective program heading in the new century. There has been a long debate in LP regarding what actions constitute preventing problems and which are purely reactive (e.g. Axelrod and Elkind, 1976). Detecting and apprehending shopthieves is certainly reacting to a situation, but the apprehension of offenders and resulting formal and informal sanctions should gain at least some general and specific deterrence (Stafford and Warr, 1993). The question for senior LP decision-makers is whether having their detectives stand at the store

entrance/exit overtly identified as an LP staffer prevents more theft attempts than does apprehending shop thieves after covertly observing their theft activities.

Regardless of the form of their primary role, in order for store detectives to perform their LP tasks some training must take place. This section also addresses what topics senior loss prevention decision-makers feel their training program should emphasize in order to meet the loss prevention department's mission and goals.

## **2.6 TRAINING STORE DETECTIVES**

The issue of training store detectives is covered albeit not extensively in the lay literature; mostly the topic is a small section in security and loss prevention books (Curtis, 1983; Edwards, 1976; French, 1979; Ganton, 1990; Hayes, 1991; Hayes 1993; Jones, 1990; Keckeisen, 1993; Miller, 1993; Murphy, 1986; Neill, 1981; Purpura, 1993; Rapp, 1989; Sandler, 1985; Van Maanenbergh, 1995; Walker, 1996,).

Training topics are often designed to address tasks store detectives are supposed to perform. Neill (1981, pp. 49-50) lists some training topics he believes most important to store detectives, regardless of their company's country of origin or merchandise mix:

"...They should be trained in and have a sound knowledge of:

- modern loss prevention techniques,

- the physical security of premises;
- the relevant laws of arrest, search and court procedure, including the laws of evidence and defamation;
- general retail security systems and procedures;
- report writing and the giving of evidence;
- cash register operating procedures;
- retail procedures peculiar to the type of store in which they are operating and the type of merchandise to be protected;
- company loss prevention policy as laid down by higher authority;
- up to date alarm systems and retail security protection devices;
- the protection of cash on premises and cash in transit;
- a reasonable understanding of fire prevention methods, the use of fire extinguishers and evacuation of customers and staff to safety in the event of fire or other catastrophe”.

The list of training topics provided by Jones (1998) highlights the wide variety of tasks detectives perform. Hayes (1997b) further focuses training recommendations on the handling of shop thieves based on a series of decisions, which must be made by the store detective:

1. Detection of a suspected shop thief (Decision Point 1 – ‘Should I watch the suspects or not? Are they exhibiting suspicious behaviours (a. theft actions such as moving close to articles or counter surveillance movement such as repeatedly

visually scanning the area, b. reactions to anxiety and adrenaline release) and are they physically capable of theft'.

2.     Evaluation of the multiple "suspicious" subjects (Decision Point 2 - ' Which subject is my priority, based on the probability (and financial impact) of their committing a theft?')
  
3.     Surveillance of the subject(s) (Decision Point 3 - 'How should the subject(s) be watched - overtly in order to deter them right now, or covertly in order to detain them and gain longer term and possibly broader general deterrence?')
  
4.     Determination of theft act (Decision Point 4 - 'Did (is) a theft (going to) take place, did I personally see the subject: a. approach our product, b. select our product, c. take or conceal our product, d. without losing sight of them, and e. pass the last point of sale without paying for our product without permission?')
  
5.     Employee's Response to a Theft Act (Decision Point 5 - 'I saw the subject take an item. What action should I take: a. terminate my surveillance, b. try to get them to put our products back without an apprehension (bluff them), or c. apprehend the subject?')

6. Customer Contact (Decision Point 6 - 'If the customer resists my lawful apprehension attempt, should I: a. just let them go, or b. attempt to physically restrain them?')
7. Safety Measures (Decision Point 7 - 'Should I search the suspect for weapons in order to protect myself and others?') The employee attempts to reduce the possibility of a lethal attack by removing potential weapons from the area and if necessary, the detained subject.
8. Employee Processes the Incident and Interviews and Debriefs the Subject and Witnesses The employee writes the report, processes any evidence and if they are called, waits for the police to arrive.
9. Deterrent Action (Decision Point 8 - 'What sanctioning action against the offender should I take for best future deterrence of this offender and others: a. release the subject, b. press criminal action, c. take civil action, or d. a combination of b and c?')
10. Detention Duration of Suspects (Decision Point 9 - 'When I do detain a suspect, how long should they be detained while being processed and held for the police?')

Based on the number and complexity of the decisions a store detective must make when dealing with Shoptheft alone, careful selection of individuals capable of consistently making them in fast-paced situations appears very important.

## **2.7 THE EFFECTS OF EMPLOYEE TURNOVER**

Over the years, many empirical studies have demonstrated that employee turnover is closely related to job-satisfaction and levels of satisfaction vary widely in the American labour force. The affects of age, tenure, salary, job type, job level, and various other elements in the work environment on an employee's job satisfaction have been extensively examined. Job satisfaction is a measure of how satisfied an employee feels with his/her employment position. While the precise relationship with occupational stress and thus employee turnover is complex, generally those who are experiencing stress have negative attitudes toward their work (Voydanoff, 1990). Although the relationship between job stress, turnover, and some organization variables may not be entirely obvious, their relationship with job satisfaction is well documented. While being considered as an outcome in its own right, job satisfaction can be regarded as a related work attitude of stress and has a significant bearing on employee satisfaction and thus turnover. Job satisfaction and stress are of great concern to organizations. Increased stress and job dissatisfaction have been highly correlated to absenteeism, increased accidents, and a variety of illness behaviours, in addition to employee turnover. Turnover behaviour, in fact, is, quite costly to the company and significantly impacts the bottom line.

All organizations lose some employees, and a main effect of this process is often financial cost (Cascio, 2000; Phillips, 1990). Since for-profit companies strive to increase profits annually, they continuously search for ways to reduce costs. In order to reduce adverse costs they must first be identified. Phillips (1990) identified both direct and hidden costs associated with the loss of staff and their replacement. These costs included, recruiting, hiring, orienting, training and closely supervising new employees. Perhaps due to a relatively low starting wage baseline, the retail industry suffers from high turnover rates. The Food Marketing Institute found their members average a 50 % annual turnover rate. Quoted in Hammel (1996), Wendover states the cost of cashier turnover in supermarkets is approximately \$3000 per employee. Mercer (1988) calculated a company with 1000 employees could lose over \$1 million a year in turnover costs.

In addition to direct financial loss, there are other adverse effects of turnover. Individual costs of turnover also include customer goodwill if close bonds or relationships are broken. With intense competition, companies often stress customer satisfaction above all else. Managers and supervisors are also adversely affected by constant turnover since they must focus on re-hiring people and re-training workplace basics rather than improving overall effectiveness and efficiency (Dangot-Simpkia, 1990).

Turnover is a particular problem with store detectives. Many retailers report experiencing between 50-100% annual store detective turnover (National Retail

Institute/NRF, 1999). Hayes (2000) found over half of study participants (53.7%, n=40) indicated their store detective turnover levels were between 25-55 % annually. In the same study 22% of respondents indicated they had less than 25% while 19.5% indicated their annual turnover was between 56-75%. Just under 5% of study participants reported turning over 76-100% of their staff. Anecdotally, the author has heard several retailers report greater than 100% turnover. In an attempt to reduce turnover, companies are looking to testing as one possible method. Borofsky and Watson (1994) found a relationship between the number of days remained on the job (tenure), and scores on a special personality inventory scale.

## **2.8 CIVIL LIABILITY AND STORE DETECTIVES**

Partly because retailers invite customers on their premises they can incur liability for their actions, inactions, or situations on their property and/or taken or avoided by their employees (Federal and Fogelman, 1986). US civil courts have frequently found retailers have a duty to reduce the likelihood of incidents where individuals are in some way harmed because of certain torts (i.e. assaults, false imprisonment, infliction of emotional distress, battery, malicious prosecution, and defamation) (Federal and Fogelman, 1986). To win a civil claim plaintiffs must usually demonstrate they were harmed, and this harm was somehow related to if “a prudent and reasonable person not performing a duty either by wilfully disregarding the duty or by forgetting the obligation to perform the duty, the individual is then considered liable for the resulting damages” (Keckeisen, 1993). Physically detaining customers and accusing them of theft creates tremendous



opportunity for such litigation. Retailers are of course very interested in reducing costly liability exposure.

As part of their job, store detectives are expected to routinely approach and detain customers suspected of theft, which potentially creates tremendous risk exposure. Controversial issues such as racially biased detection of potential offenders; not confirming a customer intentionally stole an asset; unreasonable search and seizure techniques; the use of excessive force to detain subjects; and how long subjects are reasonably detained and under what conditions often impact how retailers respond to customer theft in their stores. In an attempt to gauge the effect civil liability claims have had on the procedures used by, and the training provided to store detectives, Hayes (2000) asked retail companies (N=40) to indicate if liability concerns have caused an actual change in operating procedures and training. Over 62% indicated yes on the question of changing procedures, while 67.5% indicated liability concerns have directly caused a change in the store detective training process. In light of these issues, LP detective selection and development appears to be an important topic.

A review of the literature indicates retail store detectives are considered essential store employees who are expected to add value and not create liability. The position requires individuals capable of learning and applying detection and surveillance skills as well as abstract and evolving legal concepts. Additionally, store detectives must be capable of making critical decisions in fast-moving and

potentially dangerous situations (Hayes, 1998). Finally, high turnover levels and mixed productivity results indicate careful selection of trainees may be an important issue for retailers.

## **2.9 THE IMPORTANCE OF CAREFULLY SELECTING STORE DETECTIVES**

Retailers suffer continuing theft losses despite significant investments in loss prevention technologies. As reviewed earlier, many businesses decide they must employ special staff to target, organize and implement asset protection activities. Like any position in the company, the loss prevention specialist should be carefully selected for their job. The pre-employment scrutiny loss prevention detectives receive should perhaps be greater than most jobs however because of several factors. Store detectives generally have autonomy in daily operations. They may 'patrol' a store in a targeted or random manner. In many cases, they may leave the store or parking lot in order to conduct surveillance or collect intelligence on theft demand centres such as flea markets or pawnshops.

Store detectives also have the authority to detain store customers and accuse them of theft. This authority requires store detectives have important traits and abilities such as sound judgment, discretion, communication skills and a thorough understanding of the company's intent in dealing with theft and loss, as well as prevailing laws and procedures. Equally important is the possibility that some shop thieves may violently resist apprehension. Store detectives must know and understand company procedures and be capable of quickly analysing situations

and reacting appropriately in order to minimize the possibility of injury and damage. Because of these possibilities and others, store detectives should be carefully chosen.

This thesis contends that careful selection of store detectives is important since it aids in increasing LP effectiveness by identifying individuals best suited for the detective position in ability and personality. Careful selection also helps reduce liability exposure for the same reasons. The significance of this issue was supported by a special issue of the security industry's leading peer-reviewed journal (McCrie, 1997). The entire issue was devoted to promoting and describing the selection of security and law enforcement officers, particularly using the psychometric model. The use of ability and personality testing provides incremental accuracy to the new-hire selection process in a mission-critical job field like security and loss prevention.

## 2.10 SUMMARY

This thesis is concerned with improving a retailer's financial performance in part by increasing the performance of those charged with protecting its assets from theft. In order to analyse this issue, the role and specific duties of store detectives were reviewed. Store detectives are regarded as capable guardians under routine activities theory, providing a significant crime prevention role by increasing both general and specific deterrence for their assigned stores. This deterrence is gained by a combination of prevention activities including employee awareness, auditing, and offender apprehension. Many books and articles mention or discuss the store detective position, but other than the quotations used, generally provide relatively little detail. Many of the reviewed sources that mentioned store detective duties or tasks appeared to be largely based on anecdote, and not on systematic job analysis. Despite this apparent lack of detail or research rigour in the literature, the store detective position appears common in most larger retail companies, and detectives seem to perform similar duties, regardless of the type of retail store they operate in (Hayes, 2000). The relative lack of detail on store detective function in the literature provides an opportunity to fill this gap in the present study.

Store detectives patrol assigned stores on foot or using camera systems looking for indications of theft. If a thief is seen in the act of stealing, the detective generally assists in, or makes the apprehension. Because of the complexity and challenge of recognizing subtle dishonesty, and following both company and state laws and rules, store detectives must make a series of very quick decisions. This fast-paced

decision-making scenario may indicate people with special abilities are best suited to this position. Detectives also train other store staff on loss prevention techniques, as well as audit store LP procedures for compliance levels, or to identify risk areas. Both of these tasks require a certain degree of tact and charisma. Another important fact is because store detectives routinely confront and accuse customers of theft, they can generate considerable civil and criminal liability issues for themselves and their employers. This situation is particularly acute in the US. Another harmful dynamic, turnover, remains a problem with the detective position, possibly due in part to its combination of high stress and low pay.

This chapter identified the important and complicated role store detectives play in their companies. Detectives must be able to understand and retain complex and changing laws and procedures, exercise considerable discipline and restraint when dealing with obnoxious, and physically violent shop thieves, apprehend dishonest store employees with whom they may have become friends, point out loss prevention deficiencies to defensive, stressed-out store managers, and try to educate and motivate high turnover, low-paid and often apathetic part-time store staff on protective procedures (and do all of these things without getting sued). It is precisely because of the relative complexity of this position that better selection of job candidates is believed to be one way to increase the effectiveness of a company's loss prevention effectiveness. Furthermore, the literature reviewed for this study indicated certain psychometrically measured traits provide incremental decision-support data in the selection process, beyond current retailer selection

efforts, and were the best predictors of job performance for certain types of jobs.

The next chapter addresses employee selection, particularly using the psychometric model.

## **CHAPTER 3**

### **EMPLOYEE SELECTION AND PERFORMANCE**

#### **3.1 INTRODUCTION**

The previous chapter argued that store detectives' job performance could be at least partially improved by selecting new-hires whose individual traits, abilities and experience enable them to more effectively accomplish key job-related tasks. This chapter builds on the last by presenting an overview of the literature related to personnel selection techniques; particularly using the psychometric approach. The review is presented in several major sections. The first section reviews the history of the trait-factor approach to person-position selection, a brief look at selection methods, and the role of testing as a key tool in this process. Secondly, legal concerns regarding employee selection and testing are examined. Next, the literature on general cognitive ability and job performance is reviewed with an additional section on the Wonderlic Personnel Test. The fourth section focuses on the role personality traits have played in employee selection research. The NEO PI-R five-factor personality test is also reviewed in this section. Also reviewed is the use of biographical information to help predict job performance.

### **3.2 HISTORICAL REVIEW OF EMPLOYEE SELECTION IN THE UNITED STATES**

This thesis investigates the relationship between store detective job performance, mental abilities and personality traits. The study specifically recognizes the trait-factor approach to job selection developed by Parsons (1909). Parsons' theory identified three broad factors in selecting a vocation: (1) a clear understanding of yourself, your attitudes, abilities, interests, ambition, resources, limitations, and their causes; (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and the prospects in different lines of work; (3) the reasoning of the relation of these two groups of facts. Parsons emphasized that both an employee and employer should carefully explore and identify important traits of both the job position itself, as well as the individual being considered for employment. Parsons also proposed three basic parts of vocational selection are: (1) testing, (2) information giving, and (3) decision-making through true reasoning.

Landy and Trumbo (1980, p. 52) make the point that careful matching of individuals with specific jobs is important but not a new concept by citing a conversation between Plato and Socrates: "...from these considerations, it follows that all things will be produced in superior quantity and quality, and with greater ease when each man works at a single occupation in accordance with his natural gifts..."



How these traits are identified and measured has evolved through the years. Standardized assessments of job and individual traits often stem from surveys or tests. Early psychologists such as Munsterberg began testing job applicants in order to determine suitability for specific work positions in the early 1900s (Weinrach, 1979). Successful person-position matching apparently resulted in increased productivity and job satisfaction, in addition to decreased turnover and absenteeism.

The United States Army implemented trait selection testing during World War I with the Alpha and Beta job aptitude tests. The apparent efficiency and effectiveness of the testing process for the military led more private enterprise organizations to consider pre-employment testing (Ghiselli, 1966). In the years between the wars, businesses were often disappointed in the performance of their testing and selection procedures. The US Army again turned the tide with development of a new assessment and placement test called the Army General Classification Test.

While businesses widely used testing to select new employees through the 1950s in the US, many personnel managers began to switch from the trait-factor selection model during this period primarily due to two factors. Some managers adopted the Rogerian non-directive counselling approach, instead of testing (Weinrach, 1979). Many organizations also abandoned testing after Whyte (1956) and Gross (1962) seriously questioned the invasion of privacy that cognitive ability and

personality trait tests created for applicants. In addition, during this time some industrial psychologists pointed out there was no theory relating abilities, traits, and aptitudes to actual job performance (Landy and Trumbo, 1980).

The lack of theoretical constructs and privacy concerns were not the only setbacks to position-person testing. In 1971, the US Supreme Court handed down the landmark Griggs vs. Duke Power Co. case. This widely publicized court ruling disallowed Charlotte, North Carolina based Duke Power Company from using current selection testing procedures. The concern was Duke Power Company was using tests of mental ability in an unfair and discriminatory manner. Workers were promoted to supervisor largely based on the results of mental ability tests with no evidence that high mental ability was important to their specific job.

This legal challenge, combined with the theoretical and privacy issues, appeared to cause a downturn in selection testing. While current research indicates ability and trait testing are beneficial for selection, and will be reviewed in upcoming sections, legal concerns regarding employee selection continue to this day.

### **3.3 LEGAL ISSUES IN EMPLOYEE SELECTION**

Legislation in the area of equal employment opportunity and discrimination in employment have probably had as great an effect on personnel testing and selection as any personnel program. Along with racial tension and violence in the United States during the 1960s, the disposition of Congress and the administration,

the general social climate, and the case of *Myart v Motorola* that involved the charge of discrimination, helped to spur the passage of the Civil Rights Act of 1964. Since passage of Title VII of the 1964 Civil Rights Act (CRA) in the United States, the legal system has altered the rules regarding ways to reduce bias in pre-employment testing. The 1964 CRA enabled plaintiffs to cite disparate impact of testing as evidence of "evil intent". It was this idea of using testing to intentionally discriminate against distinct groups, which has guided much of the legal impact on pre-employment screening practices over the years.

In 1971, the US Supreme Court cited in the case Griggs vs. Duke Power Company that if a test produced "adverse impact", such as screening out a specific racial, gender, or age group, and is not job-related, then it is reasonable to infer that if it is being maintained for some other reason. The principle of discrimination by effect (rather than by intent) was formed during this landmark ruling. In *Griggs*, an electrical lineman complained he had been successively passed over for promotion to supervisor because he repeatedly failed to pass an I.Q. qualifying exam. The complainant was black and reported black employees systematically produced substantially lower scores on the test than whites. The Power Company was unable to demonstrate high I.Q. test scores were correlated with successful supervisory performance. The court cited the company could not employ the I.Q. test to screen prospective supervisor candidates since the test instrument itself was shown to be systematically biased in favour of whites. Just as importantly, the

respondent could not show the relationship between varying I.Q. test scores and job performance scores was statistically significantly different from zero.

A primary lesson from the Griggs decision seems to be that only those job selection criteria that have been empirically validated to predict success, for a particular job, and in a specific workplace of a particular employer, are Constitutionally acceptable (Pallone, 1992).

Based on several similar court rulings, the US Equal Employment Opportunity Commission (EEOC) distributed the *Uniform Guidelines on Employee Selection Procedures* in 1978. Since this publication was issued, the American Psychological Association published the *Standard for Educational and Psychological Testing* in 1985. These documents codify measures that organizations should employ when using testing to determine employee eligibility and selection for hire or promotion. Both documents advocate using the scientific method to validate selection methods for specific hiring situations.

A significant shift in legal constraints of selective testing occurred in 1988 when the Supreme Court ruled the plaintiff in Watson vs. Fort Worth Bank and Trust must identify the specific criteria that produce adverse impact. Further, the ruling stated employers are not required to "formally" validate whether a particular criterion predicts on-the-job performance. The employer does however need to show a legitimate business need for testing programs.

Another legal problem US employers must consider is just how little guidance court rulings have actually provided regarding selection technology. Part of the problem may be the subjective nature of most legal or regulatory proceedings and inquiries. In 1991, Beck-Dudley and McEvoy reviewed 46 court cases regarding performance evaluations. Their findings indicate courts often ignore critical psychological issues such as validity. In 1991, the Ninth Circuit Court of Appeals (979F.2d721) did uphold a technique whereby companies can use standard error to establish confidence intervals or “score bands” to group test scores.

Despite the preponderance of subjectivity in legal processes, extensive psychometric research on the reliability and validity of cognitive testing for those job positions requiring higher (or known) g levels is changing the legal landscape.

One landmark case which weighed psychometric evidence regarding mental ability testing for selection (*Cormier v. PPG Industries*, 1981) found that there are no known alternative selection procedures which would equally and efficiently serve PPG's legitimate business needs. The US Fifth Circuit Court of Appeals concurred with the federal district court.

Relatively new federal laws which affect employee testing include the Civil Rights Act of 1991 (CRA) and the Americans With Disabilities Act (ADA), also enacted in 1991. Both acts are intended to protect both individuals and classes of people from

discrimination. These laws have also created some confusion with many organizations regarding essential definitions. The problem lies in the lack of clear, precise descriptions of essential work tasks, medical tests, and even what actually constitutes a "disability." This lack of concise descriptions may be necessary, but costly litigation is a risk of the situation.

The ADA requires that organizations not refuse a job or promotion to an individual based on a personal disability; unless the particular disability impedes a defined essential task required to perform their assigned job. This language evidently implies testing for intelligence must be shown important for selecting individuals with a certain I.Q. level or range, and this level of I.Q. is essential to performing the actual job.

The 1991 Civil Rights Act (CRA) impacts employee selection testing since it prohibits race norming of test scores. This means no organization may make or use dual hiring and/or promotion lists, which allow discrimination due to race or physical disability.

The CRA creates additional concerns for employers. The Act is supposed to protect all applicants and employees from discrimination. One way it attempts to do this is by requiring equal opportunity to all job positions by all people. Some organizations may choose hiring quotas to insure selection of ethnic or racial minorities or women in order to avoid legal action. This option could lead to claims of "reverse discrimination" however. Since quotas often require selecting

someone based on their racial or gender status, others may still be systematically excluded.

Another problem for employers often arises when the “protection” of applicants from any possible discrimination can conflict with the physical protection of customers, visitors and other employees. Pre-employment investigations may uncover certain information such as evidence of prior criminal activity. Knowing this information could possibly protect others who work or visit a site from future criminal activity if the potential deviant person is denied employment. Ironically, the same organization may be sued for defamation for providing an offender's reference information to other potential employers (Ryan and Lasek, 1991). In light of growing crime concerns, some organizations use integrity tests to identify potentially deviant individuals, although some applicants may perceive these tests are overly invasive (Jones et al., 1990).

The controversies surrounding employing testing and selection continue, and affect any organization's selection processes greatly. The most effective procedures for compliance with the laws regarding selecting and testing, however, are rigorous validation practices to insure that each test is predictive of job performance in a certain job and for a certain group of job applicants.

### **3.4 JOB SELECTION METHODS**

Potential employers generally attempt to attract and hire people that they believe will make good employees. Organizations use a wide variety of methods to screen or select new employees (Bok, 1993; Gerhart et al., 1996.). Most of these techniques are designed to allow those doing the hiring to assess the suitability of the prospects for both their company and the specific job. Personnel selection methods include: various types of interviewing, ability and personality testing, biographical inventories (including work and educational experience), physical abilities testing, work preview or exposure, and work samples testing, self-assessments, and the use of comprehensive assessment centres. Each of these processes has both strengths and weaknesses, and not all may be required for different positions, or sub-roles (Iles and Salaman, 1995; Robertson, 1993).

There are several pre-employment interview formats. Generally, unstructured interviews mean interviewers may ask different questions to different candidates. Structured interviews include the behavioural or behaviour description type where the candidates are asked to describe how they handled prior job situations that are similar to what they might have to deal with on the new job. Situational interviews are somewhat different; candidates are asked what actions they would take in various likely, job-related situations. These situations are often drawn from a prior job analysis. Another version of the situational interview can be even more comprehensive, and asks for a description of the applicants handling of the proposed situation, while also assessing the prospect's relevant job knowledge



Some organizations also use oral interview boards in order to leverage the perceptions of a panel, while introducing a measure of stress to the process (Bauer et al., 1998; Campion et al., 1994; Huffcut and Arthur, 1994; McDaniel et al, 1994). Alternatively, job candidates can respond in writing to test questions regarding their responses to proposed situations. The written responses reduce the interaction and simulated stress factors, but allows for assessment of written communication skills.

Interviews provide employers several advantages including the ability to simultaneously assess a prospect's communications skills, job knowledge, problem-solving style, and past work experience (Arthur, 1998). There are several disadvantages of the technique such as it is very subjective, first impressions can skew the entire interview, negative information is often the major focus, there is little empirical validity for interviews as predictors of job performance.

Employers often use assessment centres to evaluate job candidates by combining several evaluations of candidate behaviour. Assessment centres might contain interviews, job-related work simulations, work samples, and even psychological testing. Generally, several trained observers are used in this technique. This manpower requirement might be considered a disadvantage of this technique since it ties up valuable human resources and can be very costly, particularly for large applicant groups. If different raters are used for different applicants, bias might be claimed since there could be differences in selection criteria perceptions

between rating teams. It is also difficult to ensure the process is standardized for all candidates. The process can add credibility to the selection process since it employs multiple, and quite thorough, evaluation techniques (Campbell and Bray, 1993; Harris et al., 1993; Kleinmann, 1993).

Another version of the assessment centre evaluation involves having the candidate preview the job in a realistic setting, or even testing them on work sample aptitude or productivity (Meglino et al., 1993). The idea is that this work exposure will help both candidate and reviewer evaluate the job, and the job candidate by providing a quasi-realistic look at the conditions and requirements of the job.

Some companies have applicants provide self-assessments of their past, relevant job experience and performance, their personal job/career expectations, and the expectations the potential employer should have about their work performance. This method can help both parties identify unreasonable expectations, while adding valuable insight into the applicant's communication abilities and style, as well as their performance when asked to provide information about themselves. Like all methods, self-assessment suffers some disadvantages such as questionable predictive validity, inflated ratings, low accuracy, low inter-rater reliability, and may produce claims of unreasonable bias and subjectivity by applicants (Williams and Levy, 1992). Retailers interviewed currently use customised versions of all or most of these selection techniques. There appears to be great interest in using

standardized testing to provide incremental validity to the selection of loss prevention staff (Hazer and Bublitz, 1998; McCrie, 1997).

### **3.5 GENERAL COGNITIVE ABILITY**

Intelligence refers to general mental ability or capacity, especially the ability to make flexible use of memory, reasoning, and knowledge in learning, and in confronting new situations and problems. There is no universal agreement on any single definition of intelligence, including the one this researcher just offered. This definition, however, was designed to embody some of the major aspects of cognitive mental ability emphasized by psychologists and the tests they devise. This emphasis on such characteristics implies that cognitive ability is not a single entity, but a complex, multifaceted set of abilities. Thus it may be said that cognitive ability is that peculiarly human talent for solving problems using words or symbols. It has been the source of much debate among psychologists, who argue over its very nature. Some hold that cognitive ability consists of a number of more-or-less independent gifts. University of Chicago's L.L. Thurstone (1938), one of the pioneers of intelligence research, concluded that each human has his or her own mix of ten different intelligence characteristics: deductive, inductive, mechanical, memory, numerical, perceptual, reasoning, spatial, verbal, and vocabulary. Opponents argue that these specific intelligence characteristics are merely minor sub-dimensions of a single human ability that they call "general intelligence," or "g." This perspective is discussed in detail in later sections.

Measures of general cognitive ability such as the Wonderlic Personnel Test (reviewed later) have been examined for bias, and have been supported by Jensen (1977) and Dodrill (1981). Gottfredson (1986b) found no evidence in the literature of cultural bias against African Americans with major standardized tests of mental ability such as the Wonderlic Personnel Test. Several of the tests reviewed were designed to either eliminate cultural bias (using certain vocabulary or circumstances which are culturally relevant), or be culturally relevant.

The literature, with few exceptions, indicates federal and court guidelines mandate organizations only use testing instruments that demonstrate predictive validity for a specific job in a specific setting in a specific company. There are enough exceptions to this stringent requirement to frustrate employers seeking to improve performance while creating abundant litigation. Despite the confusion, the prevailing opinion remains that organizations should have a legitimate business reason to select based on ability tests and conduct their testing in a reasonable and objective manner. Researchers also argue that standardized tests as predictors are not perfect and may exclude applicants, but research has demonstrated they can actually help make the selection process much more objective and accurate than other common selection methods such as the interviewee's physical appearance, the interviewer's subjective first impressions of the applicant, applicant demeanour, prep or other school attendance, using personal contacts, or family status (Yam, 1998). Of particular interest in this study, is the value of g or general

cognitive ability in partially explaining job performance variance, and the ability to consistently and accurately measure this construct for selection purposes.

### **3.6 GENERAL COGNITIVE ABILITY (G)**

#### **3.6.1 What is General Cognitive Ability, or g?**

The store detective position requires some degree of cognitive ability since they must understand, and apply, sophisticated concepts, often acting independent of constant supervision, in an often fast-paced environment. It is important to critically review the literature for credible evidence of the empirical reality of g, how it functions, whether it has been found to be a stable, and significant predictor of job performance, and how it might be accurately, and economically measured in the retail setting. A primary goal of this study is to determine if the work performance of retail store detectives is significantly related to a psychological measure of mental ability. According to Carroll (1997), the idea that there is a general factor of cognitive ability that varies amongst individuals was first put forth by the British psychologist Charles Spearman (1904). After analysing test scores from various English schools, he decided the statistical correlations among collected variables were best explained by an underlying single factor of cognitive ability. Spearman labelled this factor g, which stood for general intelligence. The statistical analysis procedure Spearman developed to identify variable 'saturation' later became known as factor analysis, and these saturations are now referred to as loadings (Carroll, 1997).

While Spearman (1927) seems to have focused on the single factor *g*, Carroll (1993), after an analysis of over 460 data sets, identified numerous intelligence factors in three strata. Other researchers (Cattell, 1971) have identified specific sub-factors such as *Gf* or fluid intelligence, and *Gc* or crystallized intelligence. Despite varied concepts about the make up of general mental ability, many of these investigators still believe there is a single pre-eminent *g* factor (Gottfredson, 1997).

Over the years, numerous investigators have identified several components of *g*, but there is currently little we understand about the physical brain processes, which are believed measured by I.Q. tests. Some recent hypotheses about the actual physical processes underlying '*g*' include individual differences in electrical brain activity, energy or glucose uptake, and the speed of neural transmission (*Wall Street Journal*, 1994).

There is no consensus about the exact nature of *g*, and some researchers (Horn and Noll, 1994) believe no single general intelligence factor exists as Spearman postulates. These same critics of a single *g* factor do, however, support the probability of the factor called fluid intelligence (*Gf*). Gustaffson, (1984) believes *g* and *Gf* are the same construct. Gardner (1998) does not seem to dispute the presence of *g*, but argues that humans have multiple intelligences. He feels *g* is primarily relevant to school performance. According to Gardner, people probably have at least eight semi-autonomous types of intelligence including linguistic, logical-mathematical, musical, spatial, bodily-kinetic, naturalist (defining

taxonomies, etc.), and existential. Gardner denies these abilities are mere talents anymore than g is. He is also sceptical that current tests can adequately measure his proposed intelligences. This statement presents obvious problems with providing evidence for his theory. Others have argued (Gottfredson, 1998) that Gardner's theory may include physical motor skills and personality traits rather than pure cognitive abilities.

Differing research and analysis methods can play a role in empirical findings. Discussed in Carroll (1997), psychologist Thurstone (1938) analysed a large data set but found no g factor. Later, however, Eysenck (1939) and Spearman (1938), after analysing the same data set, reported finding a single general intelligence factor. Much of the controversy over g studies in the 1930's and 1940's tended to be related to early, and evolving, factor analysis techniques (Carroll, 1997). This may have accounted for the differences Eysenck and Spearman found in Thurstone's study.

Today most psychologists support the idea of an overall general intelligence factor (g). In fact, the most comprehensive study to date (Carroll, 1993) examined I.Q. factorial analyses extending from the 1920s through the 1990s finding some type of main intelligence factor in almost every study.

### **3.6.2 g as an Empirical Entity**

There is a large body of evidence supporting the presence of a general intelligence factor. Various studies have linked g to the capacity of short-term memory, evoked potentials, reaction time on elementary cognitive tasks, glucose metabolism in the brain, and speed of neural transmission (Jensen, 1992; Larson and Sacuzzo, 1989; Miller and Vernon, 1996; Vernon, 1987). Some researchers hypothesize g reflects the capacity for human information processing (Fagan, 1992), and is critical to understanding human behaviour. One researcher even believes the empirical reality of g, and its importance in predicting socially, educationally and occupationally important criteria, is unmatched by any other factor (Jensen, 1992). “g” has also been linked to several physical processes. As an example, researchers at London’s Institute of Psychiatry report a specific gene variation correlates highly with high IQ scores (Yam, 1998).

Gottfredson (1998) relates that several studies of g indicate it is independent of cultural content, and an empirical reality because different cultural and social groups’ test scores result in very similar continuums. She also highlights (Gottfredson, 1998) the growing evidence of significant statistical correlations of g with specific biological characteristics such as indicators of brain function. After adjusting for gender and physical body size, brain size moderately correlates (.4) with IQ. This study does fail to control for many possible prior and intervening variables such as socio-economic status. Also interesting in this study however is



the correlation of brain energy usage during problem solving, various neural wave quality differences, and neural conducting speeds with IQ level. In addition, according to Gottfredson (1998), several researchers have found decreased decision times in subjects with higher g levels. This finding has been found in all age levels, genders, and racial groups leading the investigators to hypothesize that higher g individuals' brains are able to more quickly seize, integrate, and analyse data. Gottfredson (1998) also points out that several studies of twins raised in different environments found that, over time, the IQ of the subjects more closely resembled that of their biological parents than that of their adopted ones- supporting the notion that both genetic and environmental factors could account for significant g variability.

### **3.6.3 How is g Measured?**

While opinions of the existence, importance, and makeup of a general intelligence factor vary, ideas about how such a factor is reliably measured vary widely. In order to study, and take advantage of a general intelligence construct, valid and reliable tests had to be developed. The key to developing a standardized test is to identify stable components of g. As early as the 1920s, a symposium was held to define g (Carroll, 1997). Significantly, this conference, like others as recent as 1986, failed to "definitively" identify stable measures of g acceptable to a majority of symposium participants (Sternberg and Detterman, 1986). Some researchers believe g can be measured as a single factor, but that factor is what they label Gf or fluid intelligence (Horn and Noll, 1994). Others such as Detterman (1994) believe g

may be measured as a single general factor but is better described as hierarchal, and measured, as a grouping of different information-processing abilities (Carroll, 1997).

Despite the differences of opinions regarding the make up of a general intelligence factor, many psychologists agree test items can be developed to measure g. I.Q. tests should measure relative individual differences in the underlying trait of general intelligence; and by including three test properties, some researchers are confident this goal can be accomplished (Gordon, 1997; Jensen, 1986a, 1986b).

Firstly, since I.Q. tests are designed to measure cognitive capacity, the actual tests should largely consist of mental tasks- without requiring physical exertion (Gordon, 1997).

A second requirement of intelligence tests is that they objectively record individual performance as being better or worse, right or wrong, shorter or longer in performing some task, or in responding to a specific request (Gordon, 1997). The third requirement of test items is that they should range in difficulty and that the range should be calibrated to the population being examined. No group should find the test overly easy or difficult (Gordon, 1997). Many researchers also agreed general intelligence tests should operationalize the measurement of g by testing verbal, quantitative, and pictorial domains (Lubinski and Humphreys, 1997).

Today, just like in Spearman's time, researchers realize the measurement of g is not solely dependent on specific presentation styles such as written or oral; nor is actual test content severely limited (Jensen and Weng, 1994). The content items of most intelligence instruments attempt to measure broad cognitive properties such as verbal/linguistic, spatial/pictorial, and quantitative/mathematical reasoning (Lubinski and Humphreys, 1997).

Because general intelligence may underlie all cognitive ability, it presumably can be measured- and it can be measured in many ways. Current I.Q. tests are designed to take advantage of this phenomenon and provide stable, reliable indicators of individual cognitive capacity. The general intelligence test selected for use in this project is claimed by its designers to comply with rigorous guidelines- and is discussed later.

#### **3.6.4 g and Job Performance**

While many researchers disagree on the specifics of psychometric g, Carroll's, (1997) analysis of intelligence studies over eight decades lends support to his statement: "At the present time the evidence for a general (intelligence) factor can be said to be overwhelming." Since the presence of a general intelligence factor, and the ability to consistently, and validly, measure it, are supported by research and theory, our attention turns to using psychometric g in practical situations.

The job setting is one such situation. Many organizations must increasingly deal with solving complex problems using fewer people. In order to maximize efficiency, businesses and other enterprises have long searched for techniques to predict superior performance by their staff members. The general intelligence factor (g) may provide the single most powerful predictor of job performance in workplace settings (Gottfredson, 1997). Psychometric g enjoys extensive research support as a reliable predictor of workplace job performance (House et al., 1991). One of the most significant studies to date supporting this proposition (Hunter, 1986) analysed '...hundreds of studies showing that general cognitive ability predicts job performance in all jobs.'

Employers use many employee selection techniques and criteria. These include college grades, reference checks, background information or measurements of individual characteristics such as age, education level, gender, and work experience, job interviews, and work sample assessment centres (Arthur, 1998). In one study (Hunter and Hunter, 1984), the investigators used meta-analysis procedures to compare the predictive validity of different selection predictors on various job performance/outcome measures. They found measures of g (ability) had the highest correlation coefficient with a .63, followed by .33 for both college grades and individual characteristics measures. Education level had a coefficient of .27, reference checks a .26, while the traditional pre-employment interview was .11. Of significance to this study, g predicts job performance and training results in many different work settings, job categories and career tracks (Chan, 1996;

Gottfredson, 1986; Hartigan and Wigdor, 1989; Schmidt et al., 1992; Stokes et al., 1994,). In a later work, Schmidt and Hunter (1998) found that General Mental Ability tests correlated .51 with job performance, whereas conscientiousness tests correlated .31. If the criterion was overall performance in job training programs, the correlations were .56 and .30 respectively.

One of the longest (and most devoted) users of *g* for job selection and promotion is the US military. In 1992, Harrell reported the military's successful use of cognitive ability tests to classify over 12 million service personnel. The author contends there are similarities between store detectives and many military occupational specialties. Military police and infantry soldiers provide security and deterrence services in many settings, and often operate in a semi-autonomous manner as do store detectives. Both groups are trained to detect potential problems, and handle potentially dangerous situations. Many store detectives also come to employment in the stores after military service.

A significant part of the debate about using *g* to predict workplace performance is its utility in forecasting expected work behaviours, or a related construct. There is some concern about whether *g* best predicts actual work outcomes, or is much better at predicting training success. Ree and Earles (1991) concluded in their study of over 78,000 Air Force enlisted personnel from 82 job positions that a psychometric measure of *g* was the best predictor of success in job training.

However, in Campbell's (1990) analysis of the US Army's Project A, he reported g tests predicted actual job performance.

Other studies of USAir Force and Army personnel demonstrate the primacy of g in predicting different job performance facets such as technical knowledge, flying performance ratings, navigation tasks, training grades, and hands-on work samples (Burke et al., 1989; Carretta and Ree, 1996; Olea and Ree, 1994; Ree and Earles, 1996, Walters et al., 1993). In a study of 838 US Air Force personnel, Lance (2000) found g explained unique variance beyond that predicted by job/work performance.

In non-military settings, Nathan and Alexander (1988) found g predicts supervisory ratings, work samples, and actual production quality and quantity. Schmidt et al., (1986), and Howard (1986), similarly supported the primary importance of a general intelligence factor (g) in predicting job performance.

Further examples of using g as part of a new-hire screening process abound. These settings are quite diverse and range from professional athletics to software development. The National Football League (NFL) has tested for g since 1968, believing I. Q. can predict a new player's ability to learn increasingly complex football schemes- and even on the field performance (Kowalski, 1998). Software developer Microsoft has long believed high I.Q. is the best predictor of success in the fast paced computer software development industry, and vigorously searches

for the brightest engineers, scientists, and programmers available using structured g testing (Stross, 1996).

In a work setting, employee performance is usually measured subjectively using some type of evaluation criteria. Because these supervisory ratings are considered proxy measures at best, objective measures such as work samples may be considered more useful in many settings as a dependent variable. Hunter (1986) conducted a meta-analysis of both performance ratings and work sample projects. He found correlations of g-saturated tests with work sample performance were .75 in the civilian sample, and .53 in military jobs. Although Hunter's work enjoys broad support, some criticisms of meta-analysis methodology, such as the variability of data, metrics, units of analysis, and research quality of data sets, exist.

Many researchers believe the inherent measurement error and range restriction in many samples suppresses the amount of performance variance explained by g. Brown (1999) reported g did not predict salesperson performance, but stated his sample of 175 participants suffered from extreme range restriction, and that the mean g score was a full one standard deviation higher than expected. He therefore considers his findings to be unreliable.

A critical point in this current study of store detectives is the underlying complexity of their job. The position requires a significant amount of non-supervised, fast-paced decision-making on a daily basis (Hayes, 2000). Many times

store detectives are physically isolated from their supervisors due to the wide geographic dispersion of many chain retail operations. Some detectives may only visit twice a year with their immediate manager. In addition to the isolated nature of in-store loss prevention operations, the variety and complexity of job tasks and common situations is large and growing. Many of a detective's duties were previously outlined, but new duties are being added such as auditing, store safety operations, and checking pawnshops and flea markets around their stores for stolen goods. Gottfredson (1997) illustrates, with studies conducted by Hunter (1983, 1986), how the predictive validity of *g* appears to rise with job complexity. Complex jobs seem to require greater cognitive capacity; but an unknown at this point is just how complicated a store detective's job really is today.

As important as predicting objective job performance is in the group studied for this project, a store detective's knowledge and skill development through training also seems important as a separate issue. Productivity of store detectives is difficult to gauge. The amount of Shop theft in a detective's work centre or store can change seasonally. In addition, comparison with other detectives is difficult as well since theft rates vary widely from location to location. Loss prevention supervisors are also reluctant to rate their employees based on a 'body count' (frequency of apprehension) criterion since this very act may create subtle, or not so subtle, 'pressure' to apprehend more people. Detectives may thus take more risks by apprehending individuals they are less certain have really stolen



something from the store. This productivity tracking practice may lead to more errors, which means more liability exposure.

Civil liability exposure issues have forced many loss prevention supervisors to more subjectively measure detective's' performance and abandon strict productivity measurements. One way detectives are evaluated is by knowledge testing. Because retail theft violates state criminal and civil statutes, detectives must demonstrate their understanding of relevant and frequently changing laws. Due to liability concerns, detectives must also learn and demonstrate compliance to even more restrictive individual company procedures regarding shop thief detection, apprehension, and offender processing. Detectives must also be sensitive to issues such as use of force, and sexual or racial harassment or discrimination.

Due to financial and legal pressures, retailers must also be able to more accurately predict training success (transfer of job knowledge and skills) for their new detective recruits. Several general intelligence (g) studies demonstrate how well psychometric g predicts training performance (Jensen, 1980; Ree, Earles, and Teachout, 1994).

As previously mentioned, researchers claim direct causal links between g and job performance, and less direct linkage is also well supported. There is extensive evidence that g strongly predicts successful training through knowledge

acquisition. This acquisition ability further predicts test proficiency and ultimately job performance (Borman et al., 1995; Hunter, 1983; Schmidt et al., 1986).

Because store detectives must exercise considerable judgment in wide-ranging circumstances, detective training cannot address, in any detail, the majority of situations in which the detective must perform. It is this type of job position where selection based at least in part on g scores would seem most important. According to Gottfredson (1997), g has been found to have a direct effect in civilian and military jobs where there is frequent use of mental “ability” and discretion (e.g. pilots), versus rigidly following detailed procedures such as in engine maintenance (Borman et al., 1993, p.447). As has been noted, the detective position encourages and requires a significant amount of discretion on a daily basis.

The reality of exactly how cognitive capacity affects an individual’s ability to deal with job complexities is not well understood. Higher g appears to help workers perform better in jobs that are more complex. Gottfredson (1997) believes several key components of a particular job might partially account for the advantage people with higher cognitive abilities have in relatively complicated vocations. These factors include dealing with people, actual task configuration, and as is common in ‘real-world’ settings, insufficient educational and training preparation for complex jobs. The author points out that dealing with (motivating or leading) other humans on a regular basis is often quite complex. In addition, some tasks are very complicated by design and necessity. Finally, many, if not most, training

programs are not designed or delivered so that they 'fully' prepare a trainee for all the aspects of complex job positions. Possessing higher g can help individuals' better deal with unforeseen situations as well as other factors; and ultimately excel (Gottfredson, 1997). The higher job complexity/ higher g requirement sounds plausible, but one US doctoral study of salesperson performance (hypothesized by the author to be a relatively complex position) did not find a significant relationship between g and job performance. But the author believes a relationship may in fact exist, but was masked by three factors: narrow g score range restriction in the sample, two, range restriction in the sample's job tenure, and three, the fact that the sample's mean g score was very high (Brown, 1999).

Researchers seem to disagree on the definition of intelligence. However, many agree that general intelligence reflects the ability of people to reason, solve problems, think abstractly, and acquire knowledge (Borman et al., 1993; Gottfredson, 1997). It is important to note g is not a person's total knowledge. Rather the factor is believed to be an individual's ability to seek, acquire, interpret, and apply knowledge in appropriate situations (Gottfredson, 1997). This capacity to learn critical job knowledge and skills to perform at a high level appears from the literature to be a significant predictor of job performance, particularly in complex and dynamic environments (Gottfredson, 1997). Nevertheless, some researchers would disagree with this position.

### **3.6.5 Criticisms of using g to Predict Job Performance**

Although the academic literature abounds with support for using a measure of general cognitive ability as a predictor of job performance, criticisms of this practice exist. There appear to be four primary criticisms of using psychometric g to select for performance: (1) measures of g are fundamentally biased; (2) links between g and work outcomes are an artefact of the relationship between intelligence and socio-economic status; (3) g is not as powerful a predictor of job performance as testing for very specific tasks, requisite knowledge, aptitude or jobs; and (4) g is a better predictor of academic or training performance than actual work performance.

In the US, employers may feel compelled to establish employee selection goals other than selecting high performers. As discussed in the earlier legal section, state and federal statutes often strongly encourage or even mandate gender and racial diversity. Some organizations have found the use of selection measures such as tests of general cognitive ability indicate large mean score differences (approximately one standard deviation) between Caucasian and black applicants (Pulakos and Schmitt, 1996). This finding creates serious issues for employers since they must reconcile their desire to employ individuals who should perform at higher levels in complex job positions with the need to hire applicants who meet strictly racial goals or mandatory quotas (Silva and Jacobs, 1993).

Researchers (Pulakos and Schmitt, 1996) have experimented with employee selection techniques such as standardized interviews, individual characteristics (background information), situational judgement tests, and other non-cognitive measures to offset the possible “adverse impact” on some minority groups of selecting employees based primarily on g. Their research findings were mixed. Additional selection measures added costs while non-cognitive measurements, which did reduce adverse impact, tended to generate less validity. Despite their efforts to identify stronger or more stable predictors, Pulakos and Schmitt (1996) still found g to be the strongest predictor of job performance.

Although a concern, the concept of adverse impact may be minimal because the sometime trade-off between selecting for work outcome, and for racial diversity generally only affects certain jobs. Job slots which might require higher g scores due to their complexity are probably relatively rare as a whole.

Some critics of using g for selection (e.g. Bouchard et al., 1990) are concerned that the differences in performance on tests of general cognitive ability are largely explained by variances in subjects’ education, income, family structures, regions of residence, and family earnings. The argument is that g is actually a function of socio-economic status (SES). In 1991, Barnett and Depinet analysed several studies and concluded the link between g and job performance was not an artefact of SES. Precisely what measures of g really quantify is far from resolved at this point.

A third argument involves the wisdom of stating the primacy of using *g* to select for job success (Fox, 2000; Sternberg et al., 2000; Sternberg and Wagner, 1993; Sternberg et al., 1995). Sternberg and Wagner (1993) take exception to the 'g-centric' view that tests of general cognitive ability are the primary way to select for high job performance. They state that *g*  $R^2$  values range between .2 and .5 (average coefficients of determination) leaving as much as 75 % of the variance in job performance unexplained. The authors (Sternberg et al., 1995) argue *g* should be supplemented with a measure of 'practical' or 'tacit' intelligence. They also perceive *g* as a better predictor of academic or training success than for on-the-job success. Their argument is that workplace problems differ from learning problems in several ways including: (1) work problems are usually incompletely formulated; (2) are of some personal interest; (3) are often lacking in requisite information for solution; (4) are more often related to everyday experience; (5) are characterized by multiple solutions rather than a "book" solution; and (6) are characterized by multiple methods for picking a problem solution.

Sternberg et al. (1995) argue their instrument, which measures tacit or practical intelligence, should supplement existing intelligence and aptitude tests. They admit there is currently little evidence that selection measures which do not account for *g* can match the long and broad scholarly support of studies that do. Also, Ree and Earles (1993) doubt the researchers have empirically demonstrated their measure of tacit knowledge can substitute for, or even substantially increment, measures of *g* due to the small sample sizes in their studies; and the

possibility exists that their studies' predictor measures may in fact be heavily g saturated. This concern seems to indicate the need for studies that can more clearly demonstrate the predictiveness of a Tacit intelligence construct for job performance. There is also currently a deficit of evidence demonstrating Tacit intelligence is a separate construct from g.

### **3.6.6 Testing General Cognitive Ability and the Wonderlic Personnel Test**

Pre-employment testing for mental ability was made easier with the development of standardized tests. Landy and Trumbo (1980) found intelligence testing for businesses primarily evolved from tests developed during World Wars I and II. The general intelligence test was also the first so-called pencil and paper test. Businesses looking to hire capable people for increasingly complex jobs were searching for affordable, valid, reliable, and easy-to-use tests. E.F. Wonderlic first developed an early commercial instrument, the Wonderlic Personnel Test (WPT), in 1938 (Wonderlic and Associates, 1983). The WPT was designed to test literate adults in industrial and business settings, and provide some indication of an applicant's general mental abilities. The WPT instrument was used in the current study, and is discussed in detail in the methodology chapter.

## **3.7 PERSONALITY TRAITS IN THE WORKPLACE**

### **3.7.1 Personality Traits and Job Performance**

Personality may be defined as the pattern of characteristics and ways of behaviour that account for an individual's unique adjustments to his or her total environment

(Craik, 1993). It includes major traits, interests, values, motivations, attitudes, self-image, abilities, behaviour patterns, and emotional patterns. All of these factors influence job performance (Craik, 1993).

While g is broadly indicated as a strong predictor of job performance, it is not the only predictor. The capacity (g) to learn and perform in the workplace appears to be enhanced by the inclination to perform. Stewart et al. (1996) found support for the classic theory that performance is a multiplicative function of ability and motivation. Specifically, research shows the personality trait “conscientiousness” may account for stable and significant individual differences in motivation (Goldberg, 1993) and actual job performance (e.g. Barrick and Mount, 1991, 1993). The personality trait conscientiousness is one of the “Big Five” broad personality domains.

Goodstein and Lanyon (1999) point out that some research has reached contrary conclusions regarding the significance of the different personality factors in predicting job performance. Personality is multi-faceted, and the combination of the dimensions will vary, depending on the job being studied. They advocate a careful job analysis prior to any selection of employees based on personality characteristics, to ensure that the appropriate personality factors are used in selecting workers for the various job groups.



### **3.7.2 The Big Five Personality Trait Factors**

Personality may be described as stable factors that make human behaviour consistent, or different, in comparable situations (Rogers, 1995). Individuals tend to have distinct traits that seem to predispose them to behaviourally respond in particular ways when confronted with persons, objects or situations (Rogers, 1995).

A common starting place for describing behaviour and human personality is the lexical approach to designing a general taxonomy. Using natural language descriptors of human behaviour, researchers have assembled a generally agreed upon personality taxonomy. Allport and Odbert (1936) identified 18,000 relevant words from Webster's dictionary of which about one-fourth were labelled trait-descriptors. Later, Cattell (1945) distilled Allport and Odbert's 4500 traits down to 35 variables. Using earlier factor analysis techniques, Cattell identified 12 obliquely rotated factors from these descriptions, although factors 6 through 12 had only secondary loadings. Fiske (1949) analysed 22 of Cattell's 35 variables and used them to secure trait ratings from 128 psychology trainees. As a result of this process, Fiske described five general factors using higher-order factor analysis. According to Digman (1990), Tupes and Christal also found five relatively strong and recurrent factors in 1961. These factors were subsequently referred to as the "Big Five" (Goldberg, 1993).

Other researchers have found support for these same five major domains or dimensions of personality (Digman, 1990; Hogan, 1983; John, 1990). Several labels

for the big five personality factors have emerged over the last 20 years, but Piedmont and Weinstein (1994) described the following: neuroticism (the tendency to experience anxiety, depression and hostility), extraversion (the quantity and intensity of interpersonal interaction), openness (the proactive seeking and appreciation of new experiences), and agreeableness (the quality of one's interpersonal interaction along a continuum from compassion to antagonism (McRae and Costa, 1989). The fifth personality domain, conscientiousness (dutifulness, order, achievement striving and self-discipline) has been repeatedly linked to training and job performance (Barrick and Mount, 1991; Piedmont and Weinstein, 1994; Salgado and Rumbold, 1994,).

### **3.7.3 Criticisms of the Big Five Taxonomy**

While the Big Five personality taxonomy enjoys much support, there are problems. Briggs (1989) criticizes the Big Five for its lack of specificity. He believes the most frequently cited traits are too broad, and will not add to a needed theory. Also of concern is that each researcher or group seems to develop new trait labels or domains (Waller and Ben-Porath, 1987). One study seems to counter this view by demonstrating significant agreement on trait factors. Using the 300 items in the Adjective Checklist (ACL), John (1990) had 10 judges assign each item into one of the Big Five, finding 90 % agreement on assignment of 112 items.

Waller and Ben-Porath (1987) also point out the reverse problem that in fact the Big Five is not inclusive enough. John (1990) supports this observation and points out

the Big Five taxonomy fails to include important dimensions such as maturity, personal values, and gender terms. Perhaps as the Big Five is more fully developed into a personality theory, the question of its missing out on several dimensions will be addressed.

John (1990) also points out the Big Five structure may be an artefact of a particular initial selection of variables such as the way Cattell's 50 factor analyses tended to result in the current Big Five. This concern is somewhat alleviated by recent studies not based on previously identified factors (Angleitner et al., 1990) also finding five primary factors.

Another concern with the Big Five model is the fifth domain, Openness. McCrae (1990) does not include intelligence in openness, while Eysenck (1985) and Guilford et al. (1976) do. Including the concept of cognitive ability as a personality trait leads to the possibility of six factors.

In addition, Briggs (1990) raises the possibility the Big Five may only be the structure of the personality lexicon and not the structure of personality. His suggestion is to continue the search for underlying psychophysical processes which help produce actual observable behaviours. Perhaps the type of research suggested will allow the development or enhancement of better/deeper theoretical tools for explaining and predicting the variance in personality traits- and their influence on our perceptions and behaviour. Finally, another problem with the Big

Five taxonomy is that some of the dimensions (extraversion and neuroticism for example) often significantly correlate with each other, reducing independence and parsimony.

While there are conceptual and empirical problems with the Big Five personality taxonomy, it is supported with numerous empirical studies. There also currently appears to be no better competing taxonomy or theory currently available.

As previously mentioned, the Big Five lexical taxonomy of personality traits consists of the five domains often referred to as: neuroticism, extraversion, openness to change, agreeableness, and conscientiousness. It is this last trait, conscientiousness, which has been most frequently linked to training and job performance.

#### **3.7.4 Conscientiousness**

The personality trait conscientiousness, or motivation, has been studied over the years and described by many researchers in many ways. Hartshorn et al., (1929) characterized the trait as an aspect of ego strength, while Gatewood (1993) quotes Murray and Kluckhohn (1953) describing it as power, initiative, and responsibility (Costa and McCrae, 1991). Costa and McCrae (1991) once favoured the term “direction” for this trait. They have since proposed Conscientiousness (or C), and claim it is composed of six facets: Competence, Order, Dutifulness, Achievement Striving, Self-Discipline, and Deliberation.

Costa and McCrae (1991) have operationalized their theory regarding facets of the conscientiousness domain by adding them to their highly respected personality survey instrument, the NEO-PI (now the NEO PI-R) and described the facets as follows:

Competence refers to whether an individual is capable, sensible, and accomplished. The authors also believe locus of control (whether an individual believes their behaviour is internally or externally controlled) is related to competence. The facet labelled Order measures a person's tendency to keep one's environment tidy and well organized. Dutifulness measures the extent to which standards or principles of conduct are adhered. Another key facet of C is the need for personal achievement or Achievement Striving. This facet measures how important an individual feels striving for excellence is to them personally.

Also important to C is Self-Discipline or an individual's persistence in an endeavour, regardless of outside distractions or boredom. The authors have found subjects low in self-discipline give up on projects more quickly or tend to procrastinate. The final part of Conscientiousness is Deliberation. This facet measures a person's caution, planning and thoughtfulness. While there is currently little agreement on all facets within any personality trait domain, there is some empirical support for the facets listed above using the revised NEO-PI or NEO PI-R (Piedmont and Weinstein, 1993).

### **3.7.5 Personality and Employee Selection**

As mentioned before, organizations have long searched for techniques to predict employee performance. For over 30 years, various researchers have studied the use of personality traits to select employees. Most studies found personality measures were relatively poor predictors of workplace performance (Ghiselli, 1973; Guion and Gottier, 1965; Schmidt et al., 1984). However, since these earlier studies were conducted, the Big Five taxonomy was developed. This taxonomy allows testing for systematic relationships between specific operationalized personality constructs and workplace performance criteria (Barrick and Mount, 1991).

Following Barrick and Mount's (1991) meta-analysis study utilizing the Big Five, psychologists have renewed research efforts regarding personality and workplace behaviour (Costa, 1996; Schmidt et al., 1994). Not only is it now permissible to examine the contribution of personality factors to the selection of personnel, but this is an area of renewed effort in the personnel selection field (Borman et al., 1997; Dunnette, 1998; Hough, 1998; Salgado, 1999).

Barrick and Mount (1991) found the personality trait conscientiousness consistently related to all job performance criteria, for all occupational groups studied. Caliguiri (2000) found conscientiousness was positively related to the supervisor-rated performance of 280 expatriate workers in various managerial positions.

However, it is important to examine the direction of these statistically significant relationships. Tett (1998) has found that conscientiousness is not always positively correlated with job performance. The sometimes contradictory nature of personality traits can be complex. Driskell et al. (1994) proposed that being very conscientious (deliberation) can mean workers get less done. They may move slower and more deliberately. Deliberate people may also not be as good at quick, on-scene decisions, such as are often required of store detectives. A similar concern was raised in other research. It is generally important that workers follow company rules. This may be even more important for store detectives due to the high-risk of liability and injury issues abundant in the US. But high compliance to rules can come at the risk of damping innovation on the job; which may also be an important work trait due to dynamic workplaces, and their problems and solutions (Bunce and West, 1995; Hough, 1992). Workers may need more authority to work within more general guidelines, rather than firm, inflexible rules, particularly in rapidly changing environments such as retailing. The store detectives reviewed for this study seemed to exercise considerable independence.

Similar to g, Barrick and Mount (1993) also found personality traits and work performance relationships stronger still where employees have considerable autonomy. Again, the psychometric screening process under review in this study is seemingly applicable to store detectives.

In addition to the refinement of personality trait taxonomy, psychologists have found personality assessments should be more impactful if they are carefully matched to actual and specific job criteria (Jackson and Rothstein, 1991; Robertson and Kinder, 1993).

### **3.7.6 Critiques of Using Personality Testing for Job Selection**

One concern of personality traits for selection involves the required level of analysis on traits. Are measurements of broad personality traits enough, or should the more specific measurements of facets be used? This concept is referred to as the bandwidth/fidelity dilemma (Cronbach and Gleser, 1965). Broad trait measurements may be better for some selection scenarios where a position is less well defined, or changes constantly. While the more detailed measurements provided by specific trait facets might provide better selection data in others. This concept will be tested in this project. Personality instruments such as the NEO PI-R (Costa, 1996) provide measurements of both broad domains and narrow facets of personality traits.

Another concern of researchers involves the potential for response distortion. Potential employees may distort their test responses by denying faults, exaggerating strengths and/or faking other answers (Hogan and Nicholson, 1988; Nunnally, 1978; Tokar et al., 1998). While this issue will always remain a concern, other researchers have found that this practice is seldom a real problem in actual settings (Hough et al., 1990; Michaelis and Eysenck, 1971; Ones et al., 1996).



Schmidt and Ryan (1993) do note, however, a difference between distorting answers to conform socially versus deception designed purely to appear to conform to expected job behaviour. Current personality tests are designed to compensate for distortion, but may not be finely tuned enough to foil both types of deception.

In addition to response distortion for social desirability purposes, there are other potential problems with survey or test taking. One such concern is *random responding*. Disinterested or malicious respondents may randomly or carelessly fill out a survey instrument. Researchers can often overcome this issue by informing the participants of the importance of their input. Enough time to complete a test should be provided as well to remove any incentive to rush through it. Researchers should examine test results for long patterns of the same answer being checked.

A significant issue with test taking is *acquiescence*. Respondents may excessively agree or strongly agree on multi-point scales. Testers should encourage participants to mark the answers they genuinely agree with, and not try to anticipate a correct one. As with random responding, excessive positive scores may usually be identified visually, or with frequency distributions.

Some test takers tend to systematically disagree rather than agree with survey questions creating the problem of *nay saying*. As with acquiescence, one way to

prevent nay-saying responses is with an informative pre-test briefing encouraging sincerity and accuracy. Visual or count inspections should reveal problematic patterns. Response distortion does create concerns, since it can cause individual or group validity problems, but it can be checked. Many tests also include special check questions to guard against or identify response problems.

An additional concern of using personality tests is the broad nature of the constructs they are designed to measure. Some investigators believe the five-factor model is too broad to be able to predict job performance (Briggs, 1992; McAdams, 1992; Tett et al., 1991). Due to its generality, Behling (1998) questions whether companies should value intelligence and conscientiousness above specific skills. Hough (1992) found nine factors had higher validities when predicting job performance than just five did. This finding was presumably because of greater sensitivity provided by a "finer" definition of the constructs, thereby reinforcing the bandwidth/fidelity argument. Further support for this idea of the need for more instrument sensitivity to predict work performance, Saville and Wilson (1991) found narrow trait facets were stronger predictors of performance than broader global trait domains.

Another problem with Big Five testing and job performance mentioned in the literature deals with varying validity across population differences; differences include actual job applicants versus students or other research volunteers (Tett, 1998). McCrae and Costa (1990) have however shown trait consistency across

many volunteer groups using their NEO-PI instrument. These researchers do suggest more research with different populations is still needed (Costa and McCrae, 1992).

Others have also criticized tests of personality traits and selection. Rynes (1993), for example, was concerned there was no guiding theory regarding applicant response to selection testing and individual test instruments. Adler (1996) argued that job performance research needed more explicit theoretical linkages between specific traits and outcome, or moderating, constructs. He also encouraged more job-specific analyses be conducted. Murphy (1999) questions whether conscientiousness will be as relevant in the future, as many of our new technological tools assist workers in being more efficient planners and organizers (i.e., being more conscientious).

Other researchers (Hogan and Hogan, 1992; McAdam, 1992; Ones et al., 1996) suggested job applicants respond to selection tests (as mentioned previously) by presenting an image they believe is to their advantage such as competence thereby negating their value in real job settings.

Another criticism is the idea that g is a much stronger predictor than any combination of personality traits so why use them (Wright et al., 1995). Others (Ree and Earles, 1993) suggest cognitive abilities significantly add to the effect of personality traits in selecting and so suggest using both. Adler (1996) reinforces

this notion and notes higher cognitive ability may give new employees an initial advantage since they may more quickly understand job requirements and excel in training and knowledge retention. The influence of g in many workplace and job settings may wane over time. Later, personality traits may come to the fore and help drive actual on the job behaviours, and much of a person's workplace performance.

Finally, Ones et al. (1993) recommend employee selection procedures include integrity testing since many current integrity tests reliably predict disruptive or deviant workplace behaviours beyond what standard personality tests can. Adler (1996) did find, however, the trait conscientiousness predicted "corporate citizen" behaviour, which may partially predict deviance.

### **3.7.7 Use of the NEO PI-R in Employee Selection**

Based on the preceding literature review, it appears retail companies need better prediction tools when selecting store detectives because of the need to increase productivity while reducing liability and turnover. A combination of measuring cognitive ability and personality traits may provide incremental accuracy to conventional selection methods such as interviews and reference checks.

In order to assess the relationship between job performance and personality in the current study, the NEO PI-R (NEO Personality Inventory, Revised) was selected. The NEO PI-R is based on over 16 years of research using different types of

industrial and volunteer samples and is reviewed in detail in the research design chapter.

### **3.8 USE OF BIOGRAPHICAL DATA FOR SELECTION**

The literature further suggests using biographical information (often referred to as BioData) about job prospects to further explain job performance. This type of information is indicated to be useful in predicting job performance over and above personality and cognitive measures (Craft, 1991; Salgado, 1999). Biographical data measures were found to have a predictive validity of .35 for job performance, and .30 for training proficiency (Schmidt and Hunter, 1998). According to Salgado (1999), although their predictive validity for job performance has been recognized in recent years, they are not frequently used. Two explanations for this low usage include: 1. lack of theoretical linkage with work performance (raw empiricism), and 2. concerns about invasion of privacy due to the very personal nature of biographical information (Dean and Russell, 1999). Only recently have investigators started to employ traditional psychometric construct validity techniques to Biodata in the form of stronger items and taxonomies (Dean and Russell, 1999). An example of interest in this study: Biodata questionnaires can be developed specifically to assess conscientiousness.

Traditional BioData measures include age, gender, race, years of education, job tenure and experience, marital status, and previous work occupations, all

verifiable attributes which are believed to help explain job performance variance. These measures can also serve as statistical controls in quantitative studies. Newer BioData measures are sometimes more sophisticated scales designed to capture constructs such as motivation, aspiration, interpersonal aptitude, and values (Dean, 1999). Neither traditional nor newer measures are well defined in the current literature, and this lack of construct consistency makes it difficult to compare and contrast study methods and findings.

While both types of measures suffer from the same lack of theoretical explanation as cognitive and personality measures, there is broad empirical evidence that biographical information adds predictive validity in job performance studies (Craft, 1991; Salgado, 1999; Stokes and Toth, 1996).

### **3.9 SUMMARY OF THE LITERATURE**

Particular emphasis in the literature review was placed on the use of standardized tests for personality traits and intelligence. This emphasis resulted from a request by loss prevention decision-makers for before-hire selection measures, and the primacy of psychometric measures as job performance predictors in the reviewed literature. According to the literature reviewed, an applicant's cognitive ability and personality traits play an important role in their ability and inclination to successfully perform their jobs. This process seems especially true in jobs that are

relatively complex; require frequent, fast-paced decision-making, and a relatively large measure of self-motivation and discipline.

Particular emphasis was placed on g and the Big Five personality traits as job performance predictors, but both concepts remain somewhat controversial, and much theory development as well as both exploratory and confirmational research remains to be done. An example would be that the direction and underlying meaning of certain traits or facets such as conscientiousness with job performance are largely unexplained. The overall research in the psychometric job selection domain to date does seem persuasive (certain psychometric measures explain unique job performance variance beyond other factors), but mixed, and there is a strong need for continued employee selection study. Rigorous research to test the validity and reliability of these various predictors for specific jobs, in specific organizations, is also important at this time.

It appears from the reviewed literature that careful selection of new employees can play a strong role in individual and departmental performance, while ultimately affecting organizational performance. A variety of performance predictors are available for evaluating applicants, such as gauging past performance and decision-making through background checks, relevant individual characteristics collection (e.g. work and educational or training experience), and structured interviewing. Particularly, interviewing or tests that require the applicant draw on

their personal experience and tendencies to handle or address specific, and job relevant, situations.

Measuring and assessing an applicant's abilities to acquire job knowledge, set goals, maintain self-discipline, and handle critical job tasks and situations, by standardized testing, and enhanced by structured situational interviewing, has also been demonstrated as useful in pre-employment screening (Pulakos and Schmitt, 1995). Another key point, personality and cognitive measurements, along with biographical items, appear to add some depth and objectivity to the selection process beyond subjective, non-structured interviews.

As reviewed earlier, retailers are looking for ways to strengthen their organizations, and increase their financial performance. Sound employee selection is one way to help accomplish this objective. Moreover, as pointed out in the preceding chapters, better selection of store detectives is one way to add value to an organization plagued with crime and loss. This study aims to provide some new information in this important area.

The summary of the literature reviewed indicates the following:

1. The store detective position is a relatively complex one, which supports the retail organization's selling mission by reducing crime and loss risk and activity/event levels. Retailers are looking for ways to increase their departmental performance by increasing individual store



detective job performance levels. Pre-hiring job selection is one way an organization can improve individual performance. Finally, the behavioural components of the store detective job position need to be more specifically defined.

2. A large body of industrial psychology literature indicates general cognitive ability is a strong, stable predictor of job performance. The literature also suggests that as job complexity rises, the predictive power of general cognitive ability increases.

3. There is also a substantial literature that supports the use of personality traits to at least partially predict job performance. This proposition seems particularly strong when applied to job positions that routinely require self-discipline, initiative, and attention to detail. There is currently a lack of theory as to the direction of the specific relationships of the individual personality traits, and their more precise facets, with job performance ratings.

4. The literature also supports the use of biographical items, although like g and personality traits, biographical items are not theoretically linked to job performance, to further assess job candidate suitability. Finally, the reviewed literature supported the formation of the study's four hypotheses:

### **Hypothesis One**

There is a significant relationship between a measure of general cognitive ability (g) with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a top performer.

### **Hypothesis Two**

There is a significant relationship between personality trait measures with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a top performer.

### **Hypothesis Three**

There is a significant relationship between biographical characteristics (age, race, gender, educational attainment, LP job experience) and supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a top performer.

### **Hypothesis Four**

There is a significant relationship between the combined measures of general cognitive ability (g), personality trait measures, and biographical characteristics, with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a top performer.

## **CHAPTER 4**

### **RESEARCH DESIGN**

#### **4.1 INTRODUCTION**

Earlier chapters introduced the research problem, described the purpose of the study, explained the relevance, and reviewed the literature related to the major variables of the study. Included in the literature review were the role and focus of store detectives, as well as their training, selection, and testing. This chapter describes the research methods used in this study to both develop the criteria measurements, and to test the hypotheses derived from the literature review. The methods used to conduct a job task and situation analysis, and to evaluate the hypothesized relations are also presented along with a full description of the current methodology. Sections include an overview of the total study method, description of the selection of the sample, development and selection of research instruments, consideration of variables, and the analytical procedures used to conduct the investigation.

This investigation was designed to employ robust research methods to provide baseline data on the store detective position beyond that found in the literature, and then test the four hypotheses. At all times the research was deliberate, but also influenced by both the literature, and by the practical realities of working with two corporations in a field setting. In addition to rigorous research methods as outlined

in textbooks, company guidelines, and the personal schedules and opinions of participating LP managers also shaped the actual methods used.

## **4.2 OVERVIEW OF THE STUDY'S RESEARCH PROCESS**

Guided by established research methods (Arthur, 1998; McIntire et al., 1995), the investigative process developed for the present study consisted of three distinctive and sequential steps, which are detailed in subsequent sections. These were as follows:

Step 1: A detailed review of the employee selection and retail loss prevention literature was conducted. Those materials deemed most important and relevant to the research of on the job detective performance and measurement were reviewed in some depth.

Step 2: In-store observations, interviews, focus groups, and surveys, with store detectives and their supervisors were gathered and analysed resulting in distinct store detective job performance criteria.

Step 3: Based on the job performance criteria, the study's hypotheses are formulated and tested statistically using empirical data collected from over 200 randomly selected store detectives from two large US retail organizations; results are summarised.

### **4.3 THE STORE SAMPLE**

There are an estimated one million retail businesses in the US (National Retail Institute, 1999). However, only some of these companies employ store detectives (Hollinger et al., 1999). In order to study detective selection, the author contacted 10 out of over 50 retail companies known to use at least 500 store detectives in total where the author personally knew the directors of loss prevention. The high number of store detectives per company criterion allowed larger samples to be drawn (to enhance statistical power) for the present investigation (Cohen, 1992). Of the ten companies contacted, only two were able to participate due to competing business issues their LP executives were presently forced to handle as a higher priority. In the author's experience, the two retailer participants maintain store detective operations consistent with the trade literature regarding their focus, deployment, and tactics. The two participating companies were also selected because they operate stores of similar size. Both companies also sell multiple, and similar types of merchandise. In addition, they both operate in all regions of the United States and each generates over \$2 billion annually in sales revenue. It is also important to note that each company assigns store detectives to perform similar job tasks using similar LP techniques.

### **4.4 EXPLORATORY JOB ANALYSIS**

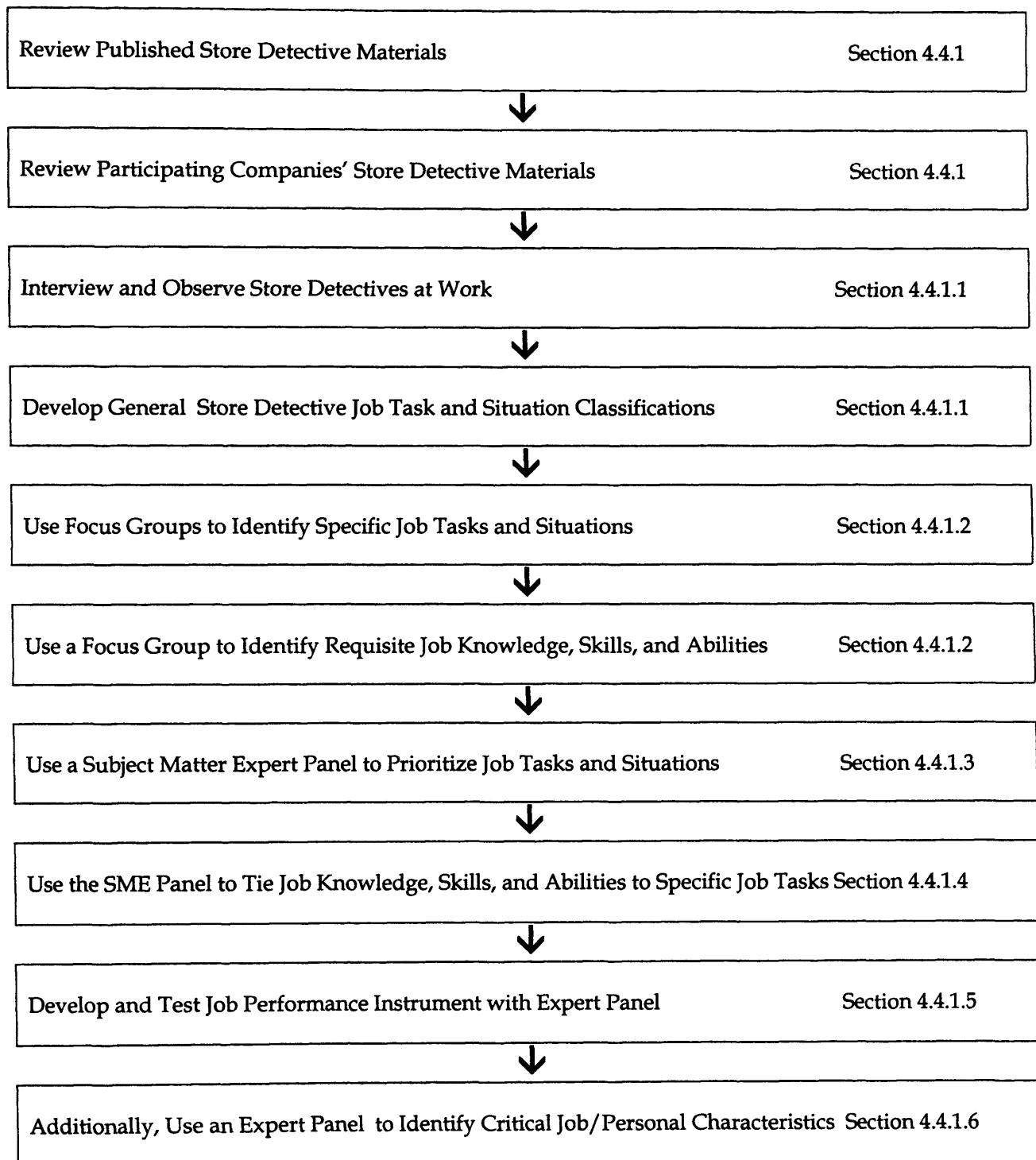
The purpose of this section is two-fold: (1) to outline preliminary job analysis research conducted to define the store detective's role (Arthur, 1998; Frankfort-Nachmias and Nachmias, 1992; McIntire et al., 1995; Strauss and Corbin, 1990); and

(2) to construct the job performance instrument used to operationalize the criteria measures used in the investigative study. The operationalization of criteria measures through the use of the job performance instrument is critical to the goals of the present research (Arthur, 1998).

To achieve these objectives, this section presents an exploratory job analysis where important aspects of the store detective's job position were gathered (Figure 2). Following sections focus on observation and interview data as derived from store detectives, focus group sessions as related to knowledge, skills, abilities, and other characteristics (KSAO's), and optimal store detective personality characteristics as derived from the NEO PI-R Job Profiler instrument. Current detective job tasks and situations data were also identified from the exploratory process. Initial results from the pilot study in which the Detective Job Performance and Characteristics Survey was administered follow.

The following figure (2) provides a summary of the job analysis process (Arthur, 1998) that led to the formulation of the store detective job performance criteria measures.

**Figure 2: The Store Detective Job Task and Situation Analysis Procedure**



#### **4.4.1 Analysis of the Store Detective Job**

Theorists and researchers alike recommend qualitative, job-specific research should be conducted in order to more precisely focus pre-employment routines (Adler, 1996; Arthur, 1998). The initial literature review, and the author's personal experience provided insight into the store detective's role, but there was a lack of detailed information on this particular job position. Specific job tasks and common job situations were not identified in any detail. In order to thoroughly analyse the store detective job, and determine critical job tasks and situations for developing a standardized performance review document, a series of qualitative and quantitative job review actions were performed. The intent was to gain significant knowledge regarding what tasks store detectives should perform in order to effectively and efficiently reduce company losses. Also, of primary interest was identifying common workplace situations store detectives deal with in their assigned stores. The job analysis process used in this study is considered primarily qualitative in design, and informed by several research methods texts (Arthur, 1998; Frankfort-Nachmias and Nachmias, 1992; McIntire et al., 1995; Strauss and Corbin, 1990). It is acknowledged that job analyses are largely qualitative in nature, and can provide large and deep information about a specific job, but the process also carries risks in that field studies of this type are influenced by both good method, and the real-world dynamics of the workplace. The participants at each step of the process are busy people trying to accommodate the study, but still focus on their personal performance. They also bring a bias which cannot always be



controlled for or balanced with contradictory data. In the present investigation, the author used the literature and experience to try to maintain objectivity.

After reviewing store detective job manuals from three non-participating US retailers, the current study's position analysis was started. In the first step of the job analysis, all current store detective training materials, job descriptions, operating procedures, performance review forms, and departmental organizational charts and rosters from the two US retailers participating in this study were examined in order to better understand the intended mission and tactics of store detectives at the participating companies. The work position documents outlined procedures describing how detectives should be recruited, hired, oriented, trained, deployed, and managed. These data were used in providing an overall picture of the job position of the store detective.

#### 4.4.1.1 Observation and Interview of Store Detectives

The next step was to conduct field observations of detectives. Although the author served as a store detective in the past, trained and managed detectives, and has conducted other research on the position (Hayes, 1997a; Hayes, 2000), it was important to gather the current job data and perceptions (Arthur, 1998; McIntire et al, 1995). To achieve this purpose, a total of four current store detectives and their managers were interviewed and observed in two store chains. This allowed for reconciliation between recently reviewed materials, my prior job position knowledge, and the activities and perceptions of incumbent detectives. This

process also allowed the author to seek out updated, contradictory, and new information on the focus and execution of store detective duties.

A convenience sample of two local (nearby) stores (one from each company) was selected by the author for observation. Each store had 2-3 assigned detectives. Following case study and other research methods processes, a multi-step data collection, synthesis, and analysis process was used (Stake, 1995; Strauss and Corbin, 1990). Initially the detectives were informally interviewed to understand their perceptions of their role, job tasks, and typical work routines. The interviews were semi-structured in that they consistently included questions about the detectives' focus and daily activities. The low level of question structure allowed for more interaction and participant relaxation. It also allowed for less researcher-introduced bias, and more data to be collected. After gaining the detectives' trust that all observations would remain confidential, the author periodically overtly observed them over a two-week period.

The detectives' actions and statements generally supported the work model and job emphasis detailed in the previously reviewed company loss prevention materials. The observed store detectives spent the majority of their time scanning the sales floor for shop thieves as they are instructed. Much time was also spent dealing with store staff on immediate issues such as a recovered empty product packaging, or suspiciously acting customers. If detectives make frequent apprehensions, they have to prepare for and attend court. Very little time appeared

to be devoted to inspecting the store and its perimeter for security risks, or working with non-loss prevention management and staff to introduce or enhance behaviours designed to reduce store-level inventory loss. This phase of the evaluation indicated that although other LP tasks were performed, the observed detectives were primarily focused on reducing shoplifting in their assigned stores through surveillance and apprehension activity; thus supporting the deterrence through detention and sanction mission of the position.

#### 4.4.1.2 Formation of the Situational and Task Survey and Focus Group Sessions

Based on reviewed materials, the author's experience, and notes taken during the interviews and periods of observations, store detective job tasks and work situations were classified into a working taxonomy. Specifically, interview and observation notes suggested that job tasks and work situations could be classified into five primary domains and labelled the "Five A's." These are described as follows.

1. *Apprehension*- internal and external theft resolutions such as apprehending, deterring, and processing employee and non-employee thieves.
2. *Awareness*- training and motivating non-loss prevention employees on asset protection issues.
3. *Auditing*- checking for, and following up on store risk levels, and loss prevention procedural compliance.
4. *Area Focus*- collecting and analysing local loss event and demographic data for systematic patterns in order to focus their work efforts.
5. *Additional Responsibilities*- other tasks and situations store detectives deal with such as escorting bank deposits, securing a store during a storm or riot, or helping a

store manager with a non-loss prevention task such as processing a freight delivery.

Classification of job activities into five primary domains resulted in the design of a final data collection survey form (see Appendix A) that was used to collect data in a series of five focus groups. First, however, the initial *Store Detective Program Situational and Task Survey* form (Appendix A) was provided to four senior loss prevention executives at the two companies for feedback and revision as a means of increasing face validity.

Several research options such as surveys and more observations were considered, but the author decided to conduct a series of focus groups in order to collect in-depth information on store detective operations from current field LP experts. The focus groups provided an economical method for collecting a large volume of quality data relatively quickly from widely dispersed experts. The focus groups were conducted in five regional locations across the United States. Groups consisted of 8-10 loss prevention (LP) subject matter experts selected by regional LP managers. Their field LP managers chose individual participants because they had varying backgrounds, ages and ranges of in-store experience, but were perceived as very experienced in store detective field operations, were very successful in their current positions, and often expressed ideas about improving the store detective job position. The titles of the participants included Regional LP Manager, District LP Manager, District LP Trainer, Senior Store Detective, and

Store Detective. Each group contained LP associates with varying degrees of LP experience, their ages ranged from early twenties to the mid fifties, Hispanic, black, Asian, and white subject matter experts were represented- as were both men and women.

The author facilitated each of four groups (with one group facilitated by two senior Regional LP Managers that had been briefed on the procedure by the author). All participants were asked to draw on their experiences and perceptions about the store detective job. Both current and new job tasks and situations were freely discussed, and put into context within actual store workplace dynamics. It was repeatedly pointed out that some detectives receive frequent supervision, while others rarely see their district manager due to differing geographic store or supervisory alignments. Other important workplace influences on LP effectiveness include the level of store and district operations management support of loss prevention efforts. This support ranges from total to none. Different levels and types of local crime and loss also tend to influence how detectives carry out their work. The current focus of District LP Managers (such as on shoplifter apprehensions, or on store procedural audits for example) was also important.

The two participating companies had some operational and procedural differences, but these turned out to be minimal and in the end had no real impact on the data collection process or the findings (different titles for LP managers for example). The task and situation form was used as a guide for each individual in the group to

identify approximately 25 store detective tasks and situations. These data were then collated, duplicate tasks and situations were eliminated, and the final listings used to develop the *Store Detective Task Survey* (Appendix B), and the *Store Detective Situational Survey* (Appendix C). Results of the job task and situational survey are provided in the following subsections.

A second distinct focus group was conducted with eight district and regional LP managers to identify job knowledge, skills, abilities, and other characteristics (KSAO's) of the store detective position. According to McIntire and his co-workers (1996), every job requires successful workers to have and use relevant KSAOs. Participating subject matter experts listed and approved the primary KSAOs store detectives' need to effectively handle the important job tasks and relevant job situations earlier listed and ranked (Arthur, 1998). The KSAOs are listed in Appendix F.

The KSAOs (n=30) were matched with consolidated task statements (n=70). Six matrices (one for each domain- with apprehension broken down into two groups- internal and external theft resolutions) were forwarded to the eight-person panel for comment and revision. These forms were returned to the author for consolidation.

#### 4.4.1.3 Results of the Job Task and Situational Survey

Twenty-three of 25 District LP managers, selected by their supervisors, responded to the task and situational surveys. The participants were asked to rate the importance of the task statements or the commonality of the situational statements using seven point Likert scales. Table 4.1 provides demographic information pertinent to these study participants. Table 4.2 provides participant statistics. Included are means, standard deviations, and range of data.

**Table 4.1: Demographics of the Initial Research Participants**

Variable	Number	Percent	Total
<u>Participants by Company:</u>			
Company 1	14	60.9	23
Company 2	9	39.1	
<u>Gender:</u>			
Male	20	87.0	23
Female	3	13.0	
<u>Ethnicity:</u>			
White	17	73.9	23
Black	5	21.7	
Hispanic	1	4.3	

**Table 4.2: Initial Research Participants' Statistics**

Variable	Mean	Standard Dev.	Minimum	Maximum
Total Loss Prevention Experience (years)	14.91	4.50	8.00	25.00
Loss Prevention Mgmt. Experience (years)	11.13	5.10	2.00	22.00
Current Age (years)	37.75	6.29	27.00	50.00



As indicated, a total of 23 individuals participated. Of these, Company 1 produced the majority (60.9 %) of the respondents. The majority were also male. From the data, an average profile emerges. Specifically, the average respondent was from Company 1, male, white, had almost 15 years of total loss prevention experience and 11 years of loss prevention management experience, and was approximately 38 years of age.

This phase of the project resulted in the *Store Detective Task Listing* (Appendix D) and the *Store Detective Situations Listing* (Appendix E). Both documents provide listings of job relevant actions ranked from most important or common to least important or common by their mean scores from the Likert scales.

#### 4.4.1.4 Tie-in of Job Tasks with Knowledge, Skills, Abilities, and Other Characteristics

After the critical job tasks were identified and prioritised by the subject matter expert panel (SME Panel), the team worked with the author to tie the priority job tasks in with the knowledge skills and other job characteristics listing developed earlier. This was accomplished at a subsequent focus group meeting in Boston using a matrix form (Appendix G) for each of the five A's (area focus, awareness, auditing, external/internal apprehension, and additional duties).

#### 4.4.1.5 Develop Job Performance Instrument

The next step in the job analysis process was to use the task and KSAO data to develop the job performance review. These data were used to build the initial instrument, which was subsequently modified four times after conferring with both the SME Panel, and the Vice Presidents of LP for the two participating companies. The final version was then produced for the current project (Appendix H).

#### 4.4.1.6 Optimal Store Detective Personality Characteristics: NEO PI-R Job Profiler

As mentioned in the literature review, extensive research indicates an individual's personality traits often explain a significant portion of the variance in job performance (Barrick and Mount, 1993). The five factor lexical model of personality traits is widely accepted (Goldberg, 1993), and provides a stable platform to measure which traits loss prevention subject matter experts feel are critical to high job performance by retail store detectives.

In order to add additional data on personality traits and store detective performance, the author used a job profiler. The job profiler used in the current study measures the level of importance that an expert panel assigns to specific traits for a specific job. Costa (1996) designed a *NEO Job Profiler (Modified)* (Appendix I), based on the five-factor personality trait solution, to capture supervisors' opinions of job-relevant personality characteristics. As a way of using the expert panel to help define critical traits needed for the detective position, this

instrument was sent to a random sample of 88 of 160 District Loss Prevention Managers. Participants were first asked to circle all personality traits they believe are important, or detrimental, to store detectives; then they were to rate the importance of each selected trait with a five point scale ranging from very undesirable to very desirable.

Seventy-five of these forms were returned during this phase for a return rate of 85%. Twenty-six of the returned instruments were incorrectly filled out leaving 49 usable questionnaires, for a usable return rate of 55%.

The main characteristics of the 49 participating supervisors are listed in Tables 4.3 and 4.4. As indicated, the participating supervisors were a relatively young and moderately educated group. The average was 37 years of age, and had approximately two years or more of college education. The average loss prevention experience level of the participants was 14 years in all companies and over six years with their current employer.

**Table 4.3: Job Profiler Participant Statistics**

Variable	Standard		Minimum	Maximum
	Mean	Dev.		
Current Age (years)	36.9	6.68	25.00	56.00
Education (years)	14.4	2.14	5.00	20.00
Total Loss Prevention Experience (all companies)	13.93	5.80	2.00	29.00
Current Job Satisfaction rating	2.57	.79	1.00	4.00
Self-Rated Job Performance	2.61	.57	2.00	4.00

The participants also were asked to rate their current level of job satisfaction (Table 4.4); with over 55 % of the supervisors indicating their satisfaction was high to outstanding. Only 9 % indicated they were not satisfied with their current situation.

**Table 4.4: Current Job Satisfaction and Self-Rated Performance of NEO Job Profiler Participants**

Job Satisfaction			Self-Rated		
Level	Freq.	Percent	Performance Level	Freq.	Percent
Low	4	8.2	Meets Expectations	20	42.6
Moderate	18	36.7	Exceeds Expectations	25	53.2
High	22	44.9	Outstanding	2	4.3
Outstanding	5	10.2	Missing	2	
Total	49		Total	49	

Based on the NEO PI-R Job Profilers returned by the LP managers, Table 4.5 shows the rank ordered listing of personality traits that the participants indicated were most relevant and important to the store detective role. For the analysis, the facets were coded on a four point scale (0= very undesirable, 1= somewhat undesirable, 2= somewhat desirable, 3= very desirable). The results are listed in descending mean score order. Standard deviation scores help indicate the raters' level of agreement.

**Table 4.5: Job Relevant Personality Facets**

	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>competence</b>	49	2.95	.19
<b>intelligence/cognitive capacity</b>	47	2.85	.35
<b>self-discipline</b>	49	2.83	.37
even-temperament (vs. angry hostility)	49	2.77	.46
resilience/hardiness (vs. vulnerability)	46	2.73	.44
<b>achievement striving</b>	47	2.72	.45
<b>integrity/dutifulness</b>	48	2.60	.49
<b>self-control</b> (vs. impulsiveness)	46	2.58	.49
assertiveness	48	2.58	.49
<b>organizational skills/order</b>	48	2.56	.50
energy/activity	44	2.47	.54
poise (vs. self-consciousness)	37	2.43	.55
positive emotions	31	2.38	.49
openness to ideas	44	2.38	.49
personality	47	2.25	.64
contentment (vs. depression)	34	2.17	.79
openness to change	48	2.16	.66
openness to feelings	38	2.13	.52
openness to values	44	2.11	.72
straightforwardness	45	2.06	.68
openness	4	2.00	.00
deliberation	42	1.90	.65
altruism	20	1.90	.64
trust	44	1.72	1.26
compliance	41	1.51	.84
modesty	30	1.50	.82
calmness	42	1.50	1.06
imagination	31	1.38	.91
sociability	37	1.16	.92
sympathy	35	1.00	.72
excitement seeking	33	.48	.75

Most of the literature on personality traits and job performance indicate the trait conscientiousness and its facets are predictors of job performance (Costa, 1996; Costa and McRae, 1992b). Reinforcing this concept, the supervisors in this study rated five of six conscientiousness (c) facets (competence, self-discipline, achievement striving, integrity/dutifulness, and organizational skills) in the top ten. Only the c facet deliberation was rated as not very relevant to the store detective. Also rated highly were intelligence, even temperament, resilience, self-control, assertiveness, energy/activity, and poise. Store detectives are periodically faced with hostile shoplifting suspects and less than co-operative store staff requiring an even temper. Because store detectives are considered support workers, and not key employees, by many company managers and staff, and because dishonest customers and employees may resist apprehension or co-operation, they must be able to assert themselves as well as demonstrate hardiness and resilience. As predicted by previously mentioned literature, intelligence was rated as very important, in fact, it was rated second most important trait (and had the lowest SD). Perhaps because many of the raters are store detectives, they are convinced of their own high cognitive abilities; alternatively, the raters may well realize the high amount of procedures and state laws detectives must know, understand, and apply in the workplace.

Excitement seeking, sociability, imagination, and sympathy were not considered important to performing this job. The overall openness trait was listed as an important trait for detectives by just four of 49 subject matter experts. This trait

identification process was performed in order to compare the findings with the eventual statistical results.

#### **4.4.2 Job Analysis Summary**

This section outlined the preliminary job analysis research that was conducted to define the store detective's role, and to construct the job performance instrument used to operationalize the criteria measures of the investigative study. The first section described how important aspects of the store detective's job position were gathered. Literature on store detective operations and methods was reviewed, followed by interviews and observations of store detectives at work. From these data, job task and situation classifications were developed. Focus groups were used to identify specific job tasks and situations, and to identify requisite job knowledge, skills, and abilities. A subject matter expert panel was used to prioritise job tasks and situations. Job skills, knowledge, and abilities were then tied to specific job tasks.

This same panel also rank ordered a listing of personality traits that participants' indicated were most relevant to the store detective job.

#### **4.5 QUANTITATIVE ANALYSIS**

The job analysis resulted in the store detective job performance-rating instrument. The initial job analysis research also produced the concept of three distinct store detective roles as job performance criteria (as well as the idea by the participating



companies of subjectively picked top performers or “Top Guns” as a fourth performance criterion). The final method used to identify four types of performance and promotability of store detectives consisted of a multi-part survey administered to over 200 active store detectives and their supervisors. The research described above provided some good qualitative information about the store detective position, but quantitative data were important for better understanding the prediction of job performance using relatively stable variables. As mentioned earlier, a review of the literature provided insight into the process of establishing the links between personal, professional, and individual characteristics, and job performance.

The two participating retail companies provided rosters of current store detectives with at least one year of tenure or more in a store detective position (n=510). Forty-two store detectives on the list were subjectively identified by their regional LP manager as the all around top job performer in their respective administrative region (42 groupings of roughly 50-75 stores). Two hundred thirty five more store detectives were randomly selected from the remaining 468 participants. All 277 participants were mailed a packet containing an individual characteristic sheet (Appendix J), and a NEO PI-R booklet and self-rating answer sheet.

Each supervisor of the selected participants was mailed a packet which included a job performance review (Appendix H) for each participant they actually manage, the NEO Job Profiler, (results discussed in the next section) (Appendix I), and an

individual characteristics sheet for themselves (Appendix K). The supervisors were also provided with a Wonderlic Personnel Test (WPT) for each subject (Appendix O). The supervisors personally administered the WPT's to their employees in the allotted 12 minutes, and then collected and sent them in the self-addressed and stamped envelopes provided.

The initial analysis also revealed a need to identify stable selection predictors for four distinct types of store detectives. The author, through the course of the initial research, identified these "types" of detectives. The store detective literature review, the observations, and the focus groups with loss prevention managers, all confirmed that store detectives are deployed, and perform, in at least three specific and somewhat distinct ways. During the focus groups, there was a consensus of opinion that each district (grouping of stores in a retail chain or multiple) LP manager tends to employ a mix of store detective types. The groups discussed how each area or district has stores in both urban and suburban areas, and with varying crime and loss levels and causes. Each area also has different leadership needs as well. Both chains in the study need a steady supply of supervisor candidates due to growth and turnover pressures. They also need subordinate leaders that can help supervise areas that are rarely visited by LP managers due to large geographic store dispersion. Likewise, different stores have very different crime and loss problems, and require different detective saturations, and skill levels and types. Based on the author's experience, and analysis of data from the

job analysis, four distinct types of detective were described. These detective types were later used as discreet job performance measurement criteria.

The first group of detectives is the *generalist* which is a worker rated highly in all five of the previously listed main categories. Many LP supervisors believe their detectives should be very adept at performing all LP tasks equally well. They therefore seek out people who can and will serve as both LP consultants to store managers, and conduct all LP tasks.

The subject matter experts described the second group as “*grab ‘em and bag ‘em*” types, or highly productive external theft resolution detectives, that are particularly effective at recognizing and apprehending shopthieves. These individuals may not be particularly good in other task areas, but their success in removing criminals from the stores is viewed as very valuable. These persons can be assigned to specific stores, or assigned to tactical teams that “work” high-theft locations apprehending as many thieves as possible in a tight timeframe.

The third group identified as critical for retailers were *future leaders or supervisors*. Many company supervisory districts need to build “bench strength” or a steady supply of store detectives with the “right stuff” to be groomed for future leadership positions. High growth chains, such as the two chains in this study, tend to require a large amount of individuals who can be promoted. The subject matter experts who participated in the preliminary research indicated they often

experienced a lack of promising future leaders within their store detective ranks. These participants wanted to know if it was possible to identify applicants that may be more likely to be good supervisors than others. This capability would be a good first step toward building their management development programs.

The fourth group was subjectively identified by the regional LP managers as "Top Guns," or people they considered their very best store detectives. Individuals they wish they could replicate since they are viewed as both very productive and easy to manage. This performance criterion was to be compared with the outcome-based performance criteria. There was some curiosity by the participating companies to see if they could subjectively identify the TopGuns as well as any statistical model.

#### **4.6 THE STORE DETECTIVE SAMPLE**

This section further elaborates on the study's sampling process. The subjects or participants in this project were currently employed by two major U. S. chain retail companies. The participating companies had a combined roster of 1500 store detectives. This sample was randomly selected from each company's loss prevention detective employee roster (Fowler, 1993; Frankfort-Nachmias and Nachmias, 1992; Rodeghier, 1996). The author decided to include only those detectives with at least 12 months of detective experience in the two companies as the eligible population in order to have their supervisors rate the last year (12 months) of service. This criterion reduced the eligible roster to 510 detectives. The

Regional LP Managers selected 42 detectives from the 510 eligible detectives on the rosters. Then starting at a random point on the roster, every second person was selected until 235 detective participants were chosen. Eventually, 201 of 277 detectives completed and returned the materials to the researcher for a response rate of 73%.

This researcher intended to compare the sample's demographic characteristics (age, race, gender, LP experience and tenure) with those of the current store detective population (n=510) of the two participating companies as a sampling frame. However, this was not possible because neither company maintained accurate records of the requested data due to liability and public relations concerns. However, due to the use of random selection, and the large final sample size (39% of the eligible population), it is believed the findings of the current study can be generalized to the current store detective population (those with at least one year's experience) in the two participating companies.

#### **4.6.1 Descriptive Statistics of the Sample**

The demographic makeup of the sample showed a relatively diverse group of store detectives in all listed categories. The following Tables describe the study's sample. Means, standard deviations, and minimum and maximums were calculated for biographical information including the Participants'/subjects' age, educational attainment, and loss prevention work experience (Table 4.6). The data set from which the current sample was drawn (all current detectives with a minimum of

one year on the job) lacked basic demographic statistics for legal reasons. However, a random sampling technique whereby 277 of 510 eligible detectives were selected (54% of the population), and 201, or 72%, of those mailed the instruments responded. The subject matter expert panel from the two companies also indicated that the sample appeared similar to the population of detectives.

While there were young detectives in the study (the modes were 24 and 26), the average age of 33 reflects several participants were over age 50. Fifty six % of the sample was between 24 and 34 years of age. The participants averaged at least one year of college. The education level modes were 12 and 14 years. One subject had a doctorate degree (which could be a law degree in the US).

The total LP work experience of the sample shows a wide range of experience from just one year to over 30 years. The average years of overall LP experience was slightly more than seven years, while the single mode was a slight two years. Current company tenure averaged almost four years. However, the mode was also two years. A full 75 % of the sample had been with their current company less than five years.

Males made up almost 80 % of the sample (Table 4.7). While Caucasians accounted for approximately 53 % of the sample, minority detectives (47 % in the sample vs. 31 % in the US) are represented at greater levels than are currently found in the overall population of the US (U.S. Census Bureau, 2001).

**Table 4.6: Descriptive Statistics of Detective Participants (in years)**

Variable	Mean	Standard Dev.	Minimum	Maximum
Detective Los Prevention Experience	7.42	5.62	1.00	30.00
Detective Los Prevention Tenure	2.88	3.81	1.00	19.00
Current Age	33.31	9.30	19.00	64.00
Detectives' Education	13.80	1.65	10.00	20.00

**Table 4.7: Sample Demographics of Detective Participants**

Variable	Number	Percent	Total
<u>Gender:</u>			
Male	158	79.4	
Female	41	20.6	
Missing	2		
			201
<u>Ethnicity:</u>			
White	105	52.8	
Black	60	30.2	
Hispanic White	29	14.6	
Asian/Oriental	3	1.5	
Amer. Indian	2	1.0	
			201

## 4.7 DATA COLLECTION

This section provides details of the design structure of the qualitative and quantitative research. The qualitative component of the study was comprised of data derived from interviews, observations, and focus groups (Strauss and Corbin, 1990). Researchers, in designing and preparing their investigations can use both quantitative and qualitative methods to carry out their studies. Qualitative research is primarily concerned with collecting and analysing information (Leedy, 1997). It tends to focus on finding and exploring as many details as possible (Frankfort-Nachmias and Nachmias, 1992). As explained by Blaxter et al., (1996), the objective of qualitative research is to achieve depth rather than breadth. In the current study, the qualitative approach was used to help formulate the research issues. The detective interviews and focus groups helped formulate and refine the study's survey questionnaire items.

The quantitative portion of the study was designed to operationalise the issues raised in the qualitative section. This empirical methodology emphasized the relatively large-scale data collection to examine social reality by employing statistical analysis (Frankfort-Nachmias and Nachmias, 1992; Ree and Parker, 1997).

As previously noted, the collection of both quantitative and qualitative data in the present study is the focus of this section. Instrumentation and predictors are described in the initial section. These include the Wonderlic Personnel Test, the



Revised NEO Personality Inventory (NEO PI-R) (Appendix P), and various criterion measures. Validity, limitations, and criticisms of the primary instruments are also discussed. The final section provides a summary table of the study's qualitative research base.

#### **4.7.1 Instrumentation and Predictors**

Three primary predictor instruments were used in this study. The general cognitive ability of subjects was measured with the Wonderlic Personnel Test (no example of this instrument is presented for review as an appendix due to copyright protections- see Appendix O), while personality traits were measured with the NEO PI-R external rater form R (also no example is presented as an appendix due to copyright protections- see Appendix P). The store detectives' individual biographical characteristics were measured with an instrument developed by the author (Appendix J).

##### **4.7.1.1 The Wonderlic Personnel Test (WPT)**

The Wonderlic test items used in the present investigation were based on the Otis Self-Administering Tests of Mental Ability (McKelvie, 1994; Wonderlic, 1992). The WPT has been used in numerous industries and by thousands of organizations (Sackett and Ostgaard, 1994), and has been described as providing perhaps the most comprehensive, up to date, and publicly available data on the cognitive demands of a wide variety of civilian jobs (Gottfredson, 1997). The WPT is currently used around the globe in a variety of settings. According to the test's

developers, several UK firms employ the WPT for screening purposes (Wonderlic, 1983, 1992).

The current Wonderlic Personnel Test (WPT) remains similar to the original version and is a 12-minute timed survey consisting of a 50-item spiral omnibus test (Murphy, 1998). The test items are considered objective in that each item only has one correct keyed answer. The WPT measures cognitive ability by using multiple types of problems. The Wonderlic manual (1992, p. 5) describes the test item types as follows: '...word comparisons, disarranged sentences, sentence parallelism, direction following, number comparisons, numbers series, analysis of geometric figures and story problems requiring either math or logic solutions.' Examples of WPT questions include: "Look at the row of numbers. What number should come next? 49 42 35 28 21 14 ? \_\_\_\_"; and "Ask is the opposite of 1. entreat 2. crave 3. demand 4. appeal 5. deny \_\_\_\_". All test items increase in difficulty through the booklet, with item types mixed throughout.

The WPT designers state that the test is designed to measure general cognitive ability that should indicate an individual's capacity to learn concepts, reason, and solve problems. The WPT manual also indicates the test may predict job satisfaction based on whether the particular job challenges the prospective employee's mental abilities.

The WPT offers at least 12 alternate test forms and the test may be scored manually or by computer. In addition to audio and Braille versions, there is a validated Spanish language form and versions for 11 other languages. While most WPT forms are timed, the test may be given untimed, and scores adjusted accordingly. The Wonderlic user's Manual (1992, p. 10) also recommends testers use a standardized adjustment for age since this can '...increase the power of the test score in predicting job performance.'

In 1985, Schoenfeldt described the WPT as a well established and easily administered test of general intelligence. Schoenfeldt (1985) also related the WPT is adequately reliable for its intended purpose of pre-employment selection. Gatewood and Field (1994) similarly favourably reviewed the WPT. Some research, however, has failed to significantly correlate WPT scores with job performance and the authors criticize the use of the WPT for selection (Rosse et al., 1991). Their concerns largely stem from a lack of analysis on the predictability of the Wonderlic Personnel Test in specific job settings. This project aims to address that very concern. This study will also help assess the currency and cultural relevance of the WPT test items by looking for a normal distribution of scores.

After the Griggs vs. Duke Power Company case in 1971, reluctance to use pre-employment/promotion testing grew, but Anastasi (1988) concluded the situation has since changed due to renewed emphasis on validity research. Intuitive beliefs about job performance and cognitive abilities began to receive empirical support in

the late 70s. Many research studies support the hypothesis that numerical and verbal reasoning ability have some predicative validity for a wide range of jobs, particularly, complex positions (Anastasi, 1988).

Schmidt and Hunter (1981) conducted some initial research in this area using the United States Employment Service (USES) General Aptitude Battery. In this meta-analysis project, Schmidt and Hunter (1981) found standardized mental tests are “generally valid” for pre-employment selection use. Other researchers (Madigan et al., 1986, p. 103) have commented on this important study stating: ‘In one study, they cumulated the results of 515 studies of validity on the General Aptitude Test Battery (GATB) carried out over a 45-year period. Three general abilities (cognitive, perceptual, and psychomotor) derived from the GATB scales were found to be valid predictors of job proficiency.’

The Wonderlic was one of the tests the Duke Power Company was using before the landmark Supreme Court case. After the case, investigators (Dodrill, 1981; Hunter, 1980; Schmidt, 1985) have reported evidence to support the specific reliability and validity of the WPT in many job settings. Hunter (1980) used a sample of over 400 job positions stratified into five levels based on the complexity of their individual information processing demands. He found the validity of general mental ability ranged from  $r = .23$  to  $r = .56$ . Inter-form reliabilities were found to range between  $r = .73$  through  $r = .95$ . Likewise, test re-test reliabilities ranged from  $r = .82$  to  $r = .94$ .

Other research has focused on the theoretical construct validity of the WPT. The Wonderlic test has been analysed and compared with the Weschler Adult Intelligence Scale (WAIS) and the newer revised WAIS-R. The WAIS is currently the most frequently used test of adult I.Q. in the world today. Dodrill (1981) analysed 120 individuals comparing scores of the Weschler Adult Intelligence Scale (WAIS) and the WPT. Correlation on full scale IQs was  $r = .93$  for the main group, while the cross validating group correlated at  $r = .91$  supporting the contention the WPT is a valid test of general cognitive ability.

Hawkins et al. (1990) compared the WPT with the revised WAIS (WAIS-R) and found a correlation of  $r = .92$ . However, the findings are based on a small sampling of 18 adults. Earlier studies by Weschler (1981), and Dodrill and Warner (1981), did however find similar coefficients in larger samplings of adults. Edinger et al. (1985) reported a smaller coefficient (.75), but the subjects in this investigation were psychiatric in-patients, and not in the general population.

The preponderance of the literature currently supports the theoretical construct validity of the Wonderlic Personnel Test. Other research supports the criterion validity of the WPT in the workplace (Hunter and Hunter, 1984; Schmidt and Hunter, 1977).

Practically speaking, an important concern in this project was the availability of busy working store detectives for extensive field test taking. Participating companies wanted to minimize the workplace disruption of this project. The Wonderlic test only required 12 minutes and the literature indicated the WPT was a better choice than a short form of the WAIS-R (Hawkins et al., 1990). Although the WAIS-R has several abbreviated sub-tests, Hawkins et al. (1990) found the Wonderlic superior to these shorter forms.

According to Hawkins et al. (1990, p. 198), the Wonderlic ‘...exhibits considerable advantages over the WAIS-R abbreviated form in terms of ease and brevity, of administration and scoring, and suitability for group administration.’

Wonderlic (1992) has found test-retest reliability ranging from .82 to .94. Dodrill (1981) found second question or longitudinal reliability was .94. Wonderlic (1992) also claims alternate form reliabilities ranging from .73 to .95. In another investigation into the internal consistency of the WPT, McKelvie (1989) found correlations of odd numbered items to even items to range between .88 to .94.

#### 4.7.1.2 The WPT and Job Selection

Theorists and researchers alike have predicted and found varying links between general cognitive ability and job performance. This linkage has ranged from very weak to moderately strong; and has been found in many job settings, including the

military, which has several job positions with similarities to security detectives. Further research in this area is indicated, especially in specific job settings.

The Wonderlic Personnel Test (WPT) is a well-tested instrument designed to assess general cognitive ability (g). The WPT has been found valid and reliable in a variety of work and job-specific settings; and is widely used in businesses for initial and promotional job selection. The literature indicates it has been found to provide relatively valid actionable information and is easy to administer and score in a busy and dispersed workplace environment. The costs of business interruption of longer instruments, which also require more stringently trained and qualified administrators, was not justified since several studies have found the WPT correlates highly with the other leading g instruments.

#### 4.7.1.3 Use of The Revised NEO Personality Inventory (NEO PI-R)

The NEO instrument is comprised of 240 questions and is designed to be completed in about 30 minutes. The questionnaire is an eight page booklet, with response "bubbled" in on a separate computer form. The responses to each question consist of five point Likert scales: strongly disagree, disagree, neutral, agree, and strongly agree. Questions from the current version include: "I tend to be cynical and skeptical of others' intentions," "I have trouble making myself do what I should," and "I keep a cool head during emergencies." There are two types of the test: (1) Form S is a self-report format while; (2) the Form R is for use by

observers. Tests have demonstrated high internal consistency between both versions (Costa, 1996). The form R was used in this study.

The five personality domains (neuroticism, extraversion, openness, agreeableness, and conscientiousness) are each measured with six facets or subscales. Reliabilities for the domain scales are reported to be excellent (Costa et al., 1995; Piedmont and Weinstein, 1993). The measured traits also appear to display good long-term stability through retest reliability (Costa and McCrae, 1992a).

Costa and McCrae (the authors of the NEO PI-R) address content validity by reducing each domain to six separate facets. Each facet is measured by using distinct items. The facets are based on the personality psychology and research literature. The NEO's facet scales correlate with other similar personality measures leading to good convergent validity (Costa and McCrae, 1992a) while discriminant validity is supported by contrasting the correlates of the different facets.

The construct validity of the NEO instrument has been consistently supported. Factor analyses have repeatedly demonstrated NEO PI-R scores load on appropriate five factor domains with secondary loadings also appearing where appropriate (Costa and McCrae, 1992b). This consistent and appropriate loading has occurred in both real workplace as well as volunteer samples.



As mentioned previously, exaggeration or faking of test answers is a concern when administering any test for selection. This instrument was no exception. However, recent research dispelled this concern. Costa et al. (1995) compared the NEO scores of police recruits (which are believed by the author, who has served in both capacities, to be similar to store detectives) to ratings of highly recommended or recommended versus recommended with reservations or not recommended as assigned by industrial psychologists following naive independent interviews (unaware of test scores). There were statistically significant differences in the scores of the two groups in both the conscientiousness and extraversion facets.

Costa (1996) also reported finding significant correlations in a national study of over 1500 subjects between supervisor job performance ratings and NEO PI-R scores. Again, extraversion and conscientiousness facets provided the strongest correlations. Conscientiousness continually displayed the strongest tie-in with work performance, specifically the amount, quality, and accuracy of work (Costa, 1996). Five of the six conscientiousness facets - competence, order, dutifulness, achievement striving, and self-discipline - were related to strong work performance Costa, (1996). Piedmont and Weinstein (1994) also found conscientiousness the strongest predictor of work performance (using the NEO PI-R) with competence, achievement striving, and self-discipline the primary characteristics which predict actual job behaviour. Salgado and Rumbos (1994) found conscientiousness best-predicted job performance and attitude ratings of managers in Spain thus supporting the multicultural validity of the test. In

addition to empirical support for its use as a job selection tool, other research has supported the utility of the NEO PI-R in today's business dynamic. The NEO PI-R is published in over a dozen languages

The literature indicates conscientiousness is a stable predictor of performance, but other traits have been strongly linked as well (Bing, 2000; Dalton and Wilson, 2000; Paunonen et al., 1999). So the test for linking personality to performance should include many traits to determine the best combination for the criterion of interest. For the reasons stated above, the NEO PI-R was used in the present investigation. Like any test used as part of a selection process, the specific personality traits required for specific jobs within specific settings were first determined. Costa (1996) recommends the use of a job analysis combined with the use of the *NEO Jobs Profiler*, available free from the authors. The Profiler is given to a panel of lay judges experienced in performing and managing the job in question. The judges rate the importance of each facet to the job, and these ratings are compared to scores by applicants. Costa et al. (1995) found high inter-rater reliability in a sample of police recruits while job profiles matched traits found in prospect interviewers had recommended. A slightly modified version (to add g, and alter the names of three trait descriptions) of the profiler was used in the preliminary research phase of this project. This study accepted this recommendation and used experienced loss prevention managers as the judging panel.

It is also important to mention other limitations of this the relationship between personality traits and job performance. Despite much evidence to the contrary, the concern over answer distortion, which has been addressed previously, remains a concern with any form of testing. Another major concern, current theory is lacking which explicitly explains the influence of personality traits (and especially the Big Five concept of personality) on job performance. Nevertheless, the NEO PI-R appears to be a rigorously tested and proven measure of the Big Five personality traits. Its use as a pre-employment selection tool is supported by the literature. It seems most beneficial when included as just one selection component used in conjunction with other measures such as general cognitive ability, Individual characteristics (such as age, race, educational level, job experience, etc.), and structured interviews which enable managers charged with selecting new store detectives to make more informed hiring decisions.

It was decided by the author that the use of this test and all trait facets would allow for more thorough and “precise” explanation of job performance variance (Paunonen et al., 1999). Thus the total domain score, and the scores of the six facets of all five traits, were recorded for each subject. Individual characteristics data (current age in years, current educational level in years, and current total years of loss prevention experience) were also collected through use of an instrument designed by the author (see Appendix J).

The final consideration on using both the NEO-PI R, and The Wonderlic Test were practicality in the loss prevention field environment. The expert panel, and the focus groups indicated the clear need for selection tools that are affordable and practical for widely dispersed retail operations. More elaborate and expensive screening measures such as work samples in assessment centres can provide valuable pre-hire information, and this technique is often used by the participating companies in metro areas with many applicants, and many LP managers available for the process. But very often the job openings are in more remote areas with few applicants, and the managers are unable to directly participate in the selection process. The companies were looking for assessment tools that provide affordable, but dependable pre-hire data. Longer g tests were also available, but their administration and interpretation were much more complex. The WPT and NEO-PI R provided the information required for the study, and met the practicality criteria.

#### **4.7.2 Criterion Measures**

Four criteria were selected in the present study to serve as indicators of subject job performance during a one-year period (Chapter 5 discusses the job performance instrument's testing for reliability and validity). These job performance criteria included the following:

- 1) The overall performance assessment score of each subject (store detective) on job performance criteria over the previous 12 months. This score was determined by

summing the scores from the six job performance dimensions on the performance review form. All performance scores were judged by the subject's most recent (last 12 months), immediate supervisor; this is to be considered a relatively subjective evaluation;

2) External resolutions productivity- job performance rating (success at apprehending and processing shopthieves, or deterring individual thefts and recovering merchandise meant to be stolen). This rating was assigned by the supervisor and could be a combination subjective and objective evaluation of performance based partially on the number of shoplifters apprehended by the subject,

3) Potential as a future leader. This consisted of the supervisor's ratings regarding the promotability of the ratee to supervisor based on supervisory behavioural traits developed by the researcher. This job facet/role was also considered subjective,

4) Top performer in an administrative region. (This criterion was subjectively picked by participating regional LP managers as the top 42 store detectives in the two companies).

Each relevant supervisor completed the job performance assessments of their assigned subordinates. The criteria evaluations were designed by the researcher based on personal experience, analysis of the literature, and study of current

evaluation forms used by several US retail companies, and the job analysis research previously described. The final job-rating instrument was developed in three phases. First, the researcher designed a store detective job rating form after reviewing three current rating forms used by three US retail organizations. The resulting form was then analysed for content and clarity by four loss prevention experts and their recommended enhancements were included. Finally, the senior decision-makers for loss Prevention of the two participating retail organizations reviewed the instruments resulting in further development.

The evaluation's subscales consist of the following job performance domains or criteria: job knowledge, job skills, job productivity and effectiveness, job reliability, professional judgement, interpersonal skills and behaviour, future promotability, and an overall job performance rating (based on the cumulative outcome on individual performance subscales). The rating system used was as follows: a rating of Outstanding received a value of 5, Exceeds Expectations was 4, Meets Expectations 3, Clear Development Needs 2, and Unsatisfactory 1. Both supervisors and subjects rated their performance using the same form. The reliability and validity of this instrument were evaluated as part of this study.

#### **4.7.3 Scaling and Measurement Issues**

In a field operating environment, descriptions, observations, and interview data on a worker's performance are often difficult to compare. Job performance ratings are therefore used to reduce such impressions, and the resulting qualitative data, into

a more manageable form. This form of measurement is an important criterion for studying job performance (Fowler, 1993; Frankfort-Nachmias and Nachmias, 1992; Rea and Parker, 1997). However, ratings can contain a number of errors (Rea and Parker, 1997). They can be overly generous, giving far too favourable a report (Borman et al., 1995). They can be ambiguous in that raters may define certain terms in a variety of different ways. There can also be a "halo effect" which obscures the pattern of responses or traits of the respondent (Carroll, 1993). The observer can form a general opinion about job performance and/or productivity that is strongly influenced by his or her overall impression. Thus, the halo effect can obscure the descriptive picture.

One important method of controlling the problems listed above, and to translating qualitative data into quantitative data, is to use a 5-point Likert rating scale (Fowler, 1993; Rodeghier, 1996). Using this procedure, items are not classified by a group of judges but are selected based on responses made by subjects to whom they are administered. This type of instrument is not limited to simple agreement or disagreement. As with the NEO PI-R, responses can be graded as Strongly Agree, Agree, Undecided, Disagree, and Strongly disagree. Each response category is assigned a value from 1 to 5 depending on the strength of agreement or disagreement (Leedy, 1997; Rodeghier, 1996). The total score for a scale consists of the sum of the item scores. This provides a means of quantifying qualitative information and results or scores can be compared. Results can also be compared to established norms, if available. Despite the intent to use scales to accurately

capture an attitude or behaviour, there is still inherent measurement error due to misunderstanding, and varying perceptions of ratings (Fowler, 1993; Leedy, 1997; Rodeghier, 1996). In the current study, all measurements stem from Likert scales from established, or newly validated, instruments. All participants were briefed on the proper use of the instruments, and detailed written instructions were provided in order to reduce the likelihood of misunderstandings and inconsistent interpretations. Likewise, responses were plotted, and all generally fell into normal distributions indicating minimal extreme values or confusion.

#### **4.7.4 Summary of Research Questions, Instruments, and Variables**

As indicated above, a variety of test instruments were used to collect data. To summarise the data collection instruments, Table 4.8 includes each research question and the appropriate data collection instruments. The general cognitive ability of subjects was measured with the Wonderlic Personnel Test, while personality traits were measured with the NEO PI-R external rater form R. Individual biographical characteristics were measured with a characteristic sheet developed by the author (Appendix J).

The format and measure of major variables of the study are provided in Table 4.9. Dependent and independent variables are listed separately. As indicated, four detective job performance criteria (roles) were of interest in the present study. These were identified as Total Job Performance, Grab 'em and Bag 'em, Future Leaders, and Top Gun.



**Table 4.8: Summary of Quantitative Research and Collection**

<b>Research Questions</b>	<b>Hypothesis Relationship (See Section 1.5)</b>	<b>Collection Instrument</b>
To what extent can detectives' job performance be predicted by using general cognitive ability?	H1	Job Performance Instrument Wonderlic Personnel Test
To what extent can detectives' job performance be predicted by R using personality traits?	H2	Job Performance Instrument NEO PI-R external rater Form
To what extent can detectives' job performance be predicted by using Sheet personal characteristics data?	H3	Job Performance Instrument Individual Characteristic
What is the relationship between job performance and personality traits, cognitive ability, and individual form R characteristics (age, gender, race, etc.)? Sheet	H4	Store Detective Job Profiler Wonderlic Personnel Test NEO PI-R external rater Individual Characteristic Job Performance Instrument

**Table 4.9: Measurement of Independent and Dependent Variables**

Variable	Format and Measure
<u>Independent</u>	
age	years
race	0=white, 1=black, 2=Hispanic, 3=Asian,4=other.
gender	0=male, 1=female
education	years
LP experience	years
job tenure	years
cognitive ability	Likert scale
personality traits	Likert scale
<u>Dependent</u>	
Job Performance Criteria (Roles)	All: Likert scales
Total Job Performance	
Grab 'em and Bag 'em	
Future Leaders	
Top Gun	
Situational Tasks	All: Likert scales
Internal Theft Resolution	
External Theft Resolution	
Staff Awareness	
Auditing and Inspection Tasks	
Area Focus/Knowledge of Loss	
Results and Reduction Strategies	

## **4.8 PROCEDURES**

The intent of this study was to determine if the use of a combination of cognitive ability, personality traits and individual characteristic measures could help retail companies better predict and select individuals who will be successful store detectives. In this study, a concurrent validity design was utilized due to practicality issues common to working with functioning companies and their employees. The American Psychological Association's (1985, p. 11) guide to personnel selection procedures states: 'Predictive studies are frequently, but not always, preferable to concurrent studies of selection tests for education or employment.' Although a predictive validity design is preferable, participating companies currently do not measure the personality traits or cognitive abilities of prospective employees and are very reluctant to test all new hires (or even a sample of them) and then track their performance. For this reason data collection for this project had to be conducted with store detectives already performing in the field. This limitation is not a serious problem. Several researchers have found estimates of validity obtained from predictive versus concurrent research designs to be comparable (Barrett et al., 1981; Pearlman et al., 1980). Similarly, Schmitt et al. (1984) found only very small differences in population validity difference estimates in concurrent and prediction designs.

Based on personal knowledge and the literature, it was judged by the author that department stores, large supermarkets, mass merchants and large-store specialty retailers were the most frequent users of store detectives to help protect company

assets (Hollinger et al., 1998). Large multi-store retailers who sell similar types of merchandise such as apparel, food, and general merchandise; and who operate large square footage stores in multiple regions of the United States were selected for the study. Store detectives in these companies perform similar duties using similar techniques (such as shoplifter patrol and detention, employee awareness, and assistance in special audits or employee investigations). Matching was done in order to minimize error in examining variance at the risk of limiting generalization to other retail settings. The "company," and raters, were coded as separate variables in order to control for separate effects at higher levels of analysis. These variables were separately tested for significant differences. Not controlled for, were the possible effects of differing crime and loss levels in the stores the detectives selected for the study are assigned to protect. Varying levels of shoplifter "action" for instance may cause some raters to score their detectives accordingly- rather than apply a relative performance rating procedure gauged to local conditions.

Each retail company submitted a complete roster of all store detectives with at least one-year of tenure as a store detective. The roster included the detective's employee number, current work address and the employee number and work address of their immediate supervisor. A total sampling of 277 detectives was randomly selected from a combined roster of the two participating companies. Packets were mailed to the participating store detectives and their supervisors. Mailed questionnaires have several advantages including providing some measure

of anonymity, minimize many ethical concerns, and standardized wording. Mailings also provide the researcher lower costs and are often a good selection for larger studies such as this one that must reach subjects dispersed across a very large geographical area. However, questionnaires also limit the complexity of questions, and make it difficult to carefully explain relatively complicated concepts. In addition, they increase the difficulty to control respondents' environment, and order of instrument response. Also, mailed surveys hinder spontaneous responses due to their inherent structure.

Each store detective and their supervisor were sent a packet containing cover letters from the researcher and their company (Appendices L and M). The store detectives also received a copy of the Individual characteristics form, the NEO PI-R booklet and answer sheet, and the Performance Assessment form. Supervisors received Performance Assessment forms for each detective they were asked to rate along with detailed instructions. The supervisors were also tasked with administering the Wonderlic Personnel Test to their selected subordinates. This form was attached to an instruction form as well. Participants were asked to carefully and honestly complete all forms, and return them to the researcher within 72 hours of receiving them using the included pre-addressed, stamped envelope. Of the 277 packets mailed to store detectives, 201 or 72 % were returned completed. Supervisors completed and returned all packets needed to match up with the detective data. All data were entered into SPSS for cleaning and analysis.

#### **4.9 DATA ANALYSIS**

The main goal of this study, to assess the relationship of individual characteristics to job performance, was achieved by conducting quantitative data analysis. This researcher's training, the available literature, and members of the doctoral committee agreed that the quantitative modelling process would provide the best results for several reasons: similar investigations in the literature used quantitative approaches in order to assess important predictors of job performance, the participating retail corporations required substantive results that they could put to use in their organizations, and statistical models provide coefficients for use in a spreadsheet program to build selection tools that can be used by the participating companies.

In order to assess the relationships between individual characteristics such as intelligence, deliberation, education, and previous work experience with job performance, interval level and categorical data were collected in order to build four regression models. Regression was chosen to analyse the data because its techniques allow the researcher to test hypotheses about relationships between variables- while controlling for the effects of other variables (Blalock, 1979; Norusis, 1997; Rodeghier, 1996). Regression results also show the direction and relevant importance of statistically significant variables, as they relate to the criterion or dependent variable. Finally, as mentioned, multiple regression analysis provides coefficients that allow prediction equations to be used for further testing and substantive application (Blalock, 1979; Norusis, 1997; Rodeghier, 1996).

This study is a correlational, concurrent validity study. It examines the relationship between cognitive (g), individual characteristics (age, education level, years of LP work experience), all thirty facets of the Big Five personality trait measures obtained from store detectives with at least one year on the job- with qualitative work performance measures provided by their supervisors. Also calculated was the likelihood of being selected as a "Top Gun" by senior loss prevention managers.

Data for this investigation were obtained from participants by voluntary self-administered testing. Criterion data were obtained by having supervisors, and the test subjects themselves, complete special performance assessments of the participants; or select the "top performing" detectives from each region.

Several statistical analysis techniques were used to explore and describe the data. The individual characteristics were first described. Factors such as age, educational level and loss prevention experience were summarized using means and standard deviations (Blalock, 1979; Norusis, 1997; Rodeghier, 1996). Nominal level or categorical data such as gender and race were also collected in this study.

Second, relationships between supervisor performance ratings and age, educational level, and experience level were examined using multiple regression analysis to determine the relative strength and significance of the predictors in

each model. Due to the dichotomous nature of the "Top Gun" criterion (0=not selected as a Top Gun; 1=selected), binary logistic regression was used. A logistic regression analysis for outcome variables is sometimes used to find an optimal linear function of predictor variables for predicting the probability of an outcome variable (Hosmer and Lemeshow, 1989; Norusis, 1999). This procedure is similar to using multiple regression analysis with interval data (Cohen and Cohen, 1983; Norusis, 1999). Each variable in this type of equation is optimally weighted with coefficients estimated from the data such that the linear combination makes the observed data level most probable.

Finally, both regression procedures were performed using the backward method in order to develop a significant job performance prediction model using all the biographical data (Norusis, 1999). Backward elimination is an exploratory regression routine in which all variables are entered into the equation, and then sequentially considered for removal (Norusis, 1999). The variable with the smallest partial correlation (with the dependant variable) is considered first for removal. If this variable meets the criterion for removal (non-significant at the .10 level in the current study), it is removed. This procedure continues until there are no variables left in the equation that meet the removal criterion. This technique can falsely indicate statistically significant independent variables by capitalizing on chance (Norusis, 1999). Also used in this stage of the analysis were Wonderlic and NEO PI-R facet scores. Regression refers to the relationship between the mean value of a random variable and the corresponding values of one or more independent



variables (Hosmer and Lemeshow, 1989; Norusis, 1999). As mentioned, multiple regression is a statistical technique that seeks to describe the behaviour of a so-called "dependent" variable in terms of the observed behaviour of numerous other "independent" variables thought to affect it. For each independent variable, a regression analysis can determine the degree to which variations in the independent variable cause changes in the dependent variable (the partial correlation coefficient of the independent variable).

#### **4.10 LIMITATIONS OF THE STUDY**

As with any investigation, several limitations of this research are identified. It is recognized that any findings from this project might not be generalisable to non-participating retail companies. Another concern is the dependent variable performance rating is a subjective proxy measure of employee actual productivity and is subject to bias and random error. While this study examines the correlations between personal characteristics and a supervisor's rating of job performance, the basic research design is cross sectional precluding the confirmation of causal linkage. Also, individual rater bias was not controlled for as assessed. Researchers have looked at other issues regarding performance reviews including leniency or the tendency to describe others in favourable but untrue terms (Schreischeim et al., 1979). In the current study performance scores were normally distributed providing no evidence of a positive bias in rating detectives.

The validity and reliability of measurement instruments always provides research limitations. The literature also shows there are several methods used to determine the validity and reliability of measurement instruments (American Psychological Association, 1987). Construct validity measures the test against a theory, such as comparing the results with those provided by other tests thought to measure the same thing: this approach may create the danger of error replication. Face validity is based on intuitively obvious issues (which may not be empirically verified or theoretically sound), and empirical validity involves checking the test against people's actual behaviour. Criterion-related validity is a form of empirical validation, which involves collecting data showing that the factors identified measure independent criteria such as performance. The contrasted groups method examines differences in achieved scores between high performing and low performing people in the sample. This study uses the empirical criterion related validity that is understood to involve less danger of circularity than construct or face validity. Validity and reliability issues are further examined in the next chapter. Strengths of the current design include:

1. Independent supervisor ratings were used which overcomes self-reported rating bias.
2. The two primary independent variable instruments: the WPT and the NEO PI-R have a strong record of validity and reliability.

3. The job performance instrument used in this study was carefully designed and tested to accurately capture the realities of the store detective position.

#### **4.11 SUMMARY OF THE RESEARCH DESIGN**

The purpose of this chapter was to explain the research used in this study. Specifically, the chapter described the research methods used to build the criteria measures, and to test the hypotheses derived from the literature review. The final sample of 201 store detectives from two participating companies, the research instruments used to collect the data, and the analytical procedures used such as exploratory backward multiple and logistic regression are indentified. Tables summarizing the research, and means of collecting the data pertaining to each question were presented.

This chapter lays the groundwork for the remainder of the study and it provides a framework upon which the investigation is based. Specifically, it details the exploratory or job analysis research, and its application in providing pre-employment assessment in a field setting.

## **CHAPTER 5**

### **DATA SCREENING AND INSTRUMENT RELIABILITY**

#### **5.1 INTRODUCTION**

Since the job performance criteria used in the study were taken from the instrument developed as part of the project, it was important to assess its reliability and validity, and such is the purpose of this chapter. To achieve this objective, the data on test reliability and intercorrelation are presented, followed by consideration of validity. The sample of store detectives is then discussed.

#### **5.2 RELIABILITY**

As previously noted, one limitation of a given set of measures is its accuracy, and thus its utility, as a test instrument. There are two important criteria for evaluating measurements. As explained by Zikmund (1991), these criteria are reliability and validity. Reliability, which is comprised of the dimensions of repeatability and internal consistency, is defined by Zikmund (1991): "Reliability applies to a measure when similar results are obtained over time and across situations... [It] is the degree to which measures are free from error and therefore yield consistent results" (p. 260).

But a reliable test measure is not necessarily valid. "Validity addresses the problem of whether a measure – for example, an attitude measure – measures what it is

supposed to measure” (Zikmund, 1991, p. 262). Validity is discussed in the following section.

As can be seen in the following tables, and in the context of this project, the instrument that was used to collect the job performance data showed good reliability and validity. Two commonly used indices of reliability are internal consistency and test-retest reliability.

The job performance instrument’s reliability was tested for internal consistency, which is calculated as coefficient alpha (Cronbach’s  $\alpha$ ). In a mathematical context, Cronbach’s alpha measures the proportion of response variability due to differences in the participants- as opposed to confusion created by the instrument itself (Carmines and Zeller, 1979). This measure roughly indicates the degree to which all the items in a scale are scored consistently (and initially measure the same construct). Scales, such as the ones developed for this project, are designed to detect small aspects of a trait. By summing these facets, a broader and hopefully more reliable measure is obtained. If these facets do measure the same trait, then they should all be highly correlated with each other. The resulting average intercorrelation of all facets or items, with the number of items, determine the final coefficient alpha. Table 5.1 shows the reliability analysis results for the overall instrument. There are thirty seven items in the analysis, which produced an overall alpha of .93. This value is an estimate of the true alpha, which is a lower bound for the true reliability (SPSS, 1999). According to Rodeghier (1996), a score of .70 or

more indicates the scale being measured produces consistent results when given to many persons with the same attitude toward the underlying concept being assessed. The scales in this project ranged from a high of eight items in the future promotability scale, to three in the job productivity scale.

**Table 5.1: Inter-correlations among Total Job Performance Review Instrument Items**

	JK*	JS*	JP*	PR*	PJ*	IP*	FP*
JK	1.00						
JS	.73	1.00					
JP	.66	.75	1.00				
PR	.69	.80	.71	1.00			
PJ	.73	.72	.63	.78	1.00		
IP	.68	.69	.65	.72	.79	1.00	
FP	.75	.81	.72	.82	.76	.74	1.00

Items 37  
Alpha .93  
Standardized item alpha .95

\* JK-Job Knowledge, JS-Job Skills, JP-Job Productivity, PR-Professional Reliability, PJ-Professional Judgement, IP-Interpersonal Skills & Behavior, FP-Future Promotability

Similar to the overall scale reliability assessment, analysis was conducted on the individual subscales as well. The job knowledge scale (Table 5.2) produced an overall alpha of .88 with six items.

**Table 5.2: Inter-correlations among Job Knowledge Scale Items**

	JKR*	JKA*	JKB*	JKC*	JKD*	JKT*
JKR	1.00					
JKA	.62	1.00				
JKB	.46	.49	1.00			
JKC	.61	.51	.49	1.00		
JKD	.54	.49	.44	.71	1.00	
JKT	.48	.50	.52	.62	.66	1.00

Items 6

Alpha .86

Standardized item alpha .88

\* JKR-Company & LP Roles and Goals, JKA-Company LP Procedures, JKB-Relevant Laws, JKC-LP Prevention Techniques, JKD-Apprehension Techniques, JKT-Detects Key Indicators of Theft

**Table 5.3: Inter-correlations among Job Skills Scale Items**

	JSA*	JSB*	JST*	JSD*	JSC*	JSS*
JSA	1.00					
JSB	.37	1.00				
JST	.62	.45	1.00			
JSD	.52	.24	.52	1.00		
JSC	.57	.53	.61	.49	1.00	
JSS	.32	.14	.34	.31	.33	1.00

Items 6

Alpha .80

Standardized item alpha .82

\* JSA-Informing & Inspiring Others, JSB-Detecting & Apprehending Offenders, JST-Prioritizing & Targeting Problems, JSD-Report Writing, JSC-Working Without Close Supervision, JSS-Auditing Skills

Job skills scale (Table 5.3) shows an alpha of .80 -with six items, while the job productivity scale and its three items (Table 5.4) fall significantly to an alpha of .54. The prime detective productivity measure, apprehension of shoplifters item (JPE), does not seem to fit into this subscale since its removal raises the scale's alpha mean to .61. This result bears further analysis in the future since most store detectives in the current sample were assigned to focus on dishonest **customer** theft activity, and to consider dishonest employees a secondary concern. The secondary status of employee dishonesty is partly due to their (dishonest staff) relative rarity, and the extra liabilities which can arise from improperly detaining, accusing, and terminating store staff, the store detectives in this study focused almost exclusively on shoplifter apprehension. Therefore, the apprehension of shoplifters will be considered a separate construct from detention of internal suspects, and will be used as the productivity performance criterion in this study (rather than using the combination of the three items internal, external, and other LP tasks).

**Table 5.4: Inter-correlations among Job Productivity Scale Items**

	JSA*	JPE*	JPI*
JSA	1.00		
JPE	.28	1.00	
JPI	.44	.14	1.00

Items 3

Alpha .54

Standardized item alpha .55

\* JPA-LP Tasks, JPE-Shoplifter Apprehensions, JPI-Dishonest Staff Apprehensions



The professional reliability scale (Table 5.5) produced an alpha of .88 with all four items contributing almost equally to it.

**Table 5.5: Inter-correlations among Professional Reliability Scale Items**

	PRA*	PRB*	PRC*	PRD*
PRA	1.00			
PRB	.72	1.00		
PRC	.67	.72	1.00	
PRD	.61	.58	.68	1.00

Items 4

Alpha .89

Standardized item alpha .89

\* PRA-Consistently on time and prepared,PRB-Completes Assignments,PRC-High-Quality Work Effort,PRD-Meets Changing Work Demands

The professional judgement scale showed a high alpha of .88 with five items (Table 5.6), and the interpersonal scale's five items (Table 5.7) produced an alpha of .85.

**Table 5.6: Inter-correlations among Professional Judgement Scale Items**

	PJA*	PJR*	PJP*	PJB*	PJC*
PJA	1.00				
PJR	.59	1.00			
PJP	.54	.58	1.00		
PJB	.60	.71	.61	1.00	
PJC	.61	.56	.52	.58	1.00

Items 5

Alpha .88

Standardized item alpha .88

\* PJA-Good Business Decisions, PJR-Maintains Confidentiality,PJP-Proper Amount of Aggressiveness & Restraint,PJB-Ethical & Honest Decisions,PJC-Makes Decisions & Takes Decisive Action

**Table 5.7: Inter-correlations among Interpersonal Job Skills Scale Items**

	IPA*	IPB*	IPC*	IPD*	IPS*
IPA	1.00				
IPB	.65	1.00			
IPC	.42	.41	1.00		
IPD	.61	.55	.53	1.00	
IPS	.48	.65	.45	.53	1.00

Items 5

Alpha .85

Standardized item alpha .85

\* IPA-Works Well With Others, IPB-Respects Others & Diversity, IPC-Creates a Network of Professional contacts, IPD-Uses the Right Message/Tone to Motivate Others, IPS-Uses the Right Message/Tone to Process Offenders

Future promotability had the highest sub-scale alpha (.91) from the eight items listed in Table 5.8.

**Table 5.8: Inter-correlations among Future Promotability Scale Items**

	FPA*	FPB*	FPC*	FPZ*	FPD*	FPE*	FPF*	FPH*
FPA	1.00							
FPB	.70	1.00						
FPC	.76	.72	1.00					
FPZ	.56	.48	.62	1.00				
FPD	.46	.56	.58	.48	1.00			
FPE	.56	.59	.58	.48	.54	1.00		
FPF	.54	.56	.63	.50	.59	.55	1.00	
FPH	.62	.54	.67	.55	.57	.56	.63	1.00

Items 8

Alpha .91

Standardized item alpha .92

\* FPB-Potential as an Investigator, FPB-Potential as a LP Trainer, FPC-Potential as an LP Leader, FPZ-Demeanor & Appearance, FPD-Organizational Abilities, FPE-Technical Knowledge & Skill, FPF-Exercises Initiative, FPH-Corporate Political Savvy

Table 5.9 shows a summary of the reliability analyses. The Total Job Performance and Future Promotability scales had the highest correlation ranges (.63-.82 and .46-.76), and consequently the highest alphas (.93 and .91); they also had the largest number of items (7 and 8). The Job Productivity rating proved to have the lowest

correlations (.14-. 44), as well as a low alpha (.54), indicating its items may not belong together in the same scale. Due to this low alpha, the total productivity scale was not used in this investigation; rather the external productivity item was selected based on the exploratory research findings on the primacy of shopper apprehension.

**Table 5.9: Summary of Inter-correlation Analysis**

Scale	No. of Items	$\alpha$	Inter-item Correlation Range
Total Job Performance	7	.93	0.63 - 0.82
Job Knowledge	6	.86	0.44 - 0.71
Job Skills	6	.80	0.14 - 0.62
Job Productivity	3	.54	0.14 - 0.44
Professional Reliability	4	.89	0.58 - 0.72
Professional Judgement	5	.88	0.52 - 0.71
Interpersonal Skills	5	.85	0.41 - 0.65
Future Promotability	8	.91	0.46 - 0.76

### 5.3 FACTOR ANALYSIS OF THE PERFORMANCE INSTRUMENT

Although the exploratory research indicated well-defined job tasks, and a taxonomy of five factors. The author and an expert panel (vice presidents of the two companies, and three senior LP executives) subsequently worked these factors into seven competency areas, consisting of 37 total items, for rating purposes. The

subject matter expert group then provided face validity for the job performance instrument.

As an additional validation step, the data generated by the job performance instrument were analysed using factor analysis. Principle components analysis, with Varimax rotation, was used to find parsimonious solutions to each of the seven hypothesized job performance measures or factors (indicated by high inter-correlations, or clusters of interrelated variables) in the response data (Carmines and Zeller, 1979; Frankfort-Nachmias and Nachmias, 1992; SPSS, 1999). Ideally seven factors would be found. Exploratory factor analysis of the individual scales showed that, other than the job productivity items, all the hypothesized factors were unidimensional (Table 5.10). Job skills also appeared to be strengthened by going to a two factor solution.

**Table 5.10: Summary of Performance Sections with Factor Analysis**

Scale	KMO	No. of Factors	Cumulative % Variance Explained
JK	.87	1	62
JS	.84	1	53
JP	.55	1	53
PR	.81	1	75
PJ	.87	1	67
IS	.81	1	62
FP	.92	1	63

JK=Job Knowledge; JS=Job Skills; JP=Job Productivity; PR=Professional Reliability; PJ=Professional Judgement; IS=Interpersonal Skills; FP= Future Promotability

All the job performance sections on the performance instrument had acceptable KMO scores (.50 or better according to SPSS, 1999), which indicates the data entered into the analysis were suited to factoring. Future Promotability was indicated as a single factor, and explained approximately 63% of the variance in the construct it is designed to measure. Both Job Productivity and Job Skills explained some of the variance (53%), and are therefore suitable for a two factor solution. As in the reliability analysis, the Job Productivity measures appear to be more than one construct. Although apprehending thieves would seem a single process, both of these performance sections seem to diverge because shoplifter and dishonest employee detection and apprehension skills and productivity are actually quite different. The subject matter expert panel, and the literature, identify theft detection as the prime focus of a detective's time, and recognize the relative rarity of employee theft (and subtle differences in process). But both of these sources continue to insist that detection, apprehension, and processing thieves (both internal and external) is a single activity. The empirical results might be

picking up on the disparity in the work position's overwhelming focus on customer theft, and this phenomenon's relative frequency compared to apprehending dishonest employees.

Since the remaining six (with job skills being a possible exception) scales were unidimensional, the six item scores were added together in order to create a summated rating scale. The total job performance instrument score became the total performer dependent (criterion) variable; the summed future promotability scores became the future leader dependent variable; and due to its low reliability and KMO scores, as well as the exploratory research pointing to the primacy of shoplifter catching, the productivity score was altered, and only the external productivity item score was used as the dependent measure for productivity in the regression analyses.

#### **5.4 VALIDITY**

The job performance instrument's validity was assessed in four ways, and in addition to the subject matter expert panels, using three separate measurements. There are several types of validity. *Content* validity indicates a test appropriately samples from all the range of characteristics it is supposed to evaluate. Support for the content validity of the instrument was established in the initial research process by establishing the job's work content domains, and their inclusion in the performance review form.

Support for the *face* validity of the instrument comes from the qualitative research with corporate and field-level LP subject matter experts used in its construction. It was designed to evaluate seven distinct domains each made up of several facets. The reliability analysis helps reinforce the non-redundant nature of the final instrument.

*Criterion* or *predictive* validity is closest to the everyday usage of the term validity and is assessed when an instrument is used to estimate some important form of behaviour. This behaviour or criterion should be external to the measuring instrument itself (Nunnally, 1978, p. 87). In the case of this study, I am trying to predict an individual's work performance as a store detective, as assessed by the job performance instrument, with the previously mentioned predictor measures. The job performance instrument will be evaluated on this criterion using multiple and logistic regression procedures.

For the purposes of this study, validity generally refers to the success an instrument or scale has in measuring the construct it was designed to measure (Carmines and Zeller, 1979; Frankfort-Nachmias and Nachmias, 1992). Validity is not considered an absolute property of any scale or instrument since their validity can change over time or in different settings or contexts. The construct validity of the job performance instrument was also assessed by examining its correlation with two other measures of the participants' job performance (*convergent* validity): the separate total job rating on the instrument itself- which was designed to allow

the rating supervisor to separately rate the detective's performance using a previous rating or some other measure they would normally use. As can be seen in Table 5.11 the correlation coefficient was a relatively strong .71 ( $p < 0.01$ ). Store detectives were also asked to score their own performance, and this measurement provided a moderate correlation of .23 ( $p < 0.01$ ) with their performance rating provided by the supervisor.

**Table 5.11: Select Performance Criterion Correlations**

Performance Criterion	1	2	3
1 Total Job Performance Rating			
2 Separate Total Job Rating	.71**		
3 Your Job Performance	.23**	.25**	
4 Current Job Satisfaction	.25**	.26**	.46**

\*\* Correlations are significant at the 0.01 level (2-tailed).

The construct validity of the total job performance measure was supported with the convergent evidence provided by its correlation with the two separate measures of job performance. The moderate but statistically significant correlation of job satisfaction and the three job performance measures may deserve further investigation in the future. It is suggested that the study's total performance measure could also be compared with standard, contemporary job performance review scores from the participating companies, but these measures were not available for this study.



As a measure of *discriminant* validity, the instrument was correlated with a measure of job satisfaction. Although there was a moderate and significant correlation, this item (job satisfaction) has been found to be correlated with, but to be distinct from, job performance constructs (Pettijohn et al., 2000). Interestingly, the job satisfaction item correlated most highly with the participants' own self-rating of their job performance. This might indicate their perceived job performance is partly explained (at least somehow co-varies with) by their current job satisfaction. The job satisfaction variable itself should be considered less than ideal however since it was composed of a single item.

Finally, the concurrent validity design of this study limited the criterion validity conclusions that can be drawn, and can be strengthened by adopting a stronger predictive design.

## 5.5 SUMMARY OF FINDINGS

The purpose of this chapter was to present the results of an analysis of the reliability and validity of the test instrument that was used to collect the data for the dependant variables. The job performance instrument's items were assessed using Cronbach's alpha, and its validity was assessed by examining its correlation with two other measures of the participants' job performance (*convergent* validity). Other than the productivity scale, these analyses revealed that the instrument had

good reliability and validity. Factor analyses indicated unidimensional solutions for at least seven factors. Now that the instrument has been tested, the prediction of store detectives' job performance can take place. This is the purpose of the following chapter.

## **CHAPTER 6**

### **PREDICTION OF STORE DETECTIVES' PERFORMANCE**

#### **6.1 INTRODUCTION**

The purpose of this chapter is to present and discuss the analysis of the predictive relationship of variables related to store detective job performance. Specifically, the final research phase of the study was the analysis of the predictive relationship of personal and professional characteristics (age, race, gender, education, LP experience, job tenure, cognitive ability, personality traits) upon job performance ratings. The academic literature, and the focus group research, both indicated an applicant's individual characteristics should help explain part of the variance in job performance ratings, which are assumed to correlate with the success, or lack of success, for a store detective. A proposed performance model and four hypotheses were identified at the end of chapter one. However, due to the identification of four store detective types in the preliminary research, the use of regression to explore these distinct performance criteria are first discussed in this chapter. The statistical results discussed in this chapter are then used to address the initial hypotheses and models in the next chapter. Results of regression analysis are provided which demonstrate the differential predictors of the four job performance variables. The remaining sections focus on presenting these four selection "models," which are based on the initial hypotheses, and derived from the preliminary analyses.

## 6.2 THE PREDICTION OF JOB PERFORMANCE

The four detective performance criteria identified in the qualitative research phase were used to identify personal characteristics (variables) that are statistically significant in *a priori* predicting performance scores on each criterion.

- Total Job Performance
- External Theft Resolution (Shoplifter Apprehension Productivity)
- Future LP Supervisor- and:
- Senior Manager-Selected "Top Gun" Type

The initial qualitative analyses (focus groups, surveys) of this project provided substantial insight into the store detective job. The conduct of the quantitative (final survey and statistical analysis) study was largely shaped by these efforts.

The initial analysis revealed a need to identify stable selection predictors for four distinct types (or job roles) of store detectives. Subsequently, the relationships between select predictor and outcome variables of four pre-employment selection models were analysed. These four models are intended to assist LP supervisors in selecting new store detectives, which is the primary objective of this research. All models are designed to identify variables that are significant predictors of the four job performance criteria.

### **6.2.1 Total Job Performance**

These are “generalists” defined as store detectives that on average rated highly in all six main job activity categories. This type of job performer is believed to help the LP department accomplish its goals by reducing the opportunities for all types of loss events, and by increasing the detection risk-levels for would-be offenders. This model tests the four hypotheses (H1-H4): To what extent do personality traits, g, and biographical items predict *total job performance*?

### **6.2.2 High External Theft Resolution Productivity**

These are “grab ‘em and bag ‘em type” or “body-snatcher” store detectives who are most effective at recognizing and apprehending shopthieves. These people may not be particularly good in other LP task areas, but their success in removing criminals from the stores is viewed by senior LP managers as very valuable. This model tests the four hypotheses: To what extent do personality traits, g, and biographical items predict *external theft resolution productivity*?

### **6.2.3 Future LP Leader/Supervisor Potential**

This category includes those store detectives with the “right stuff” to be groomed for future leadership positions. High growth chains tend to require a significant number of individuals who are capable of being promoted. This model tests the four hypotheses: To what extent do personality traits, g, and biographical items predict high *future promotability scores*?

### **6.2.4 The “Top Guns”**

This is the group of 42 people considered by their regional LP managers to be their top performing store detectives. These people were defined as individuals the raters wish they had more of- since these detectives are viewed as very effective and easy to manage. This model tests the four hypotheses: To what extent do personality traits, g, and biographical items predict the probability of being selected as a *Top Gun*?

The variables used to analyse predictive relationships included various personal and professional characteristics (age, race, gender, education, LP experience, job tenure, cognitive ability, personality traits) and job performance ratings. The instruments used to obtain these variables for statistical analysis were included with the mail packets sent to district managers and store detectives and included gathering such data as:

- Gender, LP experience, etc. (biographical-data)
- Various personality facets/traits (NEO PI-R survey)

- g/Cognitive ability (IQ) (Wonderlic Personnel Test)

### **6.3 PROCEDURE USED TO CREATE THE PREDICTIVE MODELS**

Following is a synopsis of the statistical analysis indicating the most significant predictors (ratings from high to low) of each model discussed in the next chapter. In other words, each variable (trait, BioData, etc.) identified can be correlated positively (or negatively if so indicated) to the respective model.

Individuals rated very highly on external theft resolutions are viewed by their supervisors as being particularly successful in apprehending shoplifters. Future supervisors or leaders were rated highly by their supervisors on leadership traits and performance. Finally, regional LP managers from the two participating companies separately identified "Top Guns" as the top performing store detectives. The pre-hire "Top Gun" criterion was coded as dichotomous; and therefore the model was developed using logistic regression.

The procedure used in the first three models involved a backward elimination routine to select the final set of variables. An ordinary least squares (OLS) regression was then run to determine the coefficients and significance of the selected predictors. The backward elimination process was chosen due to the large amount of potential predictor variables considered for use. The need for a large number of possible independent variables was partially created by the need to evaluate separate facet-level measures of personality traits. The literature indicated

the greater specificity provided by the facets ultimately provides more predictability on some work performance criteria. The use of facets rather than the summated trait-level scores was further indicated due to some relatively low reliabilities found in earlier reliability analysis conducted on the NEO instrument for this project.

In the three multiple regression models, standardized regression coefficients are used to indicate the variables which contribute the most to explaining the variance in job performance scores. Only variables that were significant at or below the .10 level were retained in order to maximize model stability, but none of the retained predictors had a significance level greater than .066. The adjusted coefficients of determinance ( $R^2$ ) of the models ranged from a low of 0.13 for the future supervisor- to a high of 0.23 (Nagelkerke's  $R^2$ ) for "Top Guns".

Despite the relative robustness of the OLS procedure, the three multiple regression models were tested for serious violations of standard assumptions about the data set (SPSS, 1999). Overall, the models appear sound. As mentioned before, the independent variables remaining in the models were normally distributed. The very conservative Levene's test was performed to assess homoscedasticity (equal variances). Although there were several violations as expected, residual plots indicated they were not serious. Few residual plots showed a "fanning out" tendency, which would indicate unequal and excessive variance.



The Durbin-Watson test was used to examine the data for serial correlation. Few measures showed positive or negative auto-correlation (values ranged from 2.05-2.09, well within the 1.5-2.5 recommended range), primarily since there were no repeated measures taken. Similarly, the tolerance and “VIF” tests showed no particular multicollinearity problems with any of the models indicating there was little overlap in what the variables were measuring (Norusis, 1999).

Although the four models tested in this study ended up with different sets of predictors, the four performance criteria are moderately to highly correlated (Table 6.1).

**Table 6.1: Correlation of Job Performance Measures**

Measure	1	2	3
1. Total Performance	-		
2. External Productivity	.59		
3. Future Promotability	.93	.49	
4. Top Gun Selection	-.39	-.24	-.45

All correlations are significant at the 0.01 level (2-tailed)

Perhaps of significance is that the Top Gun criterion **negatively** correlates with the other three criteria. There are at least two explanations for this finding; the Top Gun criterion is truly a separate construct from the job performance measures, while all the measures are subjective, being selected as a Top Gun was purely subjective. The other measures were designed to be based on systematic

observation of the particular job activities as defined in the performance instrument. Other than the external productivity measure, the other two were summated scores based on multiple items. These items were designed to pick up on the job performance/productivity of each participant.

The Top Gun criterion was less well defined. Each regional loss prevention manager was asked to select the store detective they consider to be their overall best performer. Some of the detectives may have been picked due to their productivity as measured by shoplifter apprehensions (this criterion had the closest correlation at -.24). Some detectives may have been selected due to their promising leadership abilities, while others could have been picked because the LP manager just likes them.

Before presentation of the regression analysis, variable labels, format and measures are summarised in Tables 6.2a and 6.2b. The dependant measures were derived from the exploratory research phase, and the independent measures shown resulted from the backward regression analyses discussed in the following chapters.

**Table 6.2a: Labelling of Final Independent Variables**

<b>Variable</b>	<b>Label</b>	<b>Format and Measure</b>
Prior LP Work Experience	Prior LP Exper.	Years
Angry Hostility	Angry Hostility	5 Pt. Likert Scale
Aesthetics	Aesthetics	5 Pt. Likert Scale
Depression	Depression	5 Pt. Likert Scale
Feelings	Feelings	5 Pt. Likert Scale
Values	Values	5 Pt. Likert Scale
Conscientiousness-Deliberation	Deliberation	5 Pt. Likert Scale
Trust	Trust	5 Pt. Likert Scale
Assertiveness	Assertiveness	5 Pt. Likert Scale
Modesty	Modesty	5 Pt. Likert Scale
Gregariousness	Gregariousness	5 Pt. Likert Scale
Wonderlic Personnel Test Score	WPT	Continuous Score
Store Detective's Gender	Gender	Dichotomous Male= 0 Female= 1

**Table 6.2b: Labelling of Dependent Variables**

Variable	Label	Format and Measure
Total Job Performance Rating	TR	7 Pt. Likert Scale
Job Productivity (External Theft Resolution) Rating	JP	7 Pt. Likert Scale
Potential Future Supervisor Rating	FP	7 Pt. Likert Scale
Selection as a 'Top Gun'	Top Gun	Dichotomous Not Selected= 0 Selected= 1

#### **6.4 VARIABLE 1: TOTAL JOB PERFORMANCE CRITERION**

Table 6.3 shows the results of the Total Performance Rating regression analysis. Like all models in this study, the total performance regression analysis indicated a modest adjusted  $R^2$  of .18 (.177) indicating moderate model fit as anticipated, since many other factors account for performance variance. The seven independent variables in this model explained approximately 18% of the variance in the total performance criterion, leaving approximately 82% of the job performance scores unexplained by the individual characteristic variables. This finding was anticipated; since the literature indicated job performance is predicted by a wide range of factors including training, management, and other cultural dynamics (e.g. Salgado, 1999).

The overall model was statistically significant ( $F = 7.04$ ,  $df\ 6$ ,  $p < .001$ ) indicating the  $R^2$  was significantly different from the null hypothesis of zero. Based on the standardized beta ( $\beta$ ) weights, Angry Hostility had the largest impact on predicting total job performance ( $\beta = -.28$ ,  $p < .001$ ). Since the beta was negative, this implies that high scores on Angry Hostility predict low total job performance scores, and vice versa. Detectives that are quick to anger tend to receive lower job performance ratings.

**Table 6.3: Coefficients of Model Explaining Total Job Performance Rating**

Variable	B	SE	$\beta$	t	p
Prior LP Exper.	-.63	.27	-.15	-2.29	.023
Angry Hostility	-1.39	.41	-.28	-3.42	.001
Aesthetics	-.76	.29	-.19	-2.59	.010
Depression	.76	.41	.16	1.85	.066
Feelings	1.17	.42	.21	2.77	.006
Values	1.25	.38	.22	3.28	.001
Deliberation	.99	.35	.20	2.79	.006
F	7.04, $df\ 7$ ( $p < 0.001$ )				
Model Adjusted $R^2$	.18				

The hypothesis that some of the characteristics variables (H4) were a significant predictor of total job performance is accepted. The following are the balance of the model's explanatory variables:

- The coefficient of the openness facet *values* was positive, and significantly different than zero ( $p = .001$ ) in predicting total job performance with a beta of .22. High values scores go with high performance scores. This suggests that total performers tend to be less dogmatic, and open to new values and concepts than average.
- The openness facet *feelings* was also positive, and significant at the .006 level ( $\beta = .21$ ). Higher scores on this personality facet predict higher performance scores. This result suggests high total performer detectives are more responsive to emotions, somewhat sensitive- possibly indicating they are very in tune with the culture and mood of the store. This trait can increase the job success of detectives since accurately gauging the mood of their fellow employees can enhance their timing as well as their interpersonal presentation style when trying to inform and motivate them.
- The conscientiousness facet *deliberation* was a positive predictor of total performance and significant at the .006 level with a beta of .20. This positive relationship with the dependant/criterion variable could indicate generalist detectives are more often thoughtful, and relatively careful in

their duties. The constant threat of personal injury, and liability, on the job indicates this can be a desirable trait for detectives.

- The openness facet *aesthetics* - This facet was a negative predictor ( $\beta = -.19$ ) of current job performance, and significant ( $p = .01$ ). This indicates a strong, systematic relationship between aesthetics and total performance when controlling for the variance explained by the other independent variables. This possibly indicates high performing detectives are not very moved by art, and considered less prone to mentally wonder, very focused on the here and now. This trait was found to significant in most of the models, and allows detectives to concentrate more fully on their tasks, and on theft and risk cues, while working in the stores.
- *Prior loss prevention experience* (before joining current firm) - This characteristic was a negative predictor of current performance with a beta of  $-.15$  ( $p=.02$ ). The more loss prevention experience a detective had prior to working at the participating companies, the lower their job performance rating. Experienced detectives possibly picked up bad or ineffective work habits elsewhere. If the move to the new company was lateral rather than upward, this can indicate they were not especially effective elsewhere.
- The neuroticism facet *depression* had a weak ( $p=.066$ ) positive relationship with the total performance criterion and a beta of  $.16$ . This finding indicates

these detectives can be more easily discouraged, or reactive to negative situations. In any case, they can be moody, anxious, or pessimistic and are predicted to worry more about the consequences of poor performance or lack of situational judgment than average.

## 6.5 VARIABLE 2: HIGH EXTERNAL THEFT RESOLUTION PRODUCTIVITY

The model used to predict *external theft resolution* (shoplifter apprehension activity and success) performance contains six predictors and is seen in Table 6.4. This model generated an adjusted  $R^2$  (.156), which was significant ( $F = 7.07$ ,  $df\ 6$ ,  $p < .001$ ) as anticipated. All predictor variables in this model were found to be statistically significant at the .05 level. For this reason the hypothesis four regarding the ability to predict high job productivity is supported.



**Table 6.4: Coefficients of Model Explaining Total Job Productivity (External theft Resolution) Performance Rating**

Variable	B	SE	$\beta$	t	p
Prior LP Exper.	-.32	.01	-.18	-2.79	.006
Gender	-.29	.14	-.14	-2.10	.037
Trust	.03	.01	.14	2.06	.041
Aesthetics	-.04	.01	-.23	-3.40	.001
Assertiveness	.048	.01	.23	3.36	.001
Modesty	.036	.02	.16	2.28	.024
F	7.07, df 6 (p < 0.001)				
Model Adjusted R <sup>2</sup>	.156				

The six statistically significant predictors were:

- The openness facet *aesthetics* was a significant negative predictor with a beta of  $-.23$  ( $p=.001$ ). This implies that low aesthetics scores predict higher job productivity ratings. It could be argued that highly successful detectives are similar to successful hunters; both might require the person remain focused on the here and now, not mentally drifting.
- The extraversion facet *assertiveness* ( $\beta = .23$ ,  $p=.001$ ) was a positive and significant predictor of apprehension productivity. Productive detectives tend to be more dominate, or forceful, than average. This finding

would make intuitive sense because detectives must routinely approach, confront, and control thieves, and potentially explosive situations. They must also resist being assigned by uninformed store managers to non-apprehension duties such as guarding back doors or watching parking lots.

- *Prior loss prevention experience* - A negative predictor of shoplifting apprehension with a beta of  $-.18$  ( $p=.006$ ). The more loss prevention experience a detective had prior to working at the two companies, the lower their shoplifting apprehension/productivity rating. This result was especially surprising since extensive LP experience would be expected to develop superior shopthief detection skills. Extensive LP field experience might result in less focus rather than more.
- The agreeableness facet *modesty* ( $\beta = .16$ ,  $p=.024$ ) was a positive and significant predictor of productivity. Higher modesty scores go with higher productivity ratings. These detectives tend to be more humble than average. This finding suggests detectives focus their workplace time more on tasks that lead to productivity such as active surveillance, than to self-promotion.
- The categorical variable *Gender* ( $\beta = -.14$ ,  $p=.037$ ) was a negative predictor of productivity. Female detectives (coded as 1) were rated slightly lower in shoplifter apprehension productivity than were males (see “Top Gun”, below). Females in the sample were also found to be slightly older

and more tenured than the males. This combination of findings might indicate females are assigned (or self-assigned themselves) to concentrate more on non-apprehension functions such as auditing or training as a whole. Females did however report lower average job satisfaction than males, which could provide an alternative explanation for their lower productivity ratings.

- The agreeableness facet *trust* was significant and positive with a beta of .14 ( $p < .05$ ). Higher trust scores correlated with higher productivity scores. Highly productive detectives tend to be more trustful and less sceptical than average. They probably rely on their own instincts.

## 6.6 VARIABLE 3: FUTURE LP SUPERVISOR

The model describing predictors of high *future supervisor/leader* ratings (Table 6.5) contained two variables this study predicted would be important: the Wonderlic Personnel Test of Cognitive Ability (g), and a facet of the trait conscientiousness. This model's adjusted  $R^2$  was .130 indicating a statistically significant ( $F = 5.19$ ,  $df = 6$ ,  $p < .001$ ), model fit. This model provides evidence that general cognitive ability helps predict job performance supporting the research question/hypothesis regarding g and performance.

**Table 6.5: Coefficients of Model Explaining Potential Future Supervisor Performance Rating**

Variable	B	SE	$\beta$	t	p
Prior LP Exper.	-.02	.01	-.12	-1.86	.065
WPT (g)	.03	.01	.16	2.41	.017
Angry Hostility	-.04	.02	-.17	-2.26	.025
Gregariousness	-.03	.02	-.13	-1.96	.051
Values	.04	.02	.16	2.34	.020
Deliberation	.04	.02	.17	2.40	.018
F	5.91, df 6 (p < 0.001)				
Model Adjusted R <sup>2</sup>	.13				

Below are the significant variables in the model:

- The conscientiousness trait *deliberation* was a positive and significant predictor of high future supervisor ratings with beta of .17 (p=.018). Detectives rated highly as future leaders are relatively thoughtful and careful. People rated highly on this trait tend to resist hasty decisions, and are less impulsive than average. Good leadership probably flourishes when a supervisor tends more toward thoroughness. But too much deliberation and cautiousness might reduce a unit's effectiveness.
- The neuroticism facet *angry hostility* ( $\beta = -.17$ , p=.025) was a negative predictor of high leadership potential. Detectives rated higher in angry hostility were found to have lower supervisory potential ratings. Future

leader prospects seem to be more difficult to anger than average; more level-headed and can even be viewed as gentle.

- *Cognitive/mental ability* – The Wonderlic score, with a beta of .16, was found to be a positive and significant ( $p=.017$ ) predictor of high leadership potential. Higher “g” or IQ scores predicted higher leadership potential scores. This finding suggests higher scores on tests purporting to measure the general mental construct g partially enable individual leadership qualities such as consideration for subordinates (giving praise, etc.), and establishing workplace structure (setting goals, scheduling, etc.) since g is claimed to enable problem-solving, spatial visualization, and planning abilities. These complex activities probably require more mental ability than the other job performance criteria studied.
- The openness facet *values* was a positive and significant ( $p=.02$ ) predictor of leadership potential scores with a beta of .16. A higher values score predicted higher leadership potential rating. This could mean detectives rated highly on supervisor items are more tolerant of others. Their stronger values focus might also endear them to their raters.
- The conscientiousness facet *deliberation* was found to positively and significantly predict supervisory potential ( $\beta = .17, p=.018$ ). This model also indicated individuals rated highly as future leaders tend to be more deliberate and thoughtful than average.

- The extraversion facet *gregariousness* - This facet was found to negatively correlate (although not found to be significantly different than zero at the .05 level,  $p=.051$ , was significant at the .10 level) with high future leader ratings. Gregariousness had a beta of  $-.13$ . This finding at first seems counter-intuitive since supervisors are generally required to continuously interact with their subordinates, peers, and store managers and staff. But detectives in the study sample rated highly on leadership items may be less outgoing than average; but somewhat brighter and more deliberate than average. Leaders are often forced, or choose, to separate themselves from continuous contact with their subordinates. This separation can help build their credibility, which might be diminished by over exposure to employees. It can be lonely at the top. What is not known is whether leaders become less sociable because of their position, or less outgoing people are more drawn to, or effective as leaders.
- *Prior loss prevention experience* was a very weak negative predictor of leadership potential ( $\beta = -.12$ ). Once again, the more loss prevention experience a detective had prior to working at the two companies, the lower their future supervisor abilities rating (although this variable was not as strong a predictor of this job performance criteria as the others), and was not significant at the 5 % level ( $p=.065$ ).

#### **6.7 VARIABLE 4: TOP GUN TYPE**

The fourth and final research question related to predictor “types” or variables, asking if a binomial logistic regression model will be able to predict subjectively selected Top Guns was supported by the study data. The logistic regression model for making this prediction, as shown in Table 6.6 on the following page, has a Nagelkerke  $R^2$  (roughly analogous to an adjusted  $R^2$ ) of .23, and uses seven independent variables; all variables are statistically significant ( $p < .10$ ), while 5 of 7 predictors were significant at the more rigorous  $p < .05$  level using the Wald statistic. Top Gun was a dichotomous outcome variable coded 0 or 1 (with 1 indicating selection as a Top Gun). The dependant variable obtained from the equation is a log likelihood function and estimates the log likelihood of the detective being selected as a Top Gun in their administrative region. A classification table generated during the model’s development indicated this model provides an 83% classification rate (a 100% classification rate indicates a perfect model) and was much stronger than selecting for Top Gun at random ( $X^2 = 31.24$ ,  $df\ 7$ ,  $p < 0.000$ ), meaning the model’s independent variables correctly predicted being selected as a TopGun the majority of the time.

Although females were rated slightly lower in productivity in the previous productivity model, females were selected as “TopGuns” by their managers more frequently. The predictors in this model were:

**Table 6.6: Stepwise Logistic Regression Results for Top Gun Model**

Variable	Logit	S.E.	Wald	df	Sig
Gender (1)	.89	.47	3.66	1	.056
Aesthetics	.10	.04	5.15	1	.023
Straightforwardness	-.14	.05	7.48	1	.006
Order	-.15	.07	4.85	1	.028
Feelings	-.18	.06	8.07	1	.005
Impulsiveness	.19	.07	7.66	1	.006
Deliberation	.11	.06	3.58	1	.059

$\chi^2 = 31.24$ , df 7 ( $p < 0.0001$ )

Model (Nagelkerke) Adjusted  $R^2$  .23

- The openness facet *feelings* (Wald = 8.07) was negatively correlated with likelihood of being selected as a TopGun ( $p=.004$ ). Detectives designated as top performers are often less excitable and spontaneous. This can be a positive trait due to the risks of this job.
- The neuroticism facet *impulsive* had a Wald statistic of 7.66, and positively and significantly ( $p=.006$ ) predicted the likelihood of being selected as a Top Gun. Selected detectives self-rated themselves as slightly



more impulsive than average; they are less prone to resist cravings. Impulsivity is evidently not the same as spontaneity.

- The agreeableness facet *straightforwardness* was also negatively related to selection on the criterion (Wald of 7.48,  $p=.006$ ), this suggests the tendency of detectives selected as top performers by their bosses to be less than frank and sincere (or guarded).
- The openness facet *aesthetics* was significant (Wald = 5.15,  $p=.023$ ), and positively predicts being selected as a Top Gun. Unlike the overall high performers, this finding indicates top performing detectives are moved by art and considered more prone to mentally wonder. They tend to be less focused on the here and now, more idealistic.
- The conscientiousness facet *order* (Wald, 4.85,  $p=.028$ ) turned out to be negatively correlated to the criterion indicating Top Guns appear to be less organized, and even slightly more careless than average. This suggests “Top Guns” are less organized- not necessarily less prepared than their peers.
- The dichotomous variable *Gender* was not significant at the .05 level in the current model (Wald = 3.66,  $p=.056$ ). But while females were rated slightly lower in external apprehension productivity in the previous model, they were selected as “Top Guns” more frequently. This finding can be compared to the findings regarding their being slightly older and more

tenured than males. And thus selected as Top Guns more frequently since they are perceived to provide more overall value to an LP region.

- The conscientiousness facet *deliberation* was also not found to be significant at the five % level (Wald = 3.58,  $p=.059$ ). This facet was positively correlated with the criterion. This could mean being careful and thoughtful is appreciated by job performance raters in this study.

## 6.8 CHAPTER SUMMARY

The purpose of this chapter was to analyse the determinants of four important dependant variables related to job performance. Of greatest importance was the assessment of the predictive ability of the four job performance models. It was believed that an applicant's individual characteristics help explain part of the variance in job performance ratings, which are assumed to correlate with the success, or lack of success, for a store detective.

While the variance explained by the models was relatively moderate as indicated by the adjusted  $R^2$  values, the OLS and logistic regression analyses used to explore the relationships of the hypothesized variables produced relatively stable models for the four distinct work types. The final models only accepted variables that were statistically significant at the .10 level. Likewise, all four models were free of serious multicollinearity, autocorrelation, or heteroscedasticity concerns.

The four store detective job performance measures which emerged from the exploratory research phase were used to test the four hypotheses regarding the predictive ability of measures of individual characteristics. Model results were discussed. Using exploratory regression analysis, it was found that only a few included predictors had statistically significant relationships with the dependant or outcome variables. Some personality facets, such as conscientiousness - deliberation, and neuroticism - negative hostility, appeared frequently, but no single predictor appeared in all four final models. This finding suggests that the four components, although significantly correlated, are different types of detectives, and have substantially different predictors. All four models were statistically significant, but with relatively small correlations and  $R^2$ 's as expected. The next chapter builds on these findings by tying in the regression results for the performance models with the study's hypotheses and model.

## **CHAPTER 7**

### **EXPLORING THE PERFORMANCE OF STORE DETECTIVES**

#### **7.1 INTRODUCTION**

The previous chapter focused on the presentation and analysis of predictor models related to store detectives' performance. The purpose of this chapter is to explore the findings of the previous chapter as applicable to the performance of store detectives. To achieve this goal an overview of the study and performance contributions are first described. The predictive validity of the independent variables is examined next. Included is a discussion of personality traits, *g*, and the impact of individual characteristics in the model.

#### **7.2 PREDICTIVE VALIDITY OF INDEPENDENT VARIABLES**

The principle purpose of this study was to identify the amount of variance in several measures of current and future job performance which were explained by a combination of personality trait facets, general cognitive ability, and the individual characteristics of age, years of education and prior LP experience, gender, and race of test participants. The study's four hypotheses presented in Chapter 1 predicted a combination of these variables would explain a significant portion of the variance of the four job performance criteria. Each is restated and tested below, followed by a discussion of variables that had some importance.

### 7.2.1 Results of Hypothesis Testing

Hypothesis One: There is a significant relationship between a measure of general cognitive ability (g) with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a Top Gun. Result: This hypothesis was rejected for all models except the future promotability measure (discussed further).

Hypothesis Two: There is a significant relationship between personality trait measures with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a Top Gun. Result: This hypothesis was supported, although most personality facets did not predict the four criteria, several did. This is discussed in greater detail below.

Hypothesis Three: There is a significant relationship between biographical characteristics (age, race, gender, educational attainment, LP job experience) and supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a Top Gun. Result: This was accepted since LP experience proved to be a negative predictor; gender was also a negative predictor in the Top Gun model.

Hypothesis Four: There is a significant relationship between the combined measures of general cognitive ability (g), personality trait measures, and

biographical characteristics, with supervisor ratings of total store detective job performance, job productivity, future promotability, and being selected as a Top Gun. Result: This hypothesis was also accepted. Some personality measures were accepted, but not just facets of c. LP experience was found to be significant. g was only found to be a significant predictor in the future promotability model.

In summary, the initial hypotheses were all accepted using exploratory backward regression analyses. The null hypotheses of no relationship between the independent and dependent variables in each model was rejected, because statistically significant model ANOVAs (or model  $X^2$  in the logistic model), as well as acceptable multiple  $R^2$ 's were found for each model. It was concluded that the tested independent variables performed at differing levels. Some predictor variables performed as predicted (e.g. several c facets)- some variables did not (g was not helpful in predicting performance ratings other than with the future leader model. Finally, some of the variables, which contributed to the final models, were not expected to contribute at all. These are explained in the separate sections that follow.

### **7.2.2 Personality Traits**

The literature reviewed for this study clearly indicated the personality trait conscientiousness, and its individual facets, were relatively stable predictors of job performance in many workplace settings- and in many types of jobs (Caliguiri,

2000; Costa, 1996; Schmidt et al., 1994; Stewart, 1999). Also, the subject matter expert panel indicated conscientiousness facets were most important for the detective position. This study supported these findings, but with rather mixed results. Three of the four job performance models did include at least one conscientiousness facet – with the external theft productivity model the glowing exception. Deliberation was the one conscientiousness facet that helped explain variance in all three of those models; but it only played a moderate role in each of those models. Using standardized coefficients as guides, deliberation ranked number four of seven variables in the total performance model; and number five of seven variables in the “Top Gun” model. Deliberation did however generate the largest Beta standardized coefficient in the future supervisor model.

The order facet of conscientiousness was the fifth most significant predictor in the “Top Gun” model; and was the only other conscientiousness facet in any of the four models studied. Order tends to indicate a person is organized, and in the context of this model, this finding intuitively fits since the Top Gun selection was very subjective. Rating supervisors might perceive and score individuals who appear very organized- and tend to regularly complete assigned tasks, as “Top Guns”.

Not predicted was the pervasive influence of neuroticism facets in the final models. Some of the findings, such as the negative correlation of angry hostility, were not intuitively surprising. This finding is not surprising since detectives often deal with abusive individuals- and must be slow to anger themselves.

Nevertheless, the positive correlation of depression in the total performance model- and the negative correlation of gregariousness and future supervisor potential were not expected by the researcher. Individuals scored as potential Future leaders in this study do not appear to be the most outgoing people in the sample. They seem to be “complex” individuals, possibly more sensitive and reactive to surrounding “political” dynamics. Store detectives also witness many hardship people on a regular basis.

Assertiveness turned up as a positive predictor of external theft productivity as did trust. Assertiveness as a predictor could mean productive detectives catch whom they are after, and make sure their supervisors know about their productivity. The trust facet of the personality trait agreeableness does seem out of place as a predictor in the store detective’s primary role- as a detector of dishonesty. But these personality trait facets measure a trait across a person’s situational spectrum and could mean high performing detectives generally believe others are honest, and therefore focus strongly on the behavioural indicators of theft- rather than just believing everyone is probably a thief. This objective focus might make them more successful than their more cynical peers.

The positive correlation of the facet deliberation with the three job performance criteria makes theoretical sense since detectives should not act too hastily for legal and safety reasons. They must detect, and briefly deliberate, over what behavioural cues they have observed which indicate dishonesty. They must also assess the probability of a particular shoplifter violently resisting apprehension.



### 7.2.3 g and Store Detective Performance

The literature, while somewhat mixed, tended to indicate general cognitive ability was a relatively stable (and sometimes the strongest) predictor of work performance (Carretta and Ree, 1996; Howard, 1986; Nathan and Alexander, 1988; Oakes, 1999; Olea and Ree, 1994; Ree and Earles, 1996; Schmidt et al., 1986). As with c, the subject matter experts also indicated g was critical to detectives. As was seen in this study's findings, this was only the case in explaining future leadership behaviours. However, this finding does make theoretical sense since leaders generally must be able to absorb and apply much more job knowledge than most store detectives (as suggested by Gottfredson, 1997). An example might be a supervisor must have a more thorough understanding of company LP goals and practices- so they can be trained and enforced. Leaders also must help plan local LP strategies and tactics, as well as interface with more senior company managers on a more regular basis. They must also carefully plan these interactions with fellow managers to achieve company, and personal career, goals. g might be important to supervisors, but this study indicated the more productive detective is at apprehending shoplifters, the less important g is.

As noted in the literature review, some researchers make the case that overall g can help predict performance in some job positions, but a separate construct labelled practical or tacit intelligence (Sternberg et al., 2000) is more important in many career tracks requiring more "common sense" than sheer intellect. This study's

negative g finding might also imply that the store detective position, which is primarily geared toward Shoptheft apprehension, is open to many people on the I.Q. continuum – but is probably not recommended as a permanent position for persons with very high g.

### **7.2.5 Individual Characteristics**

Gender was found to play a predictive role in two of the performance models. Firstly, females were found to have been rated lower in external productivity as a whole in that model. As seen in the initial research section, females in this sample were slightly older, more experienced, and less satisfied with their current jobs, in comparison to males, and in the overall sample mean scores in those areas. Perhaps the lower job satisfaction scores of females in this sample are depressing their shoplifter detection activity, and ultimately apprehension success. Another possible explanation is that more experienced store detectives are often less involved in day-to-day theft detection, and spend more time conducting training, auditing, and other job duties. This has been the author's observation in the field. There is some further support for this idea in that females were more likely to be selected as "Top Guns" by their supervisors according to the Logistical Regression model.

Age and race did not help predict the four pre-hire models developed in this study. As seen in the demographic section earlier, there was ample variance in

both variables. However, they simply did not appear to be important predictors of the four outcome variables in this particular project.

Although not specifically studied here, another indication from this project is that annual employee turnover in detective positions is very high (average tenure of just under four years)- and this problem creates an interesting dynamic. It is not known which type of detective tends to leave the company first- could it be just the incompetent, the bored, or a combination of other factors? Also not known, why detectives leave and at what point in their career this occurs. Voluntary and involuntary separation in this position should be considered for study in the future.

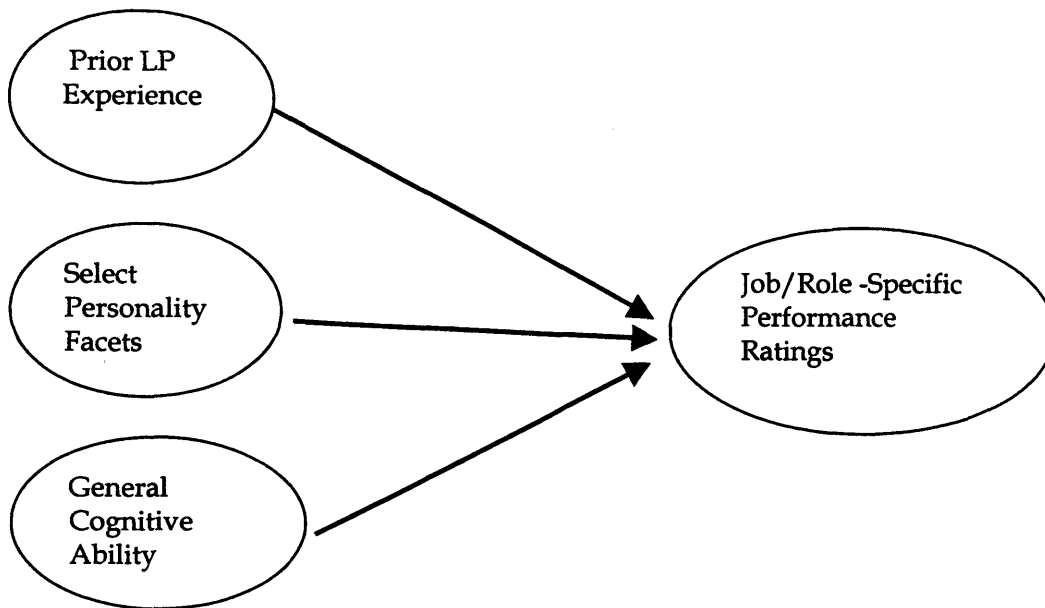
Age seems to play no role in detective job performance ratings so no further analysis of that variable is given here. Similarly, the detective job appears to provide an equal opportunity for all races, since race played no predictive role in any of the pre-hire job performance models.

One characteristic that did turn out to be important in the first three models (Total Job Performance, High External Theft Resolution Productivity, and Future LP Supervisor) was prior loss prevention experience. In each of these models, the correlation was *negative*. Never the most influential predictor, prior LP experience nevertheless played a predictive role in the criteria of total performance, external productivity, and future supervisor. In this researcher's experience, this finding

makes sense. Anecdotally, many LP supervisors tend to look for inexperienced (in LP) people for detective slots so they can train the person “their way” and not have to worry about “bad work habits” learned elsewhere. In addition, some detectives make a habit of moving from company to company; and these individuals may not be the best performers. Another possible explanation is that many successful store detectives start out with their company in another job position- such as clerk or stock person. In those positions they can learn the operations and culture of their company’s store or stores, the “know how” to perform in the company, and how to please their job performance raters- or “play the ratings game.” Top Guns with no prior LP experience, but worked in other parts of the company, might self-select themselves, or be recommended by a store detective or department head, for an LP position based on an unexpected aptitude for detecting shop thieves.

Based on this study’s findings, the originally proposed model in chapter three is revised (Figure 3) to indicate the very job role specific nature g plays in job performance, the role of low prior LP experience, and various personality facets on role-specific job ratings. This model supports the job-specific, and indeed role specific, nature of selection attributes (Iles and Salaman, 1995; Robertson et al., 1999).

**Figure 3: A revised model of the relationship of cognitive ability, personality, and background items to job performance.**



### **7.3 OVERVIEW OF THE STUDY AND PERFORMANCE CONTRIBUTIONS**

The major goal of the present investigation was to evaluate the unique contributions that personality traits at the facet level, cognitive ability, and individual characteristics such as age, education level, race, gender, and prior loss prevention experience make in the explanation of job performance ratings. The overall objective was for retailers to use this information for better store detective selection. And this information can be used as part of a strategy to affect overall performance. As discussed previously, LP detectives are deployed to reduce merchandise loss, primarily by boosting deterrence. They affect perceived deterrence levels primarily by apprehending shoplifters (Hayes, 2000). But this study indicated store detectives can play multiple roles in loss prevention by

acting simultaneously to apprehend thieves, as well as by training other staff to reduce opportunities for crime, and by maintaining LP procedural and technological compliance levels. They therefore can be a critical asset in retailers' fight to affect sales levels by increasing merchandise availability.

Much research on the relationship between personality traits and cognitive ability has focused on conscientiousness (Barrick and Mount, 1991; Piedmont and Weinstein, 1994), and general cognitive ability (Hunter, 1986; Ingleton et al., 1996; Ree and Earles, 1996) as performance predictors. Some research even establishes linkage between a combination of these factors (Rosse et al., 1991; Schippmann and Prien, 1989; Stewart et al., 1996; Wright et al., 1995). But only a few of these projects evaluated or advocated the relationship and use of personality traits at the more specific facet level (Costa, 1996; Hough, 1992; Salgado, 1998). This was the purpose of the current study.

In addition, theorists have urged more selection research narrowly focused on, or matched with specific occupational criteria, or competencies (Costa, 1996; Murphy and Shiarella, 1998; Robertson et al., 1999). No research was located which identified the predictive nature of this combination -that is, personality trait facets, g, and individual characteristics - for store detective work performance. This added to the importance of the present investigation and its contribution to knowledge in the area of performance prediction in general, and store detective performance, specifically.

In order to accomplish the overall project objective, and based on a special job analysis, predictive models for four separate store detective criteria were built. These criteria included total job performance, external theft apprehension productivity, future leader/supervisor, and all around "Top Guns" for each LP administrative region. All four models produced statistically significant results, but with relatively small correlations and  $R^2$ 's. This finding was similar to earlier work of this type in other job positions such as service workers and managers (Piedmont and Weinstein, 1994; Rosse et al., 1991). However, these findings add to the paucity of data in this specific subject area.

#### **7.4 CHAPTER SUMMARY**

The purpose of this chapter was to explore the findings of the individual variables analysed in previous chapter and determine their applicability to the prediction of store detective performance. An overview of the study and performance contributions were first described. The predictive validity of the independent variables such as personality traits, g and store detective performance, and individual characteristics were examined next.

To summarize the findings on personality traits, it was explained that the trait of conscientiousness was found in three of the four job performance models. And has been indicated as important by the earlier exploratory research. It ranked fifth in the Top Gun model. Deliberation ranked number four of seven variables in the

total performance model, number five in the Top Gun model, and number one in the future supervisor model. Neuroticism was not predictive in the final models. A negative correlation of angry hostility was found, however, which was a surprising and unexpected finding. In addition, the positive correlation of depression in the total performance model and the negative correlation of gregariousness and future supervisor potential were not expected. Assertiveness was found to be a positive predictor of external theft productivity, as was the facet trust.

The finding on g and store detective performance did not wholly relate to the literature. It was noted that general cognitive ability (g) was found in the literature to be relatively stable, and sometimes the strongest predictor of work performance. However, in the present study, this was only the case in explaining behaviours identified as future leadership potential.

With respect to individual characteristics of importance, gender was found to play a predictive role in two of the performance models. Age and race did not help predict the four pre-hire models developed in this study and played no role in detective job performance ratings. On the other hand, prior loss prevention experience turned out to be important (detrimental) in three models - Total Job Performance, High External Theft Resolution Productivity, and Future LP Supervisor.



Now that the analysis has been completed and the results of the study have been reported, it is time to conclude the research. That is the purpose of the following and final portion of the investigation.

## **CHAPTER 8**

### **CONCLUSIONS**

#### **8.1 INTRODUCTION**

Previous sections of this investigation presented individual modular components of the study. The purpose of this chapter is to bring together the modular parts, including meeting the original study objectives, into a unified whole. To achieve this goal a summary of the study and its findings is first provided. This chapter also includes discussion of the study's implications for loss prevention, retailing, and theory.

#### **8.2 SUMMARY OF THE STUDY AND FINDINGS**

The subject matter experts interviewed in the preliminary phase of the study pointed out some issues that largely shaped this project. First, based on their years of experience in loss prevention, they felt the store detective position was still a vital one in the modern retail store organization. High performing detectives can reduce liability exposure and help their assigned store- and ultimately their company, meet their respective goals. They do this by keeping crime and loss levels relatively low. Low loss means desirable merchandise remains available for profitable sales. Just as importantly, low crime levels provide an atmosphere where customers and employees feel safer and therefore buy more, or are more productive. Thus, the object of this project (enhancing the productivity of store

detectives through more focused selection), and the importance of it, was validated- and I proceeded into the research phase.

Another important factor drawn from the focus groups was that LP leaders tend to look for a mix of three types of store detectives in the applicants they screen. In their perception, the difference in local cultures, geographical store dispersal, and specific crime and loss problems meant a mix of job skills and people were needed. These groups were converted into participants for the models, which were the focus of this study -overall high LP performers (Top Guns), bag 'em and grab 'em apprehenders, and finally individuals likely to be successful as a future supervisor. The shoplifter catchers fit into the criminological literature as capable guardians directly acting to reduce theft by apprehending offenders, thereby promoting both general and specific deterrence. The generalist performer provides direct and indirect guardianship (and deterrence) by apprehending thieves, and by training and directing store staff members to reduce theft opportunities.

The third important finding of the initial research, was the subject matter expert groups' desire for information they could use to more efficiently and accurately select new store detectives which are most likely to perform at or above the company work performance standard. The group participants understood no research findings would be able to precisely quantify the predictors, or allow them to perfectly predict job performance. What they did want was a model, or set of models, which would provide new information that they could add to their other

candidate selection decision-information (such as behavioural and situational interviewing, and reference and background checking). This study largely accomplished this goal by identifying generally stable, and theoretically plausible, predictors for each of the three specified performance criteria.

Another interesting indication of this study was the differences rather than similarities between the Top Gun types and the others. Based on both the negative correlations the criterion had with the performance measures, and the distinct explanatory variables selected into the Top Gun model, this type is different than the others, and seemed more like the result of a popularity contest than an objective selection exercise. Top Guns did have significantly higher overall job performance scores (at the  $p < .05$  level) than non-selected detectives, but not as high as the overall performer typology. Their personality profiles seemed to lean more to self-promotion than productivity or leadership characteristics. The Top Gun rating was also negatively correlated with the other performance criterion at a highly significant level. It could be that the individuals selected as Top Guns were viewed by their supervisors as the detectives most like themselves. Past research on job interviews indicates there is often selection bias on the part of interviewers and raters (McDaniel et al., 1994), and this study supports the need for using multiple selection tools and criteria to counteract this tendency.

The finding that the four job criteria had different predictors was very important, and this combined with the general lack of support for the utility of  $g$  in three of

the four outcome measures, indicates job and job candidate pre-requisites are not just job and company specific, but sometimes individual job situation and role specific as well. This means managers should carefully think through the current and anticipated future role of overall job positions as well as individual slots (as discussed in Salaman and Iles, 1995).

### 8.3 STUDY OBJECTIVES

In the introduction, several study objectives were laid out in advance. These can now be addressed.

- The background chapter provided insight into the financial and cultural impact of crime and loss on retail business, as well as the evolving recognition of this dynamic by senior business executives.
- The author has spent several years attempting to develop a comprehensive description of retail crime and loss control methodology, and much of this process, and its role within current criminological theories such as routine activities and situational crime prevention, is referred to in the introduction and background chapters.
- Earlier research by the author indicated US retailers have been affected in several ways by civil litigation, and this is discussed in the background chapter of the current study.
- The preliminary research chapter outlines the process and results of a systematic store detective job description.

- The preliminary research and performance instrument testing chapters laid out the development and testing of a new job-specific store detective performance instrument. Following sections compare the predictability of individual characteristics on job performance findings of this study with previous relevant work.
- The current study added to the paucity of LP job data by providing additional empirical evidence regarding the process and use of job analysis and employee selection models in organizational settings. It also generated a suggested job duty/behaviour taxonomy.
- A store detective's reported job performance can be partially explained by using measures of personality traits, general cognitive ability, and select personal characteristics as was demonstrated with the four pre-hire regression models specified in this project. The models explained a relatively small percentage of the variance, but enough was explained to take an interviewer of detective applicants past the random point of guessing on future performance, as is common today.

## 8.4 IMPLICATIONS

This study involved the use of a literature-informed approach to job position analysis – and the prediction of actual LP job performance. The primary predictor variables and instruments (NEO PI-R, Wonderlic Personnel Test) were previously empirically established as stable predictors of job performance in many work

settings (Ashton, 1998; Burke et al., 1989; Mount et al., 1998; Rosse et al., 1991). The findings of this investigation do support some of the research findings discussed in the earlier literature review. For instance, *g* does help predict job performance in the LP setting, but in a very moderate way, and only for the future supervisor criterion. This result was similar to findings in both Sackett and Ostgaard (1994), and Nathan and Alexander (1988), and recommended by Gottfredson (1997).

Therefore, the Wonderlic Personnel Test (WPT) should be considered for use as one source of input into future leadership performance- when trying to select individuals being considered for supervisor positions. The WPT does not appear to provide much value for selecting new store detectives assigned to primarily concentrate on apprehending shop thieves. However, the average WPT score for the detectives in this study was 19, which was statistically significantly higher (using a one sample t-test for mean differences) than the normative average score listed for security guards (17) in the Wonderlic Personnel Test User's Manual (Wonderlic, 1992); possibly indicating the position does require more cognitive ability than a guard job, but less than is recommended for a police officer (22,  $p < .05$ ) by Wonderlic (1992).

The personality traits (or more specific facets) also provided added support for previous selection studies (Sackett et al., 1998; Vinchner et al., 1998) by explaining differing degrees of job performance score variance in all four models. Conscientiousness proved valuable in all four models in this project, but most of its

specific facets were no more helpful than other “Big Five” traits such as openness, neuroticism, and extraversion. Earlier job performance studies have found similar findings. Piedmont and Weinstein (1994) found low neuroticism and high extraversion scores predicted customer service, sales, and finance job performance. Similarly, Barrick et al. (1998) found a combination of conscientiousness, agreeableness, and emotional stability (neuroticism) positively related to job performance that required a lot of interpersonal interaction.

Bing (2000) found that openness predicted unique variance in performance beyond g and the other four personality factors. Finally, Cortina et al. (1992) found a combination of neuroticism and conscientiousness were good predictors of police officer performance. Overall, the NEO PI-R proved a useful instrument for selecting high performers in all categories – including the supervisor selected “TopGuns.” The *total* NEO PI-R is recommended for selection purposes, as compared to shorter versions or derivative scales, since it allows for more in-depth facet-level measurement across the whole personality spectrum of the five trait domains as was recommended by Schmidt and Ryan (1993).

It is also recommended that more defined and theoretical selection independent variables be made as they relate to either broad job competencies (Robertson, 1999), or other more specific work tasks (Adler, 1996).



Some studies reviewed for this project indicated biographic data (BioData) helped predict job performance (e.g. Vinchner, 1998). The individual characteristics (age, race, etc.) did not add much in the way of prediction to the four models. However, the pervasive negative correlation of prior loss prevention experience to job performance ratings indicates managers looking for new store detectives should not routinely seek out experienced detectives, but should consider carefully conducting further multi-method screening of applicants with lengthy LP backgrounds; and look for other indicators of high performance such as high apprehension and LP task accomplishment rates. Examples would include utilizing peer and supervisor references, and careful interviewing to uncover undesirable and desirable on the job habits or tendencies. Since prior LP experience does not seem to enhance a detective's performance in a new company, non-experienced detective candidates should also be sought out. Sources of job candidates with no prior LP experience, such as colleges and the company's stores, should be considered as primary targets for recruiting efforts.

The dichotomous impact of gender on job performance (positive predictor for TopGun performers, negative correlation with external productivity) bears further investigation and should be studied further to uncover and validate any causal inferences. In future studies, including quantitative and qualitative, the seniority and routine tasks of the detectives can be examined for the influence of these and other constructs such as favouritism, gender bias, varying job performance expectations, and degrees of strictness of performance scoring by different raters.

The same holds true for the situational interview process. Previous research has shown this process can add incremental value to the screening process (Pulakos and Schmitt, 1995). This idea deserves further study. As mentioned before, the detective position involves a relatively large amount of high-risk decision-making. A sound situational decision-making assessment tool should add valuable information to both new-hire and post-hire promotional processes. The detective job taxonomy, and the task and situation listings should provide extensive guidance in this endeavour.

Since this study was a concurrent validity design, it is suggested a similar investigation could be performed in a more predictive manner. Overtones of causality may have been inferred in this report, but the cross-sectional, concurrent design used does not allow that conclusion; even though similar work using predictive validation suggests causality in the direction of the variables suggested by this paper (Barrick and Mount, 1993).

It is also acknowledged that the performance criteria in this study are subjective proxy measures of actual performance. The scores of newly hired detectives could be recorded and compared with not only performance review ratings, but other work output measure such as quantities of thieves apprehended (when controlled for local area theft and loss levels), as well as "360 degree" ratings from LP and non-LP staff in relevant stores. The "360" method involves collecting job performance ratings on a specific worker from their supervisor, peers, and

subordinates in order to better capture a complete picture of job performance. The perspectives of an individual's performance might be influenced by job position/relationship to the ratee, job tenure and exposure to the ratee, and finally the outcome criteria measured. Similarly, the job productivity criterion could be expanded from the current three items (external apprehensions, internal apprehensions, and LP job tasks). The job tasks could be expanded into several theoretically plausible competencies based on the current job analysis, as suggested by (Robertson et al., 1999). The competencies might provide a link between raw traits as measured by the Neo and Wonderlic instruments, and the performance criteria.

Similarly, results implied that a longitudinal study would be helpful with collection of data over a period of years to examine the stability of the following constructs, and their relationships, performance, personality, background information, and cognitive ability. Longitudinal data would help control variables for differing units of analysis such as time, store or micro-social level cultural and operational dynamics, by supervisor, and company. Time, store trading area demographics, specific company, and a company's financial success, might influence leadership changes, loss levels, LP missions and measures, LP funding levels, LP procedures, human resource practices, job candidate availability, etc. as an example.

This study was designed to provide empirical data to supervisors charged with selecting three types of new store detectives. Findings implied that future projects, using similar methods, could seek to identify or confirm valid and reliable predictors of a supervisor's success by including current and past job performance data. Better supervisor selection could prove to be even more important to LP departmental performance than detective selection.

Another suggested future research area: the job performance criteria used in the instrument developed for this study, and used specifically as *outcome* variables, could become *predictor* variables to further explain unique performance variance. An example might be the detective's job skills or knowledge ratings. In addition, the anticipated relatively small  $R^2$ 's found in the current study indicate a large amount of performance variance remains unexplained. These constructs may prove relatively powerful job performance predictors beyond the traits studied here. This could be especially helpful for making performance bonus, or job promotion recommendations. Further examination of the items used to construct these factors is called for as well. Also, further performance variance could be explained by other biographical factors such as socio-economic status, and academic and scientific attitudes and interest, as was found in Moffett (1996).

Another possible explanatory factor not explored in the current study involves an ecology model proposed by Mumford et al. (1994). A person's background helps shape their conception of the type of situations or settings where they could satisfy their own needs and values. If the job they select meets their expectations, this

might help explain high individual job performance beyond cognitive capacity and personality traits.

In addition, new constructs that explain further job performance variance continue to be developed (e.g. workplace competency scales in Hough and Oswald, 2000). A job satisfaction scale, as opposed to the single item used in this project might help better explain job performance scores (Ellingson et al., 1998).

Finally, this study supported the idea that jobs, and the knowledge, skills, abilities and other characteristics required to be successful in them may often be very role and situationally specific. Managers should consider this possibility in their human resource planning.

## **8.5 LIMITATIONS**

This study suffered some specific limitations due to the sampling size and source. The 201 participants proved too small to randomly separate them into both construction and validation samples. Therefore, the models have not as of yet been further tested. A larger sample size might also allow for design and testing of an explicit model including latent variables (trait facets, etc.) using structural equation modelling techniques. Because the sample was drawn from only two US retailers, its findings are suggestive, but should not be automatically generalized to other retail organizations or settings without a replication or similar type study. Further, while it is not believed a biased sample was drawn, this could have occurred

despite the random selection process used. There were some non-respondents, some attrition, and some replacement participants arbitrarily put in the study by their supervisors.

Despite the use of literature-informed research procedures, it is possible that the variables used in this study were flawed or incorrectly completed due to confusion, error, differing testing conditions, intentional response distortion, or apathy. Attenuation or measurement error is present in any study. It was found however, that the primary predictors (WPT, NEO PI-R), and the performance criteria, were normally distributed.

Always a concern in correlational studies is controlling for variables at a larger level of analysis. In this case, a subject's company (morale, pay, training levels, etc.), their rater, or other extraneous factors could play a role in explaining relationships. There could be some rater bias, but their rating scores were relatively normally distributed- and did not require transformation. In addition, although the Wonderlic scores were normally distributed, the mean g score of one of the company's store detectives was higher than the other; and was significant at the .05 level. There were no other significant differences in the dependent or independent variables by company or rater other than g. In the future, it might also prove helpful to control for "theft action" variance (high loss vs. low loss stores) at the store level where the participants work.

A major focus of this investigation was the hypothesis that a reliable and valid measure of g would prove to be a significant predictor of job performance. In fact, only the future supervisor criterion model indicated a moderately significant positive relationship. Perhaps g provides predictability to all types of performance criteria – but the Wonderlic Personnel Test did not operationalize the type of intelligence most helpful to apprehending shop thieves. This assumption might make theoretical sense since different job outcomes require varying degrees of cognitive ability; and high g might actually hinder performance since higher intelligence individuals may tend to deliberate when immediate and simple decisions are required for that position. Spotting Shoptheft appears to be such a job task that generally requires relatively little in the way of cognitive ability after the initial learning phase. Another explanation for this mixed finding might be g scoring range restriction due to the relatively high turnover level at this position, and specifically in the two tested companies. Higher turnover might create increased range restriction in g scores. Range restriction can bias validity toward zero. There are at least four possible explanations for this finding (high turnover): 1. Higher g individuals could more quickly become bored in the position, 2. They are focusing on job tasks other than shop thief apprehension since they realize this practice can enhance loss reduction objectives; 3. They are more rapidly promoted than average g detectives; or 4. They are more actively recruited away by appreciative competitors. The differing g findings in the project bear further research.

It is recognized the results of this project may have been affected by the inherent score range restriction of a concurrent validity study. It is presumed very low scorers on both predictors and outcomes have been eliminated from the systems - while very high scoring have been promoted or otherwise moved on. This could especially be the case in this study since all participants had a minimum of a year or more experience with their current companies.

Finally, much of this study was outside the boundaries of a strict theoretical investigation- and was largely an empirical exercise. Predictors such as age, gender, education, and work experience were adopted because earlier empirical work indicated they help explain job performance. This means some of the final predictors, including the personality facets, may be related to criterion variables only spuriously - or are consequences of some prior testing or work experience. The final models produced for this study are not explicit and defensible causal models.

## **8.6 SUMMARY**

The three store detective types in this study (excluding the Top Gun criterion) were hypothesized to be separate and distinct types - with relatively different predictors. In fact, all the final selection models were relatively distinctive in their significant predictors. As previously noted, some personality facets, such as conscientiousness - deliberation, and neuroticism - negative hostility, appeared



frequently, but no single predictor appeared in all four final models. This finding provides support for the initial hypotheses.

This study also provides new insight into the employee selection process; specifically store detective selection. It indicates retailers can use various data provided by standardized tests such as the NEO PI-R and the Wonderlic Personnel Test in future leader situations; along with personal characteristics such as prior similar job experience to enhance their selection process. Generally, the results of this project provide some support for using this process for other positions as well.

Supervisors that are charged with hiring new detectives should consider deciding what type of detectives, or mixes of detective types, their area of responsibility requires- before the selection process. That will allow them to use the right selective assessment tools, performance criteria, and scores. This study found conscientiousness facets were an important predictor of job performance, but so were several other personality trait facets. The total NEO PI-R instrument should be tested and used for specific positions, and situational job roles.

Also found, was that general cognitive ability is perhaps more strongly indicated for positions requiring greater learning, planning, and recall capacity- such as is often required more frequently in leadership slots.

The models developed in the study should be replicated, and can provide substantial information for the selection process, but should only be considered one part of a hiring routine. Pre-employment screening also includes job application analysis, structured interviewing, and past behavioural performance checking techniques such as reference and criminal history checks.

The study emphasized the role humans' play in controlling organizational crime and loss through formal surveillance as active capable guardians of company assets, through LP compliance auditing, and through training and motivation of non-LP staff. The preliminary job analysis research, and the job-specific literature review, conducted for this project generated a tremendous amount of information about the store detective position, and its role in modern retail organizations. This information should also prove useful for retailers worldwide. The findings regarding the importance subsets of job roles within specific positions should be generalisable to other non-LP jobs.

Finally, the findings of the current study add further to the body of literature, and build on prior work on employee selection.

## **8.7 RECOMMENDATIONS**

This project achieved what it was supposed to in that it provided new insight and knowledge regarding retail loss prevention, and the role store-level LP specialists play in that process. This study also generated (and/or provided some validation

for) regression models and selection and evaluation instruments retailers can use in their organizations. The project also answered several questions about pre-employment screening. In the case of store detectives, there appear to be at least three distinct types of detectives with relatively unique selection criteria. Generally, the models explain less than a quarter of the variance in performance, so the search for additional explanation must continue. Much of this explanation lies outside of the selection routine. To this point, it is recommended retailers consider the following suggestions:

1. Concentrate more effort on *recruiting* applicants to the industry. The more applicants to choose from, the more likely superior candidates will be detected and hired.
2. Continue to examine the pre-employment selection process, always with an eye toward its real objective: to hire people predicted to be the most likely to perform at a high-level, and remain honest and ethical.
3. The training and development of new-hires, and current staff deserves much more attention than it really receives. Like selection, training should be based on a thorough job and organization-specific analysis. Low staffing levels, high turnover, and the continued need to produce pre-tax profit seem to lead managers to cut training time and expense, rather than inspire them to attack these problems with focused, informative, and interesting training. Training probably explains significant variance in performance.

4. Also based on a sound job analysis, proper deployment and management of staff are critical. I propose still more of the variance in performance is driven by how a detective is directed and motivated by his or her leaders. Focused deployment of store detectives on the company's greatest loss risks in this case should mean lower losses. Inspired leadership can further enhance this advantage.
5. Development and promotion of company leaders should gain major company attention. Good leaders should stress the first four suggestions. Poor and untrained leaders often ignore or botch them. Selection, training, and management goals and tactics should start with developing and retaining good leaders.
6. The relationship between Big Five personality measures, g, and biographical data, and a measure of job performance, was quantified by using multiple and logistic regression. This study illustrated an additive model to explain the relationship of the predictor variables to actual work performance. It is thus recommended that a future study use this project's results to address the building of a more explicit structural and measurement model. Perhaps using multiple personality, cognitive, BioData, and job performance measures. In addition, the model could be even more closely linked to the job analysis findings from this project's initial research (which produced a taxonomy and task and situational listings that can be used to develop a list of competencies).

7. This study generated many future research questions - particularly in the area of multi-method selection. It is further suggested retailers consider the use of the detective job performance review designed for this study as a base for creating a new review form- or re-working an existing one.

## APPENDIX A

### STORE DETECTIVE PROGRAM SITUATIONAL AND TASK FORM

Please write (legibly) a brief listing of at least 3 additional common situations and 3 routine tasks a store detective handles under each section. Use the samples provided as a guide to content and style.

***I. Area Focus*** – Each store/D.C. may have unique problems and store detectives are expected to identify and prioritize sources of loss, including high-risk sku's, times, locations, and high-rate offenders.

#### ***Routine Store Detective Tasks:***

***1) Map crime and suspicious incidents occurring in the store and parking lot to identify possible patterns.***

***2) Periodically interview store staff and other local merchants to identify current or emerging crime and loss problems.***

***3)*** \_\_\_\_\_

\_\_\_\_\_

***4)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***5)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***Common Situations Store Detectives are Confronted With:***

***1) A store manager asks the store detective to justify their current work schedule.***

***2) The district LP manager instructs the store detective to boost their productivity by patrolling their store(s) at high-risk times.***

***3)*** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***4)*** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***5)*** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**II. Auditing – Loss prevention procedures (void approvals, etc.), programs (employee awareness, etc.) and systems (EAS, CCTV, alarms, etc.) are designed to deter, detect and document crime events. Store detectives are expected to help maintain the compliance and operation of these controls by auditing actual compliance and assisting in their operations.**

***Routine Store Detective Tasks:***

***1) Conduct periodic (quarterly, etc.) random audits of LP procedures and systems.***

***2) Check the EAS system prior to each work shift.***

***3)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***4)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***5)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



***Common Situations Store Detectives are Confronted With:***

***1) A store detective is asked to audit customer refunds for policy compliance and potential problems.***

***2) A store manager acts perturbed that a store detective is trying to “nail” them with a store audit.***

***3)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***4)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***5)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**III. Awareness – Store Detectives are expected to support all in-store shrinkage reduction programs. They should interact with both Store Management and associates by providing theft activity information and encouraging/supporting the use of the Tip Line.**

***Routine Store Detective Tasks:***

***1) Ensure all employee awareness materials are properly distributed and displayed.***

***2) Periodically discuss LP issues with store associates (e.g. New hire orientation, shrink meetings, etc.).***

***3)*** \_\_\_\_\_

\_\_\_\_\_

***4)*** \_\_\_\_\_

\_\_\_\_\_

***5)*** \_\_\_\_\_

\_\_\_\_\_

***Common Situations Store Detectives are Confronted With:***

- 1) A store detective is asked to lead the shrink meeting.***
- 2) The store detective learns his base store has not displayed a shrink awareness poster.***

***3)*** \_\_\_\_\_  
\_\_\_\_\_

***4)*** \_\_\_\_\_  
\_\_\_\_\_

***5)*** \_\_\_\_\_  
\_\_\_\_\_

***IV. Apprehension – An important part of deterring future incidents and reducing incident loss is detecting, apprehending, processing and documenting customer and employee thieves and their crimes. Store detectives are expected to help collect evidence of certain crimes. They are also expected to properly surveil, apprehend and process the thieves when appropriate.***

***Routine Store Detective Tasks:***

***1) Store detectives must detect possible shoplifters by searching for key customer behaviors, and/or by encouraging non-LP staff to report their suspicions.***

***2) A shoplifter verbally resists apprehension by a store detective.***

***3) A store detective is assigned to collect POS documents as part of an employee staff investigation.***

***4) \_\_\_\_\_***

***\_\_\_\_\_***

***\_\_\_\_\_***

***5) \_\_\_\_\_***

***\_\_\_\_\_***

***\_\_\_\_\_***

***Common Situations Store Detectives are Confronted With:***

***1) A store detective is asked to audit customer refunds for policy compliance and potential problems.***

***2) A store manager acts perturbed that a store detective is trying to “nail” them with a store audit.***

***6)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***7)*** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***V. Additional Responsibilities – As part of their role in loss prevention, as well as a company employee, occasionally store detectives perform other task or must respond to other situations. These might include safety, security, sales, cleanup or transportation.***

***Routine Store Detective Tasks:***

- 1) An employee is severely injured and requires immediate first aid, as well as emergency medical care.***
- 2) A store manager asks the store detective to escort employees to their cars after work.***
- 3) The assistant store manager asks the store detective to clean up in the fitting room where a customer got sick.***

***4)*** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***5)*** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***Common Situations Store Detectives are Confronted With:***

***1) A store detective is asked to audit customer refunds for policy compliance and potential problems.***

***2) A store manager acts perturbed that a store detective is trying to “nail” them with a store audit.***

***8) \_\_\_\_\_***

\_\_\_\_\_

\_\_\_\_\_

***9) \_\_\_\_\_***

\_\_\_\_\_

\_\_\_\_\_

***10) \_\_\_\_\_***

\_\_\_\_\_

\_\_\_\_\_

***Thank you for your valuable insight!***

***Please fax to:***

***Read Hayes, CPP***

***(407)999-9504***

## APPENDIX B

### STORE DETECTIVE TASK FORM

#### Introduction

This study helps us identify and prioritize store detective work tasks.

The tasks are divided into five work areas : External theft, Internal Theft, Staff Awareness, Auditing and Inspection, and Area Focus.

Tasks associated with additional responsibilities are also addressed.

#### Instructions

Indicate how important you believe each task is by circling the appropriate number.

Please *fax* the completed survey to (407)999-9504 and then *mail* it to

5415 LK Howell Rd., Ste 236,  
Winter Park, FL 32792

within seventy-two (72) hours of receiving it.

Name \_\_\_\_\_ Title \_\_\_\_\_ Phone # \_\_\_\_\_

Gender \_\_\_\_\_ (0=male, 1=female) Race \_\_\_\_\_ (0=white, 1=black, 3=hispanic, 4=asian, 5=other)  
Age \_\_\_\_\_

Years LP Experience \_\_\_\_\_ Years LP Management Experience \_\_\_\_\_



## Store Detective Task Form

*(Please rate from 1-7 the importance of each listed task with a 7 being most important.)*

### External Theft Resolution Tasks:

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Identify possible shoplifters based upon first alert signals and/or by encouraging Associates to report their suspicions.               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Ensure all 5 Elements of Proof are obtained prior to making apprehensions.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Recognize theft methods including techniques, tools, and devices.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Ensure apprehension techniques promote overall safety of detective, witness, and customer(s).   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Process shoplifters by securing the chain of evidence along with proper documentation.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Complete all shoplift documentation per company policy and procedures and contact, if applicable, the District Loss Prevention Manager. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Follow up through case disposition, i.e. court appearances, per company policy and procedures.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Escort Shoplifter to Office while alert for possible escape, attack, or discarding of evidence.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Inform store management and staff of known shoplifting incidents.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Evaluate merchandise trends and high theft merchandise.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Complete daily checks (EAS/Fitting Room/Ticket Known Loss Log/Sweeps.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Conduct witness training and certification.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Secure case evidence (Chain of Custody)  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) Remove all potential weapons from the shoplifter detention area.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15) Track and follow up on all active cases (theirs and from their predecessors.)  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16) Issues trespass warnings where appropriate.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17) Surveil suspected shopthieves to observe the selection and unauthorized removal of company property.                                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18) Request store staff serve suspicious customers if unable to conduct surveillance.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19) Approach and detain shopthieves to company standards.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20) Interview witnesses and suspects to uncover and document information.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21) Refer offenders to law enforcement per company policy.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22) Provide evidence and support for criminal and civil sanction processing.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23) Track civil and criminal sanctioning to determine status and needed support.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24) Report and document all incidents on and around company property.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Store Detective Task Form

*(Please rate from 1-7 the importance of each listed task with a 7 being most important.)*

### **Internal Theft Resolution Tasks**

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Chart cash register variances to identify Dishonest Associates.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Conduct scheduled surveillance on an identified subject or area.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Collect written statements.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Collect and review store media (refunds, merchandise credits, associate purchases, layaway cards, markdown book) as directed. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Conduct an "undercover" test shop.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Profile new store associates for 90 days.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Conduct or observe random purse, parcel and locker checks.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Utilize exception reports and store media review to identify possible internal theft activity.                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Record and review selected areas and document observations.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Complete CCTV installs as needed and prepare a thorough case file.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Observe associates for first alert theft signals.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Communicate any internal red flags to appropriate investigator and/or manager..  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) Present deposition or trial testimony.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15) Monitor cleaning crews.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16) Act as a witness during an interview.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### **Staff Awareness Tasks**

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Ensure employee awareness materials are distributed and displayed per company standards.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Brief store management daily on company and area LP issues; as well as your planned activities.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Conduct periodic group LP meetings.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Brief your supervisor and fellow store detectives on LP issues and techniques.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Demonstrate how employees can prevent loss by keeping their areas clean and organized, greeting and watching all customers, and using EAS per company policy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) "Walk and Talk" loss prevention awareness with all associates.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Conduct apprehension witness training (Maxx).   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Attend and participate with individual and store meetings to promote LP issues and awareness.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Store Detective Task Form

*(Please rate from 1-7 the importance of each listed task with a 7 being most important.)*

### **Staff Awareness Tasks (cont.)**

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 10) Demonstrate how associates can deter loss.                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Enhance and develop store specific and regional programs to heighten awareness. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Provide ongoing training in LP related issues.                                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Promote the company Tip Line.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) Promote the target store program.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### **Auditing and Inspection Tasks**

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) Follow up on past audit deficiencies.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Perform opening/closing store tours.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Conduct fire and safety inspections.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Communicate audit issues to Store Management.                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Conduct locker checks.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Conduct random audits of store LP procedures and systems.          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Check the EAS systems and tagging compliance each shift.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Check the burglar alarm and panic door systems monthly.            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Inspect the interior and exterior of the store for security risks. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### **Area Focus/Knowledge of Loss Results and Reduction Strategies Tasks**

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) Attend store meetings, communicate store's shrink strategies.                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Review store's shrink strategy for compliance.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Meet with store management prior to each shift to ID issues.                                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Identify top shrink departments.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Identify why shrink occurred in top shrink departments.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Identify how to impact top shrink departments.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Inspect sales floor upon coming to work looking for defeated EAS tags and other evidence of theft. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Gather intelligence from incidents where all elements of proof were not satisfied.                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Validate store's reported inventory loss through auditing and monitoring.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Store Detective Task Form

*(Please rate from 1-7 the importance of each listed task with a 7 being most important.)*

### **Area Focus/Knowledge of Loss Results and Reduction Strategies Tasks (cont.)**

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 10) Track truck delivery days, store peak sales times, school hours apprehension peak Times, to set work schedules.                                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Collect data regarding area theft patterns or habitual offenders from local retail meetings.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Debrief all associate and customer offenders for intelligence data.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Monitor tip line calls for emerging problems.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) use all data sources to focus efforts; but still work randomly sometimes.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15) use data to prioritize tasks and EAS tagging.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16) Map crime and suspicious incidents in the store and parking lot to identify possible patterns.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18) Interview store staff, and other local merchants, to identify current or emerging crime and loss problems.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19) Examine store and company shrinkage data to ID high-loss merchandise or departments.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20) Examine EAS alarm activations for possible theft or error patterns.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21) Examine P.O.S. exception reports for possible theft or error patterns.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22) Interview local law enforcement and request annual crime data to identify possible crime and loss patterns.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23) Map area schools, flea markets, pawn shops, mass transit routes, and high-crime neighborhoods and areas to identify possible crime and loss problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### **Additional Responsibilities Tasks**

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Escort Management or the Cash Office Associate to make a bank run.            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Process jewelry with a member of management. (Maxx)                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Help store achieve operational controls (processing, recovery, etc.).         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Cover another store when needed. Maintain schedule flexibility.               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Secure assets during critical incidents (riots, storms, power outages, etc.). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Observe overnight cleaning crews.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Maintain rapport with local law enforcement.                                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Support the inventory process.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Thank you for your valuable insights!**

## APPENDIX C

### STORE DETECTIVE SITUATION FORM

#### Introduction

This study helps us identify and prioritize store detective work situations. The situations are divided into five work areas: External theft, Internal Theft, Staff Awareness, Auditing and Inspection, and Area Focus.

Situations associated with additional responsibilities are also addressed.

#### Instructions

Indicate how common you believe each situation is by circling the appropriate number.

Please *fax* the completed survey to (407)999-9504 and then mail it to

5415 LK Howell Rd., Ste 236,  
Winter Park, FL 32792

within seventy-two (72) hours of receiving it.

Name \_\_\_\_\_ Title \_\_\_\_\_ Phone # \_\_\_\_\_

Gender \_\_\_\_\_ (0=male, 1=female)

Race \_\_\_\_\_ (0=white, 1=black, 3=hispanic, 4=asian, 5=other) Age \_\_\_\_\_

Years LP Experience \_\_\_\_\_ Years LP Management Experience \_\_\_\_\_

## Store Detective Situation Form

*(Please rate from 1-7 how common each listed situation is with a 7 being most common.)*

### External Theft Resolution Situations:

Common situations Store Detectives are confronted with:

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) A shoplifter verbally resists apprehension by a Store Detective   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Store Associate reports seeing a customer conceal merchandise.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Detective told by police that it will take hours for them to respond to a shoplift                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Detective is asked by a parent to "scare" a minor shoplifter.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Detective believes that a theft did occur but lacks an element.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Detective is confronted by a non-employee on the sales floor.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Detective makes an apprehension that results in a NPD/PLI.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Store Detective must prioritize whom they are going to watch (with multiple people).                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Store Detective is confronted with multiple offenders.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Management pressures Store Detective to make an apprehension based on the managers observation.          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Detective confronted with irate parent of juvenile shoplifter.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Police asks detective to file charges against a suspect the police apprehended.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) A shoplifter physically resists apprehension by a Store Detective.                                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) Store Detective confronted by suspected shoplifter asking why he/she is being followed by the detective. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15) Third party interfering with Store Detective making an apprehension.                                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16) Suspected shoplifter discards stolen product prior to exit.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17) Suspected shoplifter conceals items and walks into a fitting room or restroom and then exits.            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18) Observes signs obstructing the store's merchandise interior or display view.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19) Finds evidence of possible theft such as hidden or discarded tickets or tags.                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20) Observes theft collusion between a customer and staff.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

21) Potential liability incident/non-productive detainment.

1 2 3 4 5 6 7

22) Must correct poor fitting room operations.

1 2 3 4 5 6 7

23) Must apprehend multiple shoplifters.

1 2 3 4 5 6 7

24) Observe ticket or container switches.

1 2 3 4 5 6 7

25) Mall security officer reports a shoplifter.

1 2 3 4 5 6 7

26) A shoplifter claims to be unable to speak English.

1 2 3 4 5 6 7

## Store Detective Situation Form

*(Please rate from 1-7 how common each listed situation is with a 7 being most common.)*

### External Theft Resolution Situations: (cont.)

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) Apprehend juvenile with parents in the store.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Apprehends a shoplifter and must handle an uninvolved companion.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Asked to solve a dispute (i.e., refunds, stereo types).                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Court dates are rescheduled.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) CCTV equipment breaks.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Must find a witness very quickly.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Observes an altercation in the store or parking lot.                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Store Associate or manager reports seeing a customer conceal merchandise.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Chronic bad-check writer tries to make a check purchase.                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Diversion group attempts to steal from the store safe or registers.       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Customer uses a counterfeit receipt to make a return.                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) A customer claims a local flea market is selling Maxx tagged merchandise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Police refuse to respond to a Maxx store for shoplifters.                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) A shoplifter's lawyer shows up at a store and starts asking questions.    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### Internal Theft Resolution Situations

Common situations Store Detectives are confronted with:

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) An Associate reports alert signals on a member of Management or other associate. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) An Associate refuses to co-operate with a bag check.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Management reports associate theft to Store Detective.                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Store Detective finds merchandise in Associate locker or purse/parcel.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Management or Associate confronts detective on a covert camera.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Management or Associate tells detective of another detective stealing.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Covert camera is discovered by an Associate.                                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Store Detective observes direct theft of an Associate.                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Associate request sensitive information about an investigation.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Observe policy violations other than theft.                                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |



- 11) Fitting room associate returns merchandise at multiple MarMax stores. 1 2 3 4 5 6 7
- 12) A manager claims to have received a short shipment from the D. C.. 1 2 3 4 5 6 7

## Store Detective Situation Form

(Please rate from 1-7 how common each listed situation is with a 7 being most common.)

### Staff Awareness Situations

Common situations Store Detectives are confronted with:

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) Personal performance issues vs. Awareness Program participation.                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Management uncooperative to scheduling time for meetings.                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Associates are not interested in awareness materials.                                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Management/detective not familiar with awareness materials.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Negative/disillusioned shortage committee meetings.                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Management not committed to program.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) The store detective is asked to lead the shrink meeting.                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) The store detective learns his/her base store has not displayed shrink awareness poster. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Associates unaware of operational procedures, asks detective for advice.                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Store Management does not buy into the Associate Awareness Programs.                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Associates and/or Management seek detective's endorsement for their actions.            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Associates ask when the Tip Line award will arrive.                                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Store Detective observes store is not in compliance with Shrink programs.               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) Management has a lack of interest for shrink programs.                                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### Auditing and Inspection Situations

Common Situations Store Detectives are confronted with:

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1) A Store Detective is asked to audit customer refunds for policy compliance and potential problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Store Management disagrees with audit scores and results.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Store Detective encounters reoccurring issues.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Store Detective unable to communicate audit issues.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Store Management continually reschedules audits.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Management feels overwhelmed with L.P. issues and audit deficiencies.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Store Detective notified of key L.P. equipment not working properly.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- |   |               |
|---|---------------|
| 8) Store Manager or District Loss Prevention Manager asks Store Detective to audit specific areas of the store. | 1 2 3 4 5 6 7 |
| 9) Store Manager asks for clarification of detective for auditing policy and procedures.                        | 1 2 3 4 5 6 7 |
| 10) Store Detective notifies Store Manager of reoccurring operational issues.                                   | 1 2 3 4 5 6 7 |

## Store Detective Situation Form

*(Please rate from 1-7 how common each listed situation is with a 7 being most common.)*

### Auditing and Inspection Situations (cont.)

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 11) Other Store Detective(s) not conducting audits.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) DLPM/LPDM makes it clear audits are low priority.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Discover a disabled or tampered-with alarm<br>(EAS, Exit, Burglar, and Fire). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### Area Focus/Knowledge of Loss Results and Reduction Strategies Situations

Common Situations Store Detectives are confronted with:

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Store Associates complain to Store Detectives that merchandise needs to be locked-up.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Store Management communicates to Store Detective that 90 percent of store shrink is shoplifting.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Management and Associates feel there is a lack of Loss Prevention coverage.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Management and Associates question why detective cannot make certain apprehensions (e.g. ticket switching in the fitting rooms or restrooms.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Associates ask detective why they did not receive incentive money in a timely manner.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Management questions detective's work schedule.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Management does not buy into the shrink strategy.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Store Detective feels pressure not to communicate issues to the next level.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Store Management abdicates all L.P. responsibility to the Store Detective.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) A police officer says they keep hearing about Marshall's being ripped off.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Associate questions EAS tagging policies.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) An associate says people at their college are selling MarMax merchandise.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) A Store Detective from another company reports they keep taking Maxx merchandise off of their shoplifters.                                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) use "round-robin" phone calls to alert stores of habitual refunders.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Additional Responsibilities Situations**

Common situations Store Detectives are confronted with:

- 1) A store Manager asks the Store Detective to escort Associates to their cars after work.

1234567
- 2) The Store Detective is asked to deal with a disgruntled customer.

1234567
- 3) Store Detective approached by Associate or Management with open door policy or workplace violence issues.

1234567

## Store Detective Situation Form

*(Please rate from 1-7 how common each listed situation is with a 7 being most common.)*

### Additional Responsibilities Situations (cont.)

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1) Store Detective asked to address sexual deviants.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Customer and/or Store Associate asks Detective to break into their car when locked out.                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Detective receives sensitive or critical information and asked not to repeat information.                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Management questions detective's work schedule.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Management questions detective's phone usage.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Store Detective asked to respond to critical incidents, alarms or medical emergencies.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Detective asked to assist with Lost and Found, missing media, and lost children.                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Detective asked to train other Detectives or Associates.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9) Detective is asked by another detective or another associate to commit time card fraud or other unethical acts. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Pressured to work more hours than actual time submitted.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Asked to provide security for a store, corporate, or personal event.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Asked to retrieve carts or carriages.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13) Asked to disseminate "bad" news to staff.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## APPENDIX D

### STORE DETECTIVE TASK LISTING

#### Introduction

This study helps us identify and prioritize store detective work tasks.

The tasks are divided into five work areas: External theft, Internal Theft, Staff Awareness, Auditing and Inspection, and Area Focus.

Tasks associated with additional responsibilities are also addressed.

#### Instructions

Indicate how important you believe each task is by circling the appropriate number.

Please *fax* the completed survey to (407)999-9504 and then *mail* it to

5415 LK Howell Rd., Ste 236,  
Winter Park, FL 32792

within seventy-two (72) hours of receiving it.

Name \_\_\_\_\_ Title \_\_\_\_\_ Phone # \_\_\_\_\_

Gender \_\_\_\_\_ (0=male, 1=female) Race \_\_\_\_\_ (0=white, 1=black, 3=hispanic, 4=asian, 5=other)  
Age \_\_\_\_\_

Years LP Experience \_\_\_\_\_ Years LP Management Experience \_\_\_\_\_

## **Store Detective Task Listing**

### **External Theft Resolution Tasks:**

- 65) Ensure all 5 Elements of Proof are obtained prior to making apprehensions.
- 66) Ensure apprehension techniques promote overall safety of detective, witness, and customer(s).
- 67) Approach and detain shopthieves to company standard.
- 68) Secure case evidence (Chain of Custody).
- 69) Escort Shoplifter to Office while alert for possible escape, attack, or discarding of evidence.
- 70) Complete all shoplift documentation per company policy and procedures and contact, if applicable, the District Loss Prevention Manager.
- 71) Surveil suspected shopthieves to observe the selection and unauthorized removal of company property.
- 72) Process shoplifters by securing the chain of evidence along with proper documentation.
- 73) Remove all potential weapons from the shoplifter detention area.
- 74) Refer offenders to law enforcement per company policy.
- 75) Provide evidence and support for criminal and civil sanction processing.
- 76) Follow up through case disposition, i.e. court appearances, per company policy and procedures.
- 77) Recognize theft methods including techniques, tools, and devices.
- 78) Report and document all incidents on and around company property.
- 79) Identify possible shoplifters based upon first alert signals and/or by encouraging Associates to report their suspicions.
- 80) Request store staff serve suspicious customers if unable to conduct surveillance.
- 81) Track and follow up on all active cases (theirs and from their predecessors).
- 82) Inform store management and staff of known shoplifting incidents.
- 83) Evaluate merchandise trends and high theft merchandise.
- 84) Conduct witness training and certification.
- 85) Interview witnesses and suspects to uncover and document information.



- 86) Complete daily checks (EAS/Fitting Room/Ticket Known Loss Log/Sweeps).
- 87) Track civil and criminal sanctioning to determine status and needed support.
- 88) Issue trespass warnings where appropriate.

#### **Internal Theft Resolution Tasks**

- 28) Communicate any internal red flags to appropriate investigator and/or manager.
- 29) Conduct scheduled surveillance on an identified subject or area.
- 30) Observe associates for first alert theft signals.
- 31) Collect and review store media (refunds, merchandise credits, associate purchases, layaway cards, markdown book) as directed.
- 32) Utilize exception reports and store media review to identify possible internal theft activity.
- 33) Present deposition or trial testimony.
- 34) Record and review selected areas and document observations.
- 35) Complete CCTV installs as needed and prepare a thorough case file.
- 36) Chart cash register variances to identify Dishonest Associates.
- 37) Monitor cleaning crews.
- 38) Act as a witness during an interview.
- 39) Conduct or observe random purse, parcel and locker checks.
- 40) Collect written statements.
- 41) Profile new store associates for 90 days.
- 42) Conduct an "undercover" test shop.

#### **Staff Awareness Tasks**

- 17) Promote the company Tip Line.
- 18) Attend and participate with individual and store meetings to promote LP issues and awareness.
- 19) "Walk and Talk" loss prevention awareness with all associates.

- 20) Brief your supervisor and fellow store detectives on LP issues and techniques.
- 21) Promote the target store program.
- 22) Demonstrate how associates can deter loss.
- 23) Conduct apprehension witness training (Maxx).
- 24) Demonstrate how employees can prevent loss by keeping their areas clean and organized, greeting and watching all customers, and using EAS per company policy.
- 25) Provide ongoing training in LP related issues.
- 26) Conduct periodic group LP meetings.
- 27) Ensure employee awareness materials are distributed and displayed per company standards.
- 28) Enhance and develop store specific and regional programs to heighten awareness.
- 29) Brief store management daily on company and area LP issues; as well as your planned activities.

#### **Auditing and Inspection Tasks**

- 23) Communicate audit issues to Store Management.
- 24) Check the burglar alarm and panic door systems monthly.
- 25) Inspect the interior and exterior of the store for security risks.
- 26) Conduct fire and safety inspections.
- 27) Perform opening/closing store tours.
- 28) Conduct random audits of store LP procedures and systems.
- 29) Follow up on past audit deficiencies.
- 30) Conduct locker checks.
- 31) Check the EAS systems and tagging compliance each shift.

#### **Area Focus/Knowledge of Loss Results and Reduction Strategies Tasks**

- 37) Identify top shrink departments.
- 38) Attend store meetings, communicate store's shrink strategies.

- 39) Examine P.O.S. exception reports for possible theft or error patterns.
- 40) Identify how to impact top shrink departments.
- 41) Examine store and company shrinkage data to ID high-loss merchandise or departments.
- 42) Gather intelligence from incidents where all elements of proof were not satisfied.
- 43) Identify why shrink occurred in top shrink departments.
- 44) Review store's shrink strategy for compliance.
- 45) Inspect sales floor upon coming to work looking for defeated EAS tags and other evidence of theft.
- 46) Use all data sources to focus efforts; but still work randomly sometimes.
- 47) Monitor tip line calls for emerging problems.
- 48) Meet with store management prior to each shift to ID issues.
- 49) Track truck delivery days, store peak sales times, school hours apprehension peak times, to set work schedules.
- 50) Use data to prioritize tasks and EAS tagging.
- 51) Validate store's reported inventory loss through auditing and monitoring.
- 52) Examine EAS alarm activations for possible theft or error patterns.
- 53) Map crime and suspicious incidents in the store and parking lot to identify possible patterns.
- 54) Collect data regarding area theft patterns or habitual offenders from local retail meetings.
- 55) Interview store staff, and other local merchants, to identify current or emerging crime and loss problems.
- 56) Debrief all associate and customer offenders for intelligence data.
- 57) Map area schools, flea markets, pawn shops, mass transit routes, and high-crime neighborhoods and areas to identify possible crime and loss problems.
- 58) Interview local law enforcement and request annual crime data to identify possible crime and loss patterns.

#### **Additional Responsibilities Tasks**

- 25) Support the inventory process.
- 26) Secure assets during critical incidents (riots, storms, power outages, etc.).

- 27) Maintain rapport with local law enforcement.
- 28) Cover another store when needed. Maintain schedule flexibility.
- 29) Observe overnight cleaning crews.
- 30) Process jewelry with a member of management. (Maxx)
- 31) Escort Management or the Cash Office Associate to make a bank run.
- 32) Help store achieve operational controls (processing, recovery, etc.).

## APPENDIX E

### STORE DETECTIVE SITUATION LISTING

#### Introduction

This study helps us identify and prioritize store detective work situations.

The situations are divided into five work areas: External theft, Internal Theft, Staff Awareness, Auditing and Inspection, and Area Focus.

Situations associated with additional responsibilities are also addressed.

#### Instructions

Indicate how common you believe each situation is by circling the appropriate number.

Please *fax* the completed survey to (407)999-9504 and then *mail* it to

5415 LK Howell Rd., Ste 236,  
Winter Park, FL 32792

within seventy-two (72) hours of receiving it.

Name \_\_\_\_\_ Title \_\_\_\_\_ Phone # \_\_\_\_\_

Gender \_\_\_\_\_ (0=male, 1=female) Race \_\_\_\_\_ (0=white, 1=black, 3=hispanic, 4=asian, 5=other)  
Age \_\_\_\_\_

Years LP Experience \_\_\_\_\_ Years LP Management Experience \_\_\_\_\_

## **Store Detective Situation Listing**

### **External Theft Resolution Situations:**

Common situations Store Detectives are confronted with:

- 89) Detective believes that a theft did occur but lacks an element.
- 90) Finds evidence of possible theft such as hidden or discarded tickets or tags.
- 91) Store Detective must prioritize whom they are going to watch (with multiple people).
- 92) Must correct poor fitting room operations.
- 93) Must find a witness very quickly.
- 94) Observe ticket or container switches.
- 95) Observes signs obstructing the store's merchandise interior or display view.
- 96) A shoplifter verbally resists apprehension by a Store Detective.
- 97) Store Detective is confronted with multiple offenders.
- 98) Court dates are rescheduled.
- 99) Must apprehend multiple shoplifters.
- 100) Suspected shoplifter conceals items and walks into a fitting room or restroom and then exits.
- 101) Observes theft collusion between a customer and staff.
- 102) A shoplifter physically resists apprehension by a Store Detective.
- 103) Store Associate reports seeing a customer conceal merchandise.
- 104) CCTV equipment breaks.
- 105) Detective told by police that it will take hours for them to respond to a shoplift.
- 106) Store Associate or manager reports seeing a customer conceal merchandise.
- 107) Chronic bad-check writer tries to make a check purchase.
- 108) A shoplifter claims to be unable to speak English.
- 109) Apprehend juvenile with parents in the store.

- 110) Customer uses a counterfeit receipt to make a return.
- 111) Suspected shoplifter discards stolen product prior to exit.
- 112) Apprehends a shoplifter and must handle an uninvolved companion.

## **Store Detective Situation Survey**

### **External Theft Resolution Situations (cont.):**

- 113) Detective confronted with irate parent of juvenile shoplifter.
- 114) Police asks detective to file charges against a suspect the police apprehended.
- 115) Asked to solve a dispute (i.e., refunds, stereo types).
- 116) Detective is asked by a parent to "scare" a minor shoplifter.
- 117) Detective is confronted by a non-employee on the sales floor.
- 118) Store Detective confronted by suspected shoplifter asking why he/she is being followed by the detective.
- 119) Mall security officer reports a shoplifter.
- 120) Observes an altercation in the store or parking lot.
- 121) Management pressures Store Detective to make an apprehension based on the managers observation.
- 122) Potential liability incident/non-productive detainment.
- 123) Third party interfering with Store Detective making an apprehension.
- 124) A customer claims a local flea market is selling Maxx tagged merchandise.
- 125) Diversion group attempts to steal from the store safe or registers.
- 126) Detective makes an apprehension that results in a NPD/PLI.
- 127) Police refuse to respond to a Maxx store for shoplifters.
- 128) A shoplifter's lawyer shows up at a store and starts asking questions.

## **Store Detective Situation Survey**

### **Internal Theft Resolution Situations**

Common situations Store Detectives are confronted with:

- 43) Observe policy violations other than theft.
- 44) Management reports associate theft to Store Detective.
- 45) Store Detective observes direct theft of an Associate.
- 46) An Associate reports alert signals on a member of Management or other associate.
- 47) A manager claims to have received a short shipment from the D. C..
- 48) Management or Associate tells detective of another detective stealing.
- 49) Associate request sensitive information about an investigation.
- 50) Store Detective finds merchandise in Associate locker or purse/parcel.
- 51) Fitting room associate returns merchandise at multiple MarMax stores.
- 52) An Associate refuses to co-operate with a bag check.
- 53) Covert camera is discovered by an Associate.
- 54) Management or Associate confronts detective on a covert camera.



## **Store Detective Situation Survey**

### **Staff Awareness Situations**

Common situations Store Detectives are confronted with:

- 30) Associates ask when the Tip Line award will arrive.
- 31) Associates unaware of operational procedures, asks detective for advice.
- 32) Store Detective observes store is not in compliance with Shrink programs.
- 33) Management not committed to program.
- 34) Management uncooperative to scheduling time for meetings.
- 35) Personal performance issues vs. Awareness Program participation.
- 36) Associates and/or Management seek detective's endorsement for their actions.
- 37) Associates are not interested in awareness materials.
- 38) Management has a lack of interest for shrink programs.
- 39) Negative/disillusioned shortage committee meetings.
- 40) The store detective is asked to lead the shrink meeting.
- 41) Store Management does not buy into the Associate Awareness Programs.
- 42) The store detective learns his/her base store has not displayed shrink awareness poster.
- 43) Management/detective not familiar with awareness materials.

## **Store Detective Situation Survey**

### **Auditing and Inspection Situations**

Common Situations Store Detectives are confronted with:

- 32) Store Detective encounters reoccurring issues.
- 33) Store Detective notifies Store Manager of reoccurring operational issues.
- 34) Management feels overwhelmed with L.P. issues and audit deficiencies.
- 35) Store Manager or District Loss Prevention Manager asks Store Detective to audit specific areas of the store.
- 36) Store Management disagrees with audit scores and results.
- 37) Store Detective notified of key L.P. equipment not working properly.
- 38) A Store Detective is asked to audit customer refunds for policy compliance and potential problems.
- 39) Store Detective unable to communicate audit issues.
- 40) Store Manager asks for clarification of detective for auditing policy and procedures.
- 41) Other Store Detective(s) not conducting audits.
- 42) Store Management continually reschedules audits.
- 43) DLPM/LPDM makes it clear audits are low priority.
- 44) Discover a disabled or tampered-with alarm (EAS, Exit, Burglar, and Fire).

## **Store Detective Situation Survey**

### **Area Focus/Knowledge of Loss Results and Reduction Strategies Situations**

Common Situations Store Detectives are confronted with:

- 59) Management and Associates feel there is a lack of Loss Prevention coverage.
- 60) Management and Associates question why detective cannot make certain apprehensions (e.g. ticket switching in the fitting rooms or restrooms.)
- 61) Management questions detective's work schedule.
- 62) Store Management communicates to Store Detective that 90 % of store shrink is shoplifting.
- 63) Store Associates complain to Store Detectives that merchandise needs to be locked-up.
- 64) Store Management abdicates all L.P. responsibility to the Store Detective.
- 65) Associates ask detective why they did not receive incentive money in a timely manner.
- 66) Use "round-robin" phone calls to alert stores of habitual refunders.
- 67) Associate questions EAS tagging policies.
- 68) Management does not buy into the shrink strategy.
- 69) Store Detective feels pressure not to communicate issues to the next level.
- 70) A Store Detective from another company reports they keep taking Maxx merchandise off of their shoplifters.
- 71) An associate says people at their college are selling MarMax merchandise.
- 72) A police officer says they keep hearing about Marshall's being ripped off.

## **Store Detective Situation Survey**

### **Additional Responsibilities Situations**

Common situations Store Detectives are confronted with:

- 33) Detective asked to train other Detectives or Associates.
- 34) Management questions detective's phone usage.
- 35) Management questions detective's work schedule.
- 36) Store Detective asked to respond to critical incidents, alarms or medical emergencies.
- 37) Detective receives sensitive or critical information and asked not to repeat information.
- 38) Detective asked to assist with Lost and Found, missing media, and lost children.
- 39) Store Detective approached by Associate or Management with open door policy or workplace violence issues.
- 40) A store Manager asks the Store Detective to escort Associates to their cars after work.
- 41) The Store Detective is asked to deal with a disgruntled customer.
- 42) Store Detective asked to address sexual deviants.
- 43) Asked to retrieve carts or carriages.
- 44) Asked to provide security for a store, corporate, or personal event.
- 45) Customer and/or Store Associate asks Detective to break into their car when locked out.
- 46) Detective is asked by another detective or another associate to commit time card fraud or other unethical acts.
- 47) Pressured to work more hours than actual time submitted.
- 48) Asked to disseminate "bad" news to staff.

## **APPENDIX F**

### **STORE DETECTIVE KNOWLEDGE, SKILLS, ABILITIES, AND OTHER CHARACTERISTICS (KSAO's) LISTING**

#### **Knowledge**

1. Knowledge of company guidelines regarding retailing objectives and general operations.
2. Knowledge of company guidelines regarding LP objectives and techniques.
3. Knowledge of common customer and associate theft methods and assigned market issues.
4. Knowledge of company guidelines regarding relevant local, state, and federal mandates.
5. Knowledge of personal job description, reporting, structure, and tasks.
6. Knowledge of company guidelines regarding detecting, surveilling, deterring/apprehending and processing offenders.
7. Knowledge of company guidelines regarding the area surrounding assigned stores.
8. Knowledge of company guidelines regarding company LP systems.
9. Knowledge of company guidelines regarding how to complete relevant company paperwork.
10. Knowledge of company guidelines regarding LP tasks.

#### **Skills**

1. Skill in focusing actions on assigned stores' most critical risks.
2. Skill in auditing and inspecting safety, risk, and operational issues and controls.
3. Skill in working with and influencing other employees to accomplish company goals.
4. Skill in communicating LP issues and techniques to company associates.
5. Skill in making decisions based on logic and company guidelines.

6. Skill in detecting dishonest customers and associates based on behavioral/alert signals.
7. Skill in surveilling and safely apprehending/deterring associate or customer thieves.
8. Skill in assessing and taking appropriate action in emergency situations.
9. Skill in self-assessment, improvement, and control.
10. Skill in using all job tools such as EAS, CCTV, e-mail and voicemail.
11. Skill in completely and legibly documenting and processing theft incidents.
12. Skill in oral communication.
13. Skill in judging the severity of emergency situations.

#### **Abilities**

1. Ability to read, understand, retain, and explain LP objectives, procedures, guidelines and relevant laws and regulations.
2. Ability to understand and carry out verbal and written instructions.
3. Ability to detect, surveil, follow, apprehend and properly process dishonest customer and associates.
4. Ability to work assigned schedule and locations.
5. Ability to hear phoned, radioed, other spoken indications of theft and other risks.
6. Ability to write reports and other paperwork per company guidelines.
7. Ability to read at the 10<sup>th</sup> grade level.
8. Ability to visually surveil store property for possible theft and other risks.
9. Ability to restrain a 150 pound adult.

#### **Other Characteristics**

1. Willingness to work for the needs of the business (i.e. assigned location and times).
2. Willingness to work professionally with all company staff and managers.

3. Willingness to take direction from supervisors and others.
4. Willingness to exercise self-control and follow company guidelines and relevant laws.
5. Willingness to continue learning and improving work performance.
6. Willingness to work without close supervision and in an environment with varying activity levels.
7. Willingness to exercise patience, surveil, apprehend offenders, and process them through final disposition.
8. Willingness to process incidents for official sanction and testify, if required.
9. Willingness to properly complete all paperwork.
10. Willingness to act ethically in the workplace.
11. Willingness to maintain strict confidentiality about company and sensitive matters.

## **APPENDIX G**

### **TASK AND KSAO MATRICES**

*(This page is intentionally blank)*



## Awareness – Associate Training & Motivation

<p><b>K = Knowledge</b>  <b>S = Skills</b>  <b>A = Abilities</b>  <b>O = Other Characteristics</b>  <b>CG = Company Guidelines</b></p>		<p><b>Record the task statements in the horizontal rows.</b>  <b>Record the KSAO requirements in the vertical spaces</b>  <b>For each task, evaluate which KSAOs are required and place check marks in the appropriate spaces.</b></p>	
<b>Task Statement:</b>	<b>KSAO Requirements:</b>		
Promote the company tip line	Company Guidelines regarding retailing objectives & operations	K-	✓
Promote loss prevention awareness in a store meeting	Company guidelines regarding L P objectives and techniques	K-	✓
"Walk and Talk" loss prevention awareness with all associates	Common customer & associate theft methods and market issues assigned	K-	✓
Conduct a loss prevention meeting in a store or D.C.	Company guidelines regarding relevant local, state and federal mandates.	K-	✓
Brief your supervisor and fellow store detectives on local L P issues	Personal Job description, reporting, structure and tasks.	K-	✓
Ensure associate awareness materials are distributed and displayed per procedure	C.G. @ detecting, surveilling, deterring/apprehending & processing offenders.	K-	✓
Develop or enhance store specific LP programs			
Brief store management daily on company and area LP issues and you planned activities	Focusing actions on assigned stores' most critical risks.	S-	✓
	Auditing & inspecting safety, risk & operational issues & controls.	S-	✓
	Working with and influencing other employees to accomplish company goals.	S-	✓
	Communicating L P issues & techniques to company associates.	S-	✓
	Making decisions based on logic & company guidelines.	S-	✓
	Detecting dishonest customers & associates based on behavioral/alert signals.	S-	✓
	Surveilling & safety apprehending/deter - associate or customer thieves.	S-	✓
	Assessing & taking appropriate action in emergency situations.	S-	✓
	Self-assessment, improvement & control.	S-	✓
	Using all job tools such as EAS, CCTV, email and voicemail.	S-	✓
	Read, understand, retain & explain L P objectives, procedures, guidelines & relevant laws & regulations.	A-	✓
		A-	✓
	Understand and carry out verbal & written instructions.	A-	✓
	Detect, surveil, follow, apprehend & properly process dishonest customers and associates.	A-	✓
	Work assigned schedule and locations.	A-	✓
	Hear phonetic, radioed, other spoken indications of theft and other risks.	A-	✓
	Write reports and other paperwork per company guidelines.	A-	✓
	Willingness to work for the needs of the business (i.e. assigned location and times).	C-	✓
	Willingness to work professionally with all company staff & managers.	C-	✓
	Willingness to take direction from supervisors and others.	C-	✓
	Willingness to exercise self-control and follow guidelines & relevant laws.	C-	✓
	Willingness to continue learning and improving work performance.	C-	✓
	Willingness to work without close supervision - and in an environment with varying activity levels.	C-	✓
	Willingness to exercise patience, survival - apprehend offenders and process them	C-	✓

## Apprehension – External Theft Resolutions

<p><b>K = Knowledge</b>  <b>S = Skills</b>  <b>A = Abilities</b>  <b>O = Other Characteristics</b>  <b>CG = Company Guidelines</b></p>		<p><b>Record the task statements in the horizontal rows.</b>  <b>Record the KSAO requirements in the vertical spaces</b>  <b>For each task, evaluate which KSAOs are required and place check marks in the appropriate spaces.</b></p>	
<p><b>Task Statement:</b></p>		<p><b>KSAO Requirements:</b></p>	
Surveil suspected shoptheives to observe the 5 elements of proof prior to making app	✓	K-	Company Guidelines regarding retailing objectives & operations
Approach and detail shoptheives per company guidelines (safety & procedures)	✓	K-	Company guidelines regarding L P objectives and techniques
Complete all shoptheft reports per procedure and contact DLPML/PDM	✓	K-	Common customer & associate theft methods and market issues assigned
Escort shopthief to office while alert for escape, attack or evidence disposal	✓	K-	Company guidelines regarding relevant local, state and federal mandates.
Document and secure evidence per company & local guidelines	✓	K-	Personal Job description, reporting, structure and tasks.
Cleanse shopthief detention area of potential weapons and evidence hiding spots	✓	K-	C.G. @detecting, surveilling, deterring/apprehending & processing offenders.
Refer offenders to law enforcement per company procedure	✓	S-	Focusing actions on assigned stores' most critical risks.
Follow up on all cases through final disposition - including testimony	✓	S-	Auditing & inspecting safety, risk & operational issues & controls.
Recognise theft methods including techniques, tools and devices	✓	S-	Working with and influencing other employees to accomplish company goals.
Document and report all known incidents on and around company property	✓	S-	Communicating L P issues & techniques to company associates.
Identify possible shoptheives based on first alert behaviours or by tip-offs	✓	S-	Making decisions based on logic & company guidelines.
Request store staff serve suspicious customers if unable to surveil them	✓	S-	Detecting dishonest customers & associates based on behavioral/alert signals.
Inform store management and staff of known shopthefts incidents & problems	✓	S-	Surveilling & safety apprehending/deter - associate or customer thieves.
Conduct associate witness training	✓	S-	Assessing & taking appropriate action in emergency situations.
Interview associate and customer theft witnesses, obtain statements and document	✓	S-	Self-assessment, improvement & control.
Issue trespass warnings	✓	S-	Using all job tools such as EAS, CCTV, email and voicemail.
		A-	Read, understand, retain & explain L P objectives, procedures, guidelines & relevant laws & regulations.
		A-	Understand and carry out verbal & written instructions.
		A-	Detect, surveil, follow, apprehend & properly process dishonest customers and associates.
		A-	Work assigned schedule and locations.
		A-	Hear planned, relayed, other spoken indications of theft and other risks.
		A-	Write reports and other paperwork per company guidelines.
		C-	Willingness to work for the needs of the business (i.e. assigned location and times).
		C-	Willingness to work professionally with all company staff & managers.
		C-	Willingness to take direction from supervisors and others.
		C-	Willingness to exercise self-control and follow guidelines & relevant laws.
		C-	Willingness to continue learning and improving work performance.
		C-	Willingness to work without close supervision - and in an environment with varying activity levels.
		C-	Willingness to exercise patience, surveil - apprehend offenders and process them through to final disposition.

## **Apprehension – Internal Theft Resolutions**

Record the task statements in the horizontal rows.  
Record the KSAO requirements in the vertical spaces  
For each task, evaluate which KSAOs are required and place check marks in the appropriate spaces.

**K = Knowledge**  
**S = Skills**  
**A = Abilities**  
**O = Other Characteristics**  
**CG = Company Guidelines**

**KSAO Requirements:**

### Company Guidelines regarding retailing objectives & operations

### Company guidelines regarding L P objectives and techniques

Common customer &amp; associate theft methods and market issues assigned

Comensory guidelines regarding relevant local, state and federal mandates.

Personal job description, reporting, structure and tasks.

**C. G. @Active surveillance determines/assessing & processing offenders.**

**Focussing actions on assigned stores' most critical risks.**

**Auditing & inspecting safety, risk & operational issues & controls.**

**Working with and influencing other employees to accomplish comp**

**Communicating L P issues & techniques to company associates.**

**Making decisions based on basic & common guidelines.**

Detection of known customers & associates based on links

Surveillances & safety assessments/deter - associate or customer thieves

**Abstract 2:** Police communication action in emergency situations

Self-assessment instrument  continue

Joining all job tasks such as EAS CCTV

---

**Read, understand, retain & explain L P objectives, procedures, guidelines & relevant laws & regulations.**

**Discontinue and carry out verbal as written instructions.**

**Direct, indirect, follow-up, apprehended or property process diaphanous customers and associates.**

**Work assigned schedule and locations.**

**FROM PROBABLY THE MOST COMMON SPOKEN INDICATIONS OF UNWELL AND DEMENT PATIENTS.**

**Write reports and other paperwork per company guidelines.**

**Willingness to work for the needs of the business (i.e. assigned location and times).**

**Willingness to work professionally with all company staff & managers.**

**Willingness to take direction from supervisors and others.**

**Willingness to exercise self-control and follow guidelines & relevant laws.**

**Willingness to continue learning and improving work performance.**

Willingness to work without close supervision - and in an environment with varying activity levels.

**Willingness to exercise patience, surveil, - apprehend offenders and process them through to final disposition.**

## **Auditing – Assessing & Supporting LP Procedures, Programs & Systems**

<b>K = Knowledge</b> <b>S = Skills</b> <b>A = Abilities</b> <b>O = Other Characteristics</b> <b>CG = Company Guidelines</b>		<b>Record the task statements in the horizontal rows.</b> <b>Record the KSAO requirements in the vertical spaces</b> <b>For each task, evaluate which KSAOs are required and place check marks in the appropriate spaces.</b>	
<b>Task Statement:</b>		<b>KSAO Requirements:</b>	
Communicate audit issues to store manager and provide advice where appropriate	✓	K-	Company Guidelines regarding retailing objectives & operations
Check burglar alarm and panic door systems monthly	✓	K-	Company guidelines regarding L P objectives and techniques
Inspect the interior and exterior of the store for L.P. fire and safety risks	✓	K-	Common customer & associate theft methods and market issues assigned
Perform opening and closing store checks	✓	K-	Company guidelines regarding relevant local, state and federal mandates.
Conduct random audits of store LP procedures and systems in a positive way	✓	K-	Personal Job description, reporting, structure and tasks.
Follow up on past audit problems	✓	K-	C.G. @detecting, surveilling, deterring/apprehending & processing offenders.
Conduct random locker, package & purse checks	✓	S-	Focusing actions on assigned stores' most critical risks.
Check the EAS systems and tagging compliance each shift	✓	S-	Auditing & inspecting safety, risk & operational issues & controls.
	✓	S-	Working with and influencing other employees to accomplish company goals.
	✓	S-	Communicating L P issues & techniques to company associates.
	✓	S-	Making decisions based on logic & company guidelines.
		S-	Detecting dishonest customers & associates based on behavioral/client signals.
		S-	Surveilling & safety apprehending/deter - associate or customer thieves.
		S-	Assessing & taking appropriate action in emergency situations.
	✓	S-	Self-assessment, improvement & control.
	✓	S-	Using all job tools such as EAS, CCTV, email and voicemail.
	✓	A-	Read, understand, retain & explain L P objectives, procedures, guidelines & relevant laws & regulations.
		A-	Understand and carry out verbal & written instructions.
		A-	Detect, surveil, follow, apprehend & properly process dishonest customers and associates.
	✓	A-	Work assigned schedule and locations.
	✓	A-	Hear phones, radios, other spoken indications of theft and other risks.
	✓	A-	Write reports and other paperwork per company guidelines.
	✓	C-	Willingness to work for the needs of the business (i.e. assigned location and times).
	✓	C-	Willingness to work professionally with all company staff & managers.
	✓	C-	Willingness to take direction from supervisors and others.
	✓	C-	Willingness to exercise self-control and follow guidelines & relevant laws.
	✓	C-	Willingness to continue learning and improving work performance.
	✓	C-	Willingness to work without close supervision - and in an environment with varying activity levels.
		C-	Willingness to exercise patience, surveil - apprehend offenders and process them through to final disposition.

## Area Focus & Task Prioritization

Record the task statements in the horizontal rows.  
Record the KSAO requirements in the vertical spaces.  
For each task, evaluate which KSAOs are required and place check marks in the appropriate spaces.

**K = Knowledge**  
**S = Skills**  
**A = Abilities**  
**O = Other Characteristics**  
**CG = Company Guidelines**

### KSAO Requirements:

[illegible]

### Area Focus & Task Prioritization (cont.)

Use all collated data to place EAS tags CCTV domes and work schedule	✓	✓	✓	✓	✓			✓				✓				✓			✓		✓			✓		✓	✓	✓	✓	✓	
Validate reported inventory data with spot or cycle counts and interviews	✓	✓		✓	✓			✓				✓				✓			✓		✓	✓			✓	✓	✓	✓	✓	✓	
Map local "hot spots" such as schools, flea markets, pawn shops, mass transit stops, highway exits, bars	✓	✓	✓	✓	✓			✓				✓				✓			✓		✓			✓		✓	✓	✓	✓	✓	
Interview local police, merchants mall operators and request annual crime data	✓	✓	✓	✓	✓			✓				✓				✓			✓		✓	✓			✓		✓	✓	✓	✓	
Plot EAS incidents for patterns	✓	✓	✓	✓	✓			✓				✓				✓			✓		✓			✓		✓	✓	✓	✓	✓	
Ensure our schedule appears random to others	✓	✓	✓	✓	✓			✓				✓				✓			✓		✓			✓		✓	✓	✓	✓	✓	

## Other Store Detective Actions

[illegible]

## APPENDIX H

### STORE DETECTIVE JOB PERFORMANCE ASSESSMENT

Please completely fill this assessment out in order to evaluate the **actual** job performance of this team member over the last 12 months. Strive to be as accurate as possible based on your observations and analysis. Do not try to reach a certain rating; grade each and every item objectively and separately. List the appropriate number by each question and total the sub-section. Total all sections at the bottom. Also, complete the separate rating.

Detective's Name \_\_\_\_\_  
Date of Assessment \_\_\_\_\_  
Rater's Name \_\_\_\_\_

Team Member # \_\_\_\_\_  
Assigned Store(s) \_\_\_\_\_  
Rater's Assoc. # \_\_\_\_\_

I. **Job Knowledge:** Consider the amount of required job knowledge this employee has.  
(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations, 3=Exceeds Expectations; 4=Outstanding)

A. Company goals & LP's role \_\_\_\_\_ D. LP prevention techniques \_\_\_\_\_  
B. Company LP procedures \_\_\_\_\_ E. Surveillance & apprehension techniques \_\_\_\_\_  
C. Relevant laws \_\_\_\_\_ F. Key indicators of theft \_\_\_\_\_  
Employee Job Knowledge Sub-Total \_\_\_\_\_

II. **Job Skills:** Consider the utilization of skills needed to perform this job by this employee.  
(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations, 3=Exceeds Expectations; 4=Outstanding)

A. Informing and inspiring others to prevent \_\_\_\_\_ D. Report writing \_\_\_\_\_  
B. Detecting and apprehending offenders \_\_\_\_\_ E. Working without close supervision \_\_\_\_\_  
C. Targeting high-risk problems & prioritizing LP actions \_\_\_\_\_ F. Auditing skills \_\_\_\_\_  
Employee Job Skills Sub-Total \_\_\_\_\_

III. **Job Productivity/Results:** Consider the actual results (i.e. lower losses) achieved as a result of the work effort.  
(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations, 3=Exceeds Expectations; 4=Outstanding)

A. LP Tasks (staff awareness, audits, etc) \_\_\_\_\_ B. External Theft Resolutions \_\_\_\_\_  
C. Internal Theft Resolutions \_\_\_\_\_ Employee Job Productivity Sub-Total \_\_\_\_\_



IV. **Professional Reliability:** *Consider the consistency and reliability of this employee's work efforts.*  
(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations; 3=Exceeds Expectations; 4=Outstanding)

- A. Consistently on time and prepared for work \_\_\_\_\_ C. High-Quality work effort \_\_\_\_\_  
B. Completes assignments \_\_\_\_\_ D. Meets changing demands of work situation \_\_\_\_\_

Employee Professional Reliability Sub-Total \_\_\_\_\_

V. **Professional Judgement:** *Consider the quality and consistency of this employee's decision-making.*

(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations; 3=Exceeds Expectations; 4=Outstanding)

- A. Consistently makes good business decisions \_\_\_\_\_  
B. Consistently makes ethical/honest decisions \_\_\_\_\_  
C. Maintains confidentiality & respect for others \_\_\_\_\_  
D. Makes decisions & takes decisive action \_\_\_\_\_  
E. Consistently exhibits proper amount of self-control with suspects & detained offenders \_\_\_\_\_

Employee Professional Judgement Sub-Total \_\_\_\_\_

VII. **Future Promotability Potential:** *Consider the employee's leadership and organizational potential.*  
(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations; 3=Exceeds Expectations; 4=Outstanding)

- A. Potential as an investigator \_\_\_\_\_ E. Organizational abilities \_\_\_\_\_  
B. Potential as a trainer \_\_\_\_\_ F. Level of technical knowledge & skill \_\_\_\_\_  
C. Potential as a leader & supervisor \_\_\_\_\_ G. Exercises initiative \_\_\_\_\_  
D. Demeanor & Appearance \_\_\_\_\_  
H. Corporate political savvy (using resources) \_\_\_\_\_

Employee Future Promotability Sub-Total \_\_\_\_\_

VI. **Inter-Personal Skills & Behavior:** *Consider the employee's inter-personal skills and actual behaviors.*

(0=Unsatisfactory; 1=Clear Development Needs; 2=Meets Expectations; 3=Exceeds Expectations; 4=Outstanding)

- A. Consistently works well with fellow store and LP associates (teamwork) \_\_\_\_\_  
B. Consistently respects others in the workplace (diversity) \_\_\_\_\_  
C. Creates a network of professional contacts (LP, law enforcement, etc.) \_\_\_\_\_  
D. Uses the right message or tone to motivate different groups (employees, managers, etc.) \_\_\_\_\_  
E. Uses the right message or tone to process shoplifters \_\_\_\_\_

Employee Interpersonal Skills Sub-Total \_\_\_\_\_

Total Rating Score \_\_\_\_\_  
Add up sub totals from Sections I – VII

**Separate Overall Job Performance Rating**  
Please rate this associate's job performance last year:  
(0-4)

\_\_\_\_\_

(4 – Outstanding, 3 – Exceeds Expectations, 2 – Meets Expectations, 1 – Clear Development Needs, 0 – Unsatisfactory)

## APPENDIX I

### STORE DETECTIVE JOB PROFILER

Name \_\_\_\_\_

Date: \_\_\_\_\_

Title \_\_\_\_\_

Your Associate # \_\_\_\_\_

This survey is designed to determine which personality traits you feel based on experience are desirable, undesirable, or unapplicable for our store detectives.

**There are 2 steps to completing this Job Profiler.**

**Step 1:** For each of the 30 traits described below, indicate whether the trait is relevant to this particular job. Not all of the traits are expected to be relevant to this job. A trait is relevant to the degree that having or not having the trait will influence job performance. If the trait is **relevant** circle the name of the trait.

**Step 2:** For all traits that you consider relevant, indicate whether the trait is:

- **Very Undesirable (VU)**
- **Somewhat Undesirable (SU)**
- **Somewhat Desirable (SD)**
- **Very Desirable (VD)**

by placing a check under the appropriate letters. Undesirable traits are expected to have a *negative* impact on job performance. Desirable traits are expected to have a *positive* impact on job performance. Traits not considered relevant should be checked under NA.

The descriptions given below attempt to suggest both the positive and negative aspects of each of 30 traits; consider both the strengths and the limitations of levels of this trait. Recall also that different positions will require different characteristics in the employee, and base your ratings on the requirements of this position, **not on the desirability of the trait in general.**

Description of the Trait		Please Rate the Trait				
		VU	SU	NA	SD	VD
N:1	<b>Calmness</b> Relaxed, unconcerned, not sensitized to potential problems or difficulties	[ ]	[ ]	[ ]	[ ]	[ ]
E:1	<b>Personality</b> Friendly, talkative, eager to interact on a personal level with many others	[ ]	[ ]	[ ]	[ ]	[ ]
O-1	<b>Imagination</b> Imaginative, creative, dreamy; prone to let mind wander off into daydreams	[ ]	[ ]	[ ]	[ ]	[ ]
A-1	<b>Trust</b> Trusting, takes others at their word uncritically, can be gullible	[ ]	[ ]	[ ]	[ ]	[ ]
C-1	<b>Competence</b> Capable, confident, well-prepared; takes pride in common sense and prudence	[ ]	[ ]	[ ]	[ ]	[ ]

		VU	SU	NA	SD	VD
N-2	<b>Even-Temperament (vs. Angry Hostility)</b> Slow to anger or take offense, mild-tempered and easy-going	[ ]	[ ]	[ ]	[ ]	[ ]
E-2	<b>Sociability</b> Likes to be around people, sociable; finds it hard to be or work alone	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
O-2	<b>Openness to Aesthetics</b> Sensitive to art and beauty, intrigued by patterns; concerned with aesthetics	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
A-2	<b>Straightforwardness</b> Frank, candid, interpersonally open; unable to manipulate others or conceal information	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
C-2	<b>Organizational Skills/Order</b> Well-organized, tidy, methodical; exacting and fastidious	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
N-3	<b>Contentment (vs. Depression)</b> Content and imperturbable, rarely feels discouraged, not prone to guilt feelings	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
E-3	<b>Assertiveness</b> Forceful and assertive, assumes positions of leadership, likes to be in charge	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
O-3	<b>Openness to Feelings</b> Emotionally sensitive, empathetic, attuned to own and others' feelings	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
A-3	<b>Altruism</b> Generous, giving, courteous; not prone to put own interests first; soft-hearted	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
C-3	<b>Integrity/Dutifulness:</b> Upright and scrupulous, a stickler for rules, can be moralistic	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
N-4	<b>Poise (vs. Self-Consciousness)</b> Confident in social groups, not easily embarrassed, insensitive to status differences	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
E-4	<b>Energy/Activity</b> Energetic, lively, high activity level; may find sedentary work unappealing	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
O-4	<b>Openness to Change</b> Adapts well to novelty, needs variety, bored by routine.	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]

A-4	<b>Compliance</b> Gets along with others, cooperative, unwilling to raise objections or express disagreement	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
C-4	<b>Achievement Striving</b> Ambitious, strives for excellence, has high standards; may be a "workaholic"	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
N-5	<b>Self-Control (vs. Impulsiveness)</b> Resists temptation/ controls drives and urges; not excitable	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
E-5	<b>Excitement Seeking</b> Seeks excitement, adventurous and daring, takes unnecessary risks for thrills	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
O-5	<b>Openness to Ideas</b> Intellectually curious; questioning, needs stimulation of new ideas	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
A-5	<b>Modesty</b> Humble, self-effacing, defers to others, unwilling to promote self	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
C-5	<b>Self-Discipline</b> Persistent, productive, does not procrastinate, tends to push self	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
N-6	<b>Resilience/Hardiness (vs. Vulnerability)</b> Self-reliant, copes well with crises; can deal with stress	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
E-6	<b>Positive Emotions</b> Cheerful, high-spirited, buoyant in mood; laughs readily	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
O-6	<b>Openness to Values</b> Independent in judgement, high moral reasoning, questions authority	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
A-6	<b>Sympathy</b> Sympathetic, humanitarian; swayed by human feelings over rational judgment	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
C-6	<b>Deliberation</b> Cautious, thoughtful, makes careful plans; may lack spontaneity	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]
I-1	<b>Intelligence and Cognitive Capacity</b> Bright, quick learner, thoughtful, understands concepts not just tasks	VU [ ]	SU [ ]	NA [ ]	SD [ ]	VD [ ]

## APPENDIX J

### STORE DETECTIVE INDIVIDUAL CHARACTERISTIC SHEET

Please be as accurate as possible. All answers will be kept confidential. No individual's answers will be shared with the company.

<p>Your Age in Years</p> <p>(1) _____</p> <p>Your Education in Years (1 - 20)</p> <p>(2) _____</p> <p>Your Total LP Experience in Years (All companies)</p> <p>(3) _____</p> <p>Your Total LP Experience in Years (This company)</p> <p>(4) _____</p> <p>Name: _____</p>	<p>Your Current Position</p> <p>_____</p> <p>Please rate <b>–your–</b> current job satisfaction (4-Outstanding, 3-Exceeds Expectations, 2-Meets Expectations, 1-Clear Development Needs, 0- Unsatisfactory)</p> <p>(5) _____</p> <p>Please rate <b>–your–</b> job performance over the last year (4-Outstanding, 3-Exceeds Expectations, 2-Meets Expectations, 1-Clear Development Needs, 0- Unsatisfactory)</p> <p>(6) _____</p> <p>Please rate your <b>-supervisor's-</b> performance over the last year (4-Outstanding, 3-Exceeds Expectations, 2-Meets Expectations, 1-Clear Development Needs, 0- Unsatisfactory)</p> <p>(7) _____</p> <p>Today's Date</p> <p>_____</p>
--	--

Please place the completed *NEO* survey, *NEO* workbook, and this form in the mailer envelope and mail it to our office within 72 hours of receiving this packet

## APPENDIX K

### SUPERVISOR INDIVIDUAL CHARACTERISTICS

Please be as accurate as possible. All answers will be kept confidential. No individual's answers will be shared with the company.

<p>Your Age in Years</p> <p>(1) _____</p> <p>Your Education in Years (1 - 20)</p> <p>(2) _____</p> <p>Your Total LP Experience in Years (All companies)</p> <p>(3) _____</p> <p>Your Total LP Experience in Years (This company)</p> <p>(4) _____</p>	<p>Your Current Position</p> <p>_____</p> <p>Please rate <b>–your–</b> current job satisfaction (4-Outstanding, 3-Exceeds Expectations, 2-Meets Expectations, 1-Clear Development Needs, 0- Unsatisfactory)</p> <p>(5) _____</p> <p>Please rate <b>–your–</b> job performance over the last year (4-Outstanding, 3-Exceeds Expectations, 2-Meets Expectations, 1-Clear Development Needs, 0- Unsatisfactory)</p> <p>(6) _____</p> <p>Today's Date</p> <p>_____</p>
---	--

Please place the completed *Job Profiler*, Performance Rating(s), and *Store-Level Development* sheet in the mailer envelope and mail it to our office within 72 hours of receiving this packet.

## APPENDIX L

### COVER LETTER FROM RESEARCHER

September 24, 1999

Dear LP Team Member,

We need your expertise and experience. I am working with *your* Loss Prevention group to continue to enhance the store detective program. Our group is working on an innovative selection project and would like you to participate in our research by completing two surveys, and the *Store-Level Project* sheet.

By now, your supervisor should have administered the timed *Wonderlic* survey to you. **The contents of this package are to be completed at your home store while on company time and within your next two scheduled workdays of having completed the *Wonderlic* survey.**

The surveys, and the *Store-Level Project* sheet, deal mainly with traits and abilities LP Associates have and will take you less than 60 minutes to complete. In addition, the *NEO PI-R Personality Inventory* should take 20-30 minutes to complete. You **will not** be evaluated on any survey results and your participation is voluntary. Please follow all survey instructions and answer all questions to the best of your ability. You should take the *NEO PI-R* **first**; then complete the *Store-Level Project*.

The questionnaires should be completed anonymously. Your participation is voluntary, and no one at your company will know who completed any particular questionnaire. The only results that will be computed are those for all project participants grouped together as a whole. They will only know if everyone sent accurately completed surveys in on time.

The *NEO* survey booklet, surveys, and *NEO* answer sheet should be placed into the mailer envelope we provided, sealed, and returned completed **within 72 hours** of your receiving them.

Please **do not discuss** your surveys with any of your fellow team members until **after they** have completed theirs.

We appreciate your participation in this valuable project.

Sincerely,

Read Hayes  
Senior Consultant  
Loss Prevention Specialists  
5415 Lake Howell Road, Ste. 236  
Winter Park, FL 32792  
Phone (407)999-9511  
Fax (407)999-9504  
Email lps@lossprevention.com



## **APPENDIX M**

### **COVER LETTER FROM LP EXECUTIVE TO SELECTED STORE DETECTIVES**

Dear Loss Prevention Professional,

Our department is currently participating in a process improvement program with Read Hayes and Loss Prevention Specialists. The intent of this project is to maximize our in-store LP program by gathering feedback from our store-level LP team. Included in this packet are three short surveys which will allow us to continue improving the store detective program. Your participation is voluntary.

It is very important that you follow **all** instructions in the attached information packet so we can make the required improvements. I also want to stress that **none** of **your** individual answers, input or scores will be known to any of us at XXXXX. We will only be provided a general report of research findings. So please be as **accurate** as possible. Remember to keep your participation **confidential** to maximize our success.

I want to thank you in advance for your participation in this important project. Remember to closely follow the enclosed letter and all survey booklet instructions; and if you have any questions please contact Read Hayes at (407) 999-9511.

Sincerely,

XXXXXX

Vice President of Loss Prevention

XXXXXX

## APPENDIX N

### REGRESSION MODELS

#### Model for Explaining Total Job Performance Rating

##### Model Summary

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	.454	.206	.177	2.055

##### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17147.202	7	2449.600	7.040	.000(a)
	Residual	66113.793	190	347.967		
	Total	83260.995	197			

##### Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	46.569	15.045		3.095	.002					
	LPEXOTHR	-.630	.275	-.150	-2.292	.023	-.197	-.164	-.148	.978	1.023
	angry hostility	-1.393	.407	-.282	-3.419	.001	-.245	-.241	-.221	.613	1.632
	Aesthetics	-.759	.293	-.190	-2.587	.010	-.048	-.184	-.167	.777	1.286
	Depression	.765	.413	.149	1.852	.066	-.100	.133	.120	.642	1.559
	feelings	1.172	.423	.210	2.773	.006	.086	.197	.179	.730	1.369
	values	1.250	.381	.218	3.276	.001	.227	.231	.212	.943	1.060
	Conscientiousness-Deliberation	.968	.347	.205	2.794	.006	.221	.199	.181	.773	1.294

## Model for Explaining Job Productivity (External Theft Resolution) Rating

### Model Summary

Model	R	R Square	Adjusted Square R	Durbin-Watson
1	.426(a)	.182	.156	2.081

### ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.260	6	4.210	7.070	.000(a)
	Residual	113.735	191	.595		
	Total	138.995	197			

### Coefficients(a)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.291	.466		2.773	.006					
	LPEXOT HR	-3.167E-02	.011	-.184	-2.794	.006	-.194	-.198	-.183	.985	1.015
	store detective's gender	-.295	.141	-.143	-2.097	.037	-.172	-.150	-.137	.924	1.083
	trust	2.613E-02	.013	.139	2.056	.041	.152	.147	.135	.933	1.072
	aesthetics	-3.747E-02	.011	-.229	-3.399	.001	-.190	-.239	-.223	.942	1.062
	Extraversion-Assertiveness	4.789E-02	.014	.228	3.357	.001	.186	.236	.220	.928	1.077
	modesty	3.567E-02	.016	.160	2.279	.024	.089	.163	.149	.867	1.153

## Model for Explaining Potential Future Supervisor Rating

### Model Summary

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	.396(a)	.157	.130	2.088

### ANOVA

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	30.897	6	5.150	5.910	.000(a)
	Residual	166.421	191	.871		
	Total	197.318	197			

### Coefficients(a)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.972	.736		1.320	.188					
	Wonderlic Personnel Test Score	2.842E-02	.012	.164	2.409	.017	.154	.172	.160	.956	1.046
	LPEXOTHR	-2.545E-02	.014	-.124	-1.856	.065	-.155	-.133	-.123	.985	1.016
	angry hostility	-4.032E-02	.018	-.168	-2.265	.025	-.225	-.162	-.151	.804	1.244
	Extraversion-Gregariousness	-3.073E-02	.016	-.134	-1.960	.051	-.063	-.140	-.130	.939	1.064
	values	4.410E-02	.019	.158	2.345	.020	.173	.167	.156	.971	1.030
	Conscientiousness-Deliberation	4.013E-02	.017	.175	2.396	.018	.220	.171	.159	.829	1.206

## **APPENDIX O**

### **WONDERLIC PERSONNEL TEST**

The WPT is an ability test that is composed of three types of items: vocabulary, arithmetic reasoning, and spatial relations. According to Hunter (1989), the WPT is psychologically equivalent to other known measures of cognitive ability in the literature. The correlation between the U. S. Employment Service GATB and the WPT is .75. When corrected for attenuation the correlation between the two measures is .90. The uncorrected correlation between the Wechsler Adult Intelligence Scale (WAIS), a well-established measure of intelligence for adolescents and adults, is .93, and approaches unity when corrected for attenuation. These studies provide evidence that the WPT is a construct valid measure of cognitive ability. Across forms, test-retest reliabilities reported in the test manual range from .82 to .94. Alternate form reliabilities range from .73 to .95, while other measures of internal consistency (e.g., alpha, KR-20) range from .88 to .94 (see Wonderlic Personnel Test Manual, 1983).

The WPT Form IV is a four page instrument consisting of five sections. The first section is about the Wonderlic Personnel Test. It describes the form as a test of problem-solving ability. Which contains various types of questions which must be solved with out a calculator.

The second section ask for the participant's name, the date, their Social Security number, and the position they are applying for. The third section explains the test directions such as the 50 questions increase in difficulty, and that test takers are unlikely to finish all of them. The test is 12 minutes, and all answers should be placed in the proper brackets. Section four contains three sample questions. All three contain the correct answers.

The final section contains the 50 questions on two pages. The questions are quantitative and verbal in nature. Examples include: words that are either the opposite of, or similar to, example words; similar or dissimilar word meanings; complete number sequences given several numbers; advanced addition and subtraction; drawing lines to create squares with geometric figures; assuming two statements are true, is the next statement true or false; and identify which fraction does not fit with the others in a sequence.

The Wonderlic instrument is copyrighted, and discussed in more detail in Chapter 4, for further information, readers can contact:

Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Avenue  
Libertyville, IL 60048, USA  
(800) 323-3742

## **APPENDIX P**

### **NEO PI-R**

The NEO-PI-R was designed to provide a general description of normal personality relevant to clinical, counselling and educational situations. Based on the Five-Factor model of personality, the NEO-PI-R is comprised of 243 items; the 240 facet and domain items are rated on a 5-point scale (3 validity items are also included). The test may usually be completed within 45 minutes.

The purpose of the test is to establish an accurate assessment of a participant's personality using the five facets of personality. The five domains (factors) measured by the NEO-PI-R provide a general description of personality, while the facet scales allow more detailed analysis. These five factors and their facet scales include: NEUROTICISM: Anxiety, Hostility, Depression, Self-consciousness, Impulsiveness, Vulnerability; EXTRAVERSION: Warmth, Gregariousness, Activity, Excitement-Seeking, Positive Emotions; OPENNESS TO EXPERIENCE: Fantasy, Aesthetics, Feelings, Actions, Ideas, Values; AGREEABLENESS: Trust, Modesty, Compliance, Altruism, Straightforwardness, Tender-Mindedness; CONSCIENTIOUSNESS: Competence, Self-discipline, Achievement, Deliberation, Dutifulness, Order.

The NEO is based on the Five-Factor Model of personality established by Goldberg.

The test is designed to be used in many circumstances.

The first domain of the NEO-PI is Neuroticism, which is designed to assess adjustment vs. emotional instability. A high score in Neuroticism does not mean a person is neurotic; this person could simply be very emotional. The six subscales of Neuroticism are: anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability.

The second domain is Extraversion, which assesses how often, and how intense, a participant's interpersonal interactions are. The six subscales include: warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. High scores are not intended as a means to group people as an extravert versus as an introvert. The third domain, often called Openness, is actually labeled Openness to Experience. This is an assessment of behavior which affects how one sees new and varying experiences. In addition, it is an assessment of toleration for these experiences. The six subscales are: fantasy (imaginative vs. realistic), aesthetics (sensitive vs. insensitive to art and beauty), feelings (empathetic towards surroundings vs. insensitive to surroundings), actions (seeks variety vs. preference of the familiar), ideas (intellectually curious vs. factually orientated), and values (broadminded and tolerant vs. dogmatic and conforming).

Agreeableness is the fourth domain. These facets include trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness. The



fifth domain, Conscientiousness, includes the facets: competence, order, dutifulness, achievement striving, self-discipline, deliberation (Costa & McCrae, 1992).

The NEO-PI-R is known to be an inventory with high reliability. It has high internal consistency with coefficients that range from .86 to .95 for domain scales, and .56 to .90 for facet scales. In longitudinal studies of the NEO factors, stability coefficients of .51 to .83 were found. This test has also been found to have higher validity than other personality inventories.

The NEO-PI-R Form S (self-administered) item booklet is eight pages long, and designed to be completed by a subject with minimal direction in approximately 45 minutes. The hand scoring sheet is a computer scored fill in the proper slot with a pencil or pen form. The responses are SD- strongly disagree, D- disagree, N- neutral, A- agree, SA- strongly agree. The answer sheet also records the participant's name, age, gender, date of test, and a unique identification number if desired.

The booklet contains a page of instructions with sample questions for reference. Pages 3-8 contain the 240 questions. All facets are mixed randomly throughout the booklet. Example questions include: I laugh easily; I'm pretty set in my ways; I often crave excitement; and I try to be courteous to everyone I meet. As mentioned,

all questions can be responded to with SD, D, N, A, and SA marks on the answer form.

Like the WPT, the NEO PI-R is copyrighted and reviewed in more detail in

Chapter 4. Further information on the instrument may be obtained by contacting:

Psychological Assessment Resources, Inc.  
P.O. Box 998  
Odessa, FL 33556, USA  
(800) 331-8378

## APPENDIX Q

### GLOSSARY OF TERMS

As used in this study, the following words, terms, and phrases are operationally defined as follows:

Loss: - The term loss refers to the deprivation of any asset (i.e., people, reputation, cars, time, cash, supplies, or merchandise) through normal processes, errors, negligence, accidents, and theft. Dimensions of loss include item out of stocks (no on-shelf availability of an item for buying customers), fear of crime (avoidance behavior- avoiding a location, reducing visit durations, or moving visits to hours of daylight), and loss of operating cash.

Loss Prevention Loss prevention is also referred to as LP, Asset(s) Protection, Loss Control, and Security) Efforts to: 1. Reduce *loss events* (such as crime and error) through increased deterrence, monitoring, and training, 2. Reduce *actual losses* from loss events (i.e., reduce the amount of cash and other assets lost from individual or cumulative loss events,) through quick incident detection and response, or 3. Reduce the *impact of actual losses* on an organization through insurance claims, tax write-offs, asset recovery, etc. Loss Prevention can also mean the actual reduction of loss- and not just the efforts to reduce loss. Loss Prevention takes place throughout organizations including buying operations, distribution/logistics operations, office and administrative operations, and store

and other selling (internet, catalog, etc.) operations; and involves actions by all company staff.

Shrinkage - The loss or degradation in value of inventory by normal processes, errors, negligence, and theft. This loss can occur throughout the entire supply chain from manufacture to the selling floor.

Store Detectives - (Also referred to as detectives, specialists, and operatives.) Generally store-level loss prevention associates charged with reducing crime and loss in their assigned store or area by identifying and prioritizing local loss risks, apprehending and processing external and internal offenders, auditing security procedures for compliance and follow up, and making non-loss prevention staff aware of asset protection issues and activities.

## REFERENCES

- Adler, S. (1996) Personality and Work Behavior: Exploring the Linkages. Applied Psychology: An International Review, 45, 3, 207-224.
- Allport, G. W., and Odbert, H. S. (1936) Trait names: A psycho-lexical study. Psychological Monographs, 47, 211.
- American Psychological Association, Division of Industrial-Organizational Psychology. (1987). Principles for the validation and use of personnel selection procedures (3rd Ed.). Berkley, CA: APA.
- American Psychological Association (1985) Standards for Educational and Psychological Testing. Washington, DC: APA.
- Anastasi, A. (1988) Psychological Testing. New York: Macmillan.
- Angleitner, A., Ostendorf, F., and John, O. P. (1990) Towards a taxonomy of personality descriptions in Germany: A psycho-lexical study. European Journal of Personality, 4, 2, 89-118.
- Arthur, D. (1998) Recruiting, Interviewing, Selecting and Orienting New Employees (3rd Ed.). New York: American Management Association.
- Arvey, R. D., and Murphy, K. R. (1998). Performance evaluation in work settings. Annual Review of Psychology, 49, 141-168.
- Ashton, M.C. (1998) Personality and job performance: The importance of narrow traits. Journal of Organizational Behavior, 19, 3, 289-303.
- Axelrod, A. D., and Elkind, T. (1976) Merchants' Responses to Shoplifting: An Empirical Study. Stanford Law Review, 28, 589,596, 609-612.
- Bamfield, J. (1997) Fighting Retail Crime: How Major Retailers Curb Theft from Shops. London: ICL Retail Systems.
- Bamfield, J. (1998) Retail Civil Recovery: Filling a Deficit in the Criminal Justice System? International Journal of Risk, Security and Crime Prevention, 3, 4, 257-267.
- Bamfield, J., and Hollinger, R. C. (1996) Managing losses in the retail store: A comparison of loss prevention activity in the United States and Great Britain. Security Journal, 7, 1, 61-70.

- Barnett, G. V., and Depinet, R. L. (1991) A reconsideration of testing for competence rather than intelligence. American Psychologist, 46, 1012-24.
- Barrett, G., Phillips, J., and Alexander, R. (1981). Concurrent and predictive validity designs: A critical re-analysis. Journal of Applied Psychology, 66, 1-6.
- Barrick, M. R., and Mount, M. K. (1993) Autonomy as a moderator of the relationships between the Big Five personality dimensions and job performance. Journal of Applied Psychology, 78, 111-118.
- Barrick, M. R., and Mount, M. K. (1991) The Big Five Personality Dimensions and Job Performance. Personnel Psych, 44, 1-26.
- Barrick, M. R., Stewart, G. L., Neubert, M., and Mount, M. K. (1998) Relating member ability and personality to work team processes and team effectiveness. Journal of Applied Psychology, 83, 377-391.
- Bauer, T., Maertz, D., Dolen, M., and Campion, M. (1998) Longitudinal assessment of applicant reactions to employment testing and test outcome feedback. Journal of Applied Psychology, 83, 892-903.
- Baumer, T. L., and Rosenbaum, D. P. (1984) Combating Retail Theft: Programs and Strategies. Stoneham, MA: Butterworth, 115-124.
- Beck, A., and Willis A. (1995) Crime and Security: Managing the Risk to Safe Shopping. Leicester: Perpetuity Press.
- Beck-Dudley, C. L., and McEvoy, G. M. (1991) Performance appraisals and discrimination suits: Do courts pay attention to validity? Employee Responsibilities and Rights Journal, 4, 2, 149-163.
- Behling, O. (1998) Employee selection: Will intelligence and conscientiousness do the job? Academy of Management Executives, 12, 1, 77-86.
- Bing, M.N. (2000) Openness and job performance in US-based Japanese manufacturing companies. Journal of Business and Psychology, 14, 3, 515-522.
- Blalock, H.M. (1979) Social Statistics. 2<sup>nd</sup> Edition, New York: McGraw Hill, 382-447.
- Blankenburg, E. (1976) The Selectivity of Legal Sanction: An Empirical Investigation of Shoplifting. Law and Society, 109-130.
- Blaxter, L., Huges, C. and Tight, M. (1996). How to research. New York, NY: Open Press University.

- Bok, D. 1993. The cost of Talent. New York, NY: Free Press.
- Borman, W. C., Hanson, M. A., and Hedge, J. W. (1997) Personnel Selection. Annual Review of Psychology, 48, 299-337.
- Borman, W. C., Hanson, M. A., Oppler, S. H., Pulakos, E. D., and White, L. A. (1993) Role of early supervisory experience in supervisor performance. Journal of Applied Psychology, 78, 443-449.
- Borman, W. C., White, L. A., and Dorsey, D. W. (1995) Effects of ratee task performance and interpersonal factors on supervisor and peer performance ratings. Journal of Applied Psychology, 80, 168-177.
- Borofsky, G. L., and Watson, R. (1994) Prediction of Early Voluntary Turnover and Job Performance: The Contribution of a Pre-employment Screening Inventory. Psychological Reports, 74, 817-826.
- Bouchard, T. J., Lykken, D. T., McGue, M., and Segal, N. L. (1990) Sources of human psychological differences: The Minnesota Study of Twins Reared Apart. Science, 250, 4978, 223-228.
- Briggs, S. R. (1989) The optimal level of measurement for personality constructs. In D. M. Buss, and M. C. Cantor (Eds.), Personality psychology: Recent trends and emerging directions. New York: Springer-Verlag, 201-209.
- British Retail Consortium (1999) Retail Crime Survey.
- Brodt, S. J. (1994) Shoplifting and Amateur Shoplifters In the 90's: A Case Study. Journal of Security Administration, 17, 2, 11-20.
- Brough, M., and Brown, D. (1989) Every Retailer's Guide to Loss Prevention. North Vancouver: Self-Counsel Press, 90-92.
- Brown, R.T. (1999) The relationship of general cognitive ability, 'working smart,' and salesperson performance. Unpublished doctoral dissertation, Southern Illinois University at Carbondale.
- Buckle, A., and Farrington, D. P. (1984) An Observational Study of Shoplifting. British Journal of Criminology, 24, 1, 63-73.
- Bunce, D., and West, M.A. (1995) Self perceptions and perceptions of group climate as predictors of individual innovation at work. Applied Psychology: An International Review, 44, 199-215.

Burke, B. G., Sanser, W. I., Kemery, E. R., and Dyer, F. N. (1989) Intelligence and Physical Fitness as Predictors of Success in Early Infantry Training. Perceptual and Motor Skills, 69, 263-271.

Butler, G. (1994) Shoplifters views on security: lessons for crime prevention. In M. Gill. (Ed.), Crime at Work: Studies in Security and Crime Prevention. Leicester: Perpetuity Press.

Caliguiri, P. M. (2000) The Big Five personality characteristics as predictors of expatriates' desire to terminate the assignment and supervisor-rated performance. Personnel Psychology, 53, 1, 67-88.

Campbell, J. P. (1990) An overview of the Army General Selection and Classification Project (Project A). Personnel Psychology, 43, 231-239.

Campbell, R.J., and Bray, D.W. (1993) Use of an assessment centre as an aid in management selection. Personnel Psychology, 46, 691-699.

Campion, M.A., Campion, J.E., and Hudson, J.P. (1994) Structured interviewing: A note on incremental validity and alternative question types. Journal of Applied Psychology, 79, 998-1002.

Carmines, E.G., and Zeller, R.A. (1979) Reliability and Validity Assessment. Newbury Park, CA: Sage Publications.

Carretta, T. R., and Ree, M. J. (1996) Factor Structure of the Air Force Officer Qualifying Test: Analysis and Comparison. Military Psychology, 8, 29-42.

Carroll, J. B. (1993) Human Cognitive Abilities: A Survey of Factor Analytic Studies. New York: Cambridge University Press.

Carroll, J. B. (1997) Psychometrics, Intelligence and Public Perception. Intelligence, 24, 1, 25-52.

Carroll, J., and Weaver, F. (1986) Shoplifters' Perceptions of Crime Opportunities: A Crime Process Tracing Study. In R. V. Clark (Ed.), Crime Prevention Studies, 3, Monsey, NY: Criminal Justice Press.

Carter, N., Holmstrom, A., Simpanen, M., and Melin, L. (1988) Theft Reduction in a Grocery Store through Product Identification and Graphing of Losses for Employees. Journal of Applied Behavior Analysis, 21, 4, 385-389.

Cascio, W. F. (2000) Costing Human Resources, (4th Ed). Boston: Kent Publishing Company.



Cash, P. T. Jr., and McCrae, R. R. (1992) NEO PI-R Professional Manual. Odessa, FL: Psychological Assessment Resources.

Cattell, R. B. (1971) Abilities: Their Structure, growth and action. Boston: Houghton-Mifflin.

Cattell, R. B. (1945) The description of personality: Principals and findings in a factor analysis. American Journal of Psychology, 58, 69-90.

Chan, D. (1996) Criterion and Construct Validation of an Assessment Centre. Journal of Occupational and Organizational Psychology, 69, 2, 167-182.

Civil Rights Act (1964)

Clarke, R.V. (1997) Situational Crime Prevention: Successful Case Studies (2<sup>nd</sup> Edition). Albany, NY: Harrow And Heston.

Cleary, J. (1986) Prosecuting the Shoplifter: A Loss Prevention Strategy. Stoneham, MA: Butterworth-Heinemann.

Cobb, W. E. (1982) Shoplifting. In Savitz, L. D. and Johnston, N. (Eds.), Contemporary Criminology. New York: John Wiley and Sons, 369-377.

Cohen, J. (1992) A Power Primer. Psychological Bulletin, 112, 1, 155-159.

Cohen, J., and Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum

Cohen, L.E., and Felson, M. (1979) Social Change and Crime Rate Trends: A Routine Activities Approach. American Sociological Review, 44, 588-608.

Cortina, J.M., Doherty, M.L., Schmitt, N. Kaufman, G., and Smith, R.G. (1992) The Big Five Personality Factors in the IPI and MMPI: Predictors of Police Performance. Personnel Psychology, 45, 119-141.

Costa, P. T. (1996) Work and Personality: use of the NEO PI-R in Industrial Organizational Psychology. Applied Psychology: An International Review, 45, 3, 225-241.

Costa, P. T., and McCrae, R. R. (1992a) Four Ways Five Factors are Basic. Personality and Individual Differences, 13, 6, 653-665.

Costa, P. T., and McCrae, R. R. (1992b) Revised NEO Personality Inventory and NEO Five Factor Inventory: Professional Manual. Odessa, FL: Psychological Assessment Resources.

Costa, Paul T., McCrae, R. R., and Dye, D. A. (1991) Facet Scales for Agreeableness and Conscientiousness: A Revision of the NEO Personality Inventory. Personality and Individual Differences, 12, 9, 887-898.

Costa, P.T., Jr., McCrae, R.R., and Kay, G.G. (1995) Persons, places, and personality: career assessment using the Revised NEO Personality Inventory. Journal of Career Assessment, 3, 2, 123-139.

Cox, D., Cox, A., and Moschis, G. (1990) When Consumer Behavior Goes Bad: An Investigation of Adolescent Shoplifting. Journal of Consumer Research, 17, (September) 149-158.

Craft, J. (1991) Using BioData as a Selection Instrument (Report No. ED338702). Baltimore, MD: Johns Hopkins University, Centre for Social Organization of Schools.

Craik, K. H.. (1993). Fifty years of personality psychology. New York, Plenum Press.

Cronbach, L. J., and Gleser, C. C. (1965). Psychological tests and personnel decisions (2<sup>nd</sup> ed.). Urbana, IL: University of Illinois Press.

Cupchick, W. (1997) Why Honest People Shoplift or Commit Other Acts of Theft. Toronto: Tagami Communications.

Curtis, R. (1983) Retail Security: Controlling Loss for Profit. Woburn, MA: Butterworths.

Dalessio, A., and Silverhart, T. (1994) Combining Biodata Test and Interview Information: Predicting Decisions and Performance Criteria. Personnel Psychology, 47, 303-315.

Dalton, M., and Wilson., M. (2000) The relationship of the Five Factor Model of Personality to Middle Eastern expatriate managers. Journal of Cross-Cultural Psychology, 31, 2, 250-258.

Dangot-Simpkin, G. (1990) Employee turnover can damage your career. Supervisory Management, 35, 3.

Davis, M. G., Lundman, R. J., and Martinez, R. (1991) Private Corporate Justice: Store Police, Shoplifters, and Civil Recovery. Social Problems, 38, 3, 398.

Dean, M.A. (1999) On biodata construct validity, and criterion-related validity, and adverse impact. Unpublished doctoral dissertation. Louisiana State University. Baton Rouge, LA.

Dean, M. A., and Russell, C.J. (1999) Life Experiences and Performance Prediction: Toward a Theory of Biodata. In G. Ferris (Ed.), Research in Personnel/Human Resources, JAI Press.

Detterman, D. K. (1994) Theoretical possibilities: The relation of human intelligence to basic cognitive abilities. In D. K. Detterman (Ed.), Current topics in human intelligence. Norwood, NJ: Ablex.

Diggen, M. (1995). Criminal Indictment-State of Florida vs. Albertsons, Inc. Palm Beach: Circuit Court of the Fifteenth Judicial Circuit of Florida.

Digman, J. M. (1990) Personality Structure: Emergence of the Five-Factor Model. Annual Review of Psychology, 41, 417-440.

Dodrill, C. B. (1981) An economical method for the evaluation of general intelligence in adults. Journal of Consulting and Clinical Psychology, 49, 668-673.

Dougherty, T.W., Turban, D.B., and Callender, J.C. (1994) Confirming first impressions in the employment interview: A field study of interviewer behavior. Journal of Applied Psychology, 79, 184-190.

Dreher, G. F., and Bretz, R. D. (1991) Cognitive Ability and Career Attainment: Moderating Effects of Early Career Success. Journal of Applied Psych, 76, 392-397.

Driskell, J.E., Hogan, J., Salas, E., and Hoskins, B. (1994) Cognitive and personality predictors of training performance. Military Psychology, 6, 31-46.

Dunnette, M. D. (1998) Emerging trends and vexing issues in industrial and organisational Psychology. Applied Psychology: An International Review, 47, 2, 129-153.

Easterby-Smith, M., Thorpe, R. and Lowe, A. 1991, Management research: An introduction. London: Sage Publications.

Eck, J.E. (1995) A general model of geography of illicit retail marketplaces. In D. Weisburd and J. Eck (eds.), Crime and Place. Crime Prevention Studies, 4. Monsey, NY: Criminal Justice Press.

Edinger, J. D., Shipley, R. H., Watkins, E. C., and Hammett, E. B. (1985) Validity of the Wonderlic Personnel Test as a brief I. Q. measure in psychiatric patients. Journal of Consulting and Clinical Psychology, 53, 937-939.

Edwards, L. C. (1958) Shoplifting and Shrinkage Protection for Stores. Springfield, IL: Charles C. Thomas.

Edwards, L. C. (1976) Shoplifting and Shrinkage Protection for Stores, (2<sup>nd</sup> Ed.). Springfield, IL: Charles C. Thomas.

Ellingson, J.E., Gruys, M.L., and Sackett, P.R. (1998) Factors related to the satisfaction and performance of temporary employees. Journal of Applied Psychology, 83, 913-921.

Ellingson, J. E., Smith, D. B., and Sackett, P. R. (2001) Investigating the influence of social desirability on personality factor structure. Journal of Applied Psychology, 86, 122-133.

Equal Opportunities Review (1996) No. 67, May/June, London: HMSO.

Eysenck, H. J. (1939) Review of Thurstone's Primary Mental Abilities. British Journal of Educational Psychology, 9, 270-275.

Eysenck, H. J., and Eysenck, M. W. (1985) Personality and individual differences: A natural science approach. New York: Plenum.

Fagan, J. F. (1992) Intelligence: A theoretical viewpoint. Current Directions in Psychological Science, 3, 82-86.

Farrell, K., and Farrera, J. (1985) Shoplifting: The AntiShoplifting Guidebook. New York: Praeger, 87-96.

Farrington, D. P., and Burrows, J. N. (1993) Did Shoplifting Really Decrease? British Journal of Criminology, 33, 1, 57-69.

Federal, R., and Fogelman, J. (1986) Avoiding Liability in Retail Security. Atlanta: Stafford Publications.

Felson, M. (1998) Crime in Everyday Life (2<sup>nd</sup> Ed). Thousand Oaks, CA: Pine Forge Press.

Felson, M. (1996) Preventing retail theft: an application of environmental criminology. Security Journal, 7, 1, 71-75.

Feuerverger, A., and Shearing, C. D. (1982) An Analysis of the Prosecution of Shoplifters. Criminology, 20 2, 273-289.

Fiske, D. W. (1949) Consistency of the factorial structures of personality ratings from different sources. Journal of Abnormal Social Psychology, 44, 329-344.

Fleishman, F. A., and Mumford, M. D. (1989) Individual Attributes and Training Performance. In I. L. Goldstein (Ed.) Training and Development in Organizations. San Francisco: Jossey-Bass, 183-255.

Fowler, F.J. (1993) Survey Research Methods(2<sup>nd</sup> Ed). Newbury Park, CA: Sage Publications, 10-35.

Fox, S. (2000) Relations of emotional intelligence, practical intelligence, general intelligence, and trait affectivity with interview outcomes: It's not all just g. Journal of Organizational Behavior, 21, 203-220.

Frankfort-Nachmias, C., and Nachmias, D. (1992) Research Methods in the Social Sciences. New York: St. Martin's Press, 108-109.

French, J. T. (1979) Apprehending and Prosecuting Shoplifters and Dishonest Employees. New York: National Retail Merchants Association.

Ganton, L. C. (1990) Training: The Best Buy in Retail Security. In S. M. Gallery (Ed.), Security Training: Readings from Security Management. Stoneham, MA: Butterworth's.

Gardner, H. (1998) A Multiplicity of Intelligences. Scientific American: Exploring Intelligence, 94, 19-23.

Gatewood, J.B. (1993). Intracultural Variability and Problem-Solving. <http://www.lehigh.edu/jbg1/public/www-data/probsolv.htm>

Gatewood, R. D., and Field, H. S. (1994) Human Resources Selection. Ft. Worth, TX: Dryden.

Gerhart, B., Trevor, C., and Graham, M. 1996. New directions in employee compensation research. In G. R. Ferris (Ed.), Research in personnel and human resource management. Greenwich, CT: JAI Press, 143-203 .

Ghiselli, E. E. (1973) "The validity of aptitude tests in personnel selection. Personnel Psychology, 26, 461-477.

Gill, M. (1994) Introducing Crime at Work. In M. Gill (Ed.), Crime at Work: Studies in Security and Crime Prevention, Leicester: Perpetuity Press, 4.

Goldberg, L. R. (1993) The Structure of Phenotypic Personality Traits. American Psychologist, 48, 1, 26-34.

Goodstein, L. D., and Lanyon, R. I. (1999) Applications of personality assessment to the workplace: A review. Journal of Business and Psychology, 13, 3, 291-322.

Gordon, R. A. (1997) Everyday Life as an Intelligence Test: Effects of Intelligence and Intelligence Context. Intelligence, 24, 1, 203-320.

Gottfredson, L. S. (Ed.) (1986a). The g factor in employment. Journal of Vocational Behavior, 29, 3.

Gottfredson, L.S. (1998) The General Intelligence Factor. Scientific American: Exploring Intelligence, 9, 4, 24-29.

Gottfredson, L. S. (1984) The role of intelligence and education in the division of labour. Baltimore, MD: Report No. 355, 31.

Gottfredson, L. S. (Ed.) (1986b). Societal consequences of the g factor in employment. Journal of Vocational Behavior, 29, 379-410.

Gottfredson, L. S. (1997) Why g matters. The Complexity of Everyday Life. Intelligence, 24, 1, 79-133.

Gottfredson, M. R., and Hirschi, T. (1990) A General Theory of Crime, Stanford, CA: Stanford University Press.

Graves, J.G. (1999) Emotional Intelligence and Cognitive Ability: Predicting Performance in Job-Simulated Activities. Dissertation Abstracts Online.

Griffin, R. K. (1975) Anti-Shoplifting Policy Development. In M. M. Hughes (Ed.) Successful Retail Security: An Anthology. Los Angeles, CA: Security World Publishing.

Griggs vs. Duke Power Co. (1971) 403 U. S. 424.

Gross, M. L. (1962) The Brain Watchers. New York: Random House.

Guilford, J. S., Zimmerman, W. S., and Guilford, J. P. (1976). The Guilford-Zimmerman Temperament Survey Handbook: Twenty-five years of research and application. San Diego: EDITS Publishers.

Guion, R. M., and Gottier, R. F. (1965). Validity of personality measures in personnel selection. Personnel Psychology, 18, 159.

Gustaffson, J. E. (1984) A unifying model for the structure of intellectual abilities. Intelligence, 8, 179-203.

- Hammel, F. (1996) Attention Pays. Supermarket Business, 51, 6, 108-109.
- Harrell, J. W. (1992) Some history of the Army General Classification Test. Journal of Applied Psychology, 77, 875-878.
- Harris, M.M., Becker, A.S., and Smith, D.E. (1993) Does the assessment centre scoring method affect the cross-situational consistency ratings? Journal of Applied Psychology, 78, 675-678.
- Hartigan, J. A., and Wigdor, A. K. (Eds.). (1989). Fairness in employment testing: Validity generalization, minority issues, and the General Aptitude Test Battery. Washington, D. C.: National Academy Press.
- Hartshorn, H., May, M. A., and Maller, J. B. (1929) Studies in the nature of character, Volume 2: Studies in service and self-control. New York: MacMillan.
- Hawkins, K. A., Faraone, S. V., Pepple, J. R., Seidman, L. J., and Tsuang, M. T. (1990) WAIS-R Validation of the Wonderlic Personnel Test as a Brief Intelligence Measure in a Psychiatric Sample. Psychological Assessment, 2, 2, 198-201.
- Hayes, R. (1997a) Retail Crime Control: a new operational strategy. Security Journal, 8, 225-232.
- Hayes, R. (1997b) Crime and Loss Control Training: U. S. Retailers' Response to Rising Theft, Competition and Risk. International Journal of Risk, Security and Crime Prevention, 2, 4, 267-278.
- Hayes, R. (1993a) Employee Theft Control. Orlando, FL: Prevention Press.
- Hayes, R. (1991) Retail Security and Loss Prevention, Stoneham: Butterworth-Heinemann, 36-45.
- Hayes, R. (2000) Retail Store Detectives: An Analysis of their Focus, Selection, Training, and Performance Ratings. Security Journal, 31, 1, 7-20.
- Hayes, R. (1997c) Retail Theft: An Analysis of Apprehended Shoplifters. Security Journal, 7, 1, 11-14.
- Hayes, R. (1993b) Shoplifting Control. Orlando, FL: Prevention Press.
- Hayes, R. (1990) Winning the Civil Recovery War. Security Management, 9, 83-84.
- Hazer, J.T., and Bublitz, S.T. (1998) Psychometric review of the Law Enforcement and Development Report (LEADR) Security Journal, 10, 3, 183-185.

Hirschfeld, R. R. (1996) Evidence for the Discriminant Validity of Conscientiousness and Work Orientation as Principal Components of Global Trait Work Motivation. UMI Dissertation Services.

Hogan, R. (1983) Personality psychology: Back to basics. In A. I. Rabin and R. A. Zucker (Eds.) The emergence of personality. New York, Springer, 79-104.

Hogan, R., and Hogan, J. (1992, 1995) Hogan Personality Inventory Manual. Tulsa, OK: Hogan Assessment Systems.

Hogan, R., and Nicholson, R. A. (1988) The meaning of personality test scores. American Psychologist, 43, 621-626.

Hollinger, R.C., and Dabney, D. (1999) Motor Vehicle Theft at the Shopping Centre: An Application of the Routine Activities Approach. Security Journal, 12, 1, 63-78.

Hollinger, R.C., and Dabney D. (1994) Reducing Shrinkage in the Retail Store: It's not just a job for the loss prevention department. Security Journal, 5, 1, January 2-10.

Hollinger, R., Dabney, D., and Hayes, R. (2000) National Retail Security Survey. Gainesville, FL: University of Florida.

Hollinger, R., Dabney, D., and Hayes, R. (1997) National Retail Security Survey. Gainesville, FL: University of Florida.

Hollinger, R. Dabney, D., and Hayes, R. (1996) National Retail Security Survey. Gainesville, FL: University of Florida.

Horan, D. J. (1986) The Retailer's Guide to Loss Prevention and Security. Ft. Lauderdale, FL: CRC.

Horn, J. and Noll, J. (1994) A system for understanding cognitive capabilities: A theory and the evidence on which it is based. In D.K. Detterman (Ed.), Current Topics in Human Intelligence: Vol. 4 Theories for Intelligence, Norwood, N. J. Ablex.

Hosmer, D., and Lemeshow, S. (1989). Applied logistic regression. New York, NY: Wiley.

Hough, L.M. (1998). Personality at work: Issues and evidence. In M. D. Hakel (Ed.), Beyond multiple choice: Evaluating alternatives to traditional testing for selection. Mahwah, NJ: Erlbaum, 131-159.



Hough, L.M. (1992) The Big Five personality variables- construct confusion: Description versus prediction. Human Performance, 5, 139-155.

Hough, L. M., Eaton, N. K., Dunnette, M. D., Kamp, J. D., and McCloy, R. A. (1990) Criterion-related validities of personality constructs and the effect of response distortion on those validities. Journal of Applied Psychology, 75, 581-595.

Hough, L. M., and Oswald, F. L. (2000) Personnel selection. Annual Review of Psychology, 51, 631-664.

House, R., Howard A., and Walker, G. (1992) The prediction of managerial success: A test of the person-situation debate. Working Paper, Wharton School of Business, University of Pennsylvania.

Howard, A. (1986) College experiences and managerial performance. Journal of Applied Psychology, 71, 530-552.

Hunter, J. E. (1986) Cognitive Ability: Cognitive aptitude, job knowledge, and job performance. Journal of Vocational Behavior, 29, 340-362.

Hunter, J. E. (1989) The Wonderlic Personnel Test as a predictor of training success and job performance. E. F. Wonderlic Personnel Test, Inc.

Hunter, J. E. (1980) Validity Generalization for 12,000 Jobs: An application of Synthetic Validity and Validity Generalization to the General Aptitude Test Battery (GATB). Washington, D. C.: us Employment Service, us Dept. of Labour.

Hunter, J. E., and Hunter, R. F. (1984) Validity and Utility of Alternate Predictors of Performance. Psychological Bulletin, 96, 72-98.

Iles, P., and Salaman, G. (1995) Recruitment, selection and assessment. In J. Storey (Ed.) Human Resource management: A Critical Text. London: Rutledge, 203-233.

Ilgen, D. R., and Pulakos, E. D. (1999) Introduction: Employee performance in today's organizations. In D. R. Ilgen and E. D. Pulakos (Eds.), The changing nature of performance: Implications of staffing, motivation and development. San Francisco: Jossey-Bass, 1-18.

Ingleton, C., Hallsworth, A., and Macandrew, J. (1996) Retail service quality and competencies in retailing: Improved profits via improved salesforce selection using the "MIRI method." Presented to the Third International Conference on Retailing and Services Science. Innsbruck.

Jackson, D. N., and Rothstein, M. (1991) Personality put to the test. Nature, 35, 100.

Jensen, A. R. (1977) An Examination of Culture Bias in the Wonderlic Personnel Test. Intelligence, 8, 51-64.

Jensen, A. R. (1992) Commentary: Vehicles of g. Psychological Science, 3, 275-278.

Jensen, A. R. (1986b) Intelligence: Definition, measurement and future research. In R. J. Sternberg, and D. K. Detterman (Eds.), What is Intelligence? Norwood, NJ: Ablex.

Jensen, A. R. (1986a) Psychometric g and achievement. In B. R. Gifford (Ed.) Policy Perspectives on Educational Testing. Boston: Kluwer.

Jensen, A. R., and Weng, L. (1994) What is a good g? Intelligence, 18, 231-258.

John, O. P. (1990) The 'big five' factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), Handbook of Personality: Theory and Research. New York: Guilford Press.

Johnson, P. M., and Outcalt, R. F. (1996) Myths of Retail May be Hurting Your Business. The Seattle Journal of Commerce, Online Edition.

Jones, P. H. (1998) Retail Loss Control (2<sup>nd</sup> ed.), Oxford: Butterworth & Co., Ltd., 21-24.

Jones, J. W. (1992) Third Annual Report On Employee Theft In The Supermarket Industry : 1991 Findings. London House and Food Marketing Institute, Rosemont, Illinois.

Jones, J. W., Slora, K. B., and Boye, M. W. (1990) Theft Reduction Through Personnel Selection : A Control Group Design In The Supermarket Industry. Journal of Business and Psychology, 5, 275-79.

Keckeisen, G. L. (1993) Retail Security Versus the Shoplifter: Confronting the Shoplifter While Protecting the Merchant. Springfield: Charles C. Thomas, 26-30.

Kimiecik, R. C. (1995) Loss Prevention Guide for Retail Businesses. New York: John Wiley & Sons.

Kleinmann, M. (1993) Are rating dimensions in assessment centres transparent for participants? Journal of Applied Psychology, 78, 988-993.

Klemke, L. W. (1992) The Sociology of Shoplifting: Boosters and Snitches Today. New York: Praeger.

Kowalski, T. (1998) The Wonderlic Quiz. The Sporting News Online.

Lance, C.E. (2000) Replication and extension of models of supervisory performance ratings. Human Performance, 13, 2, 139-158.

Landy, F. J., and Trumbo, D. A. (1980) Psychology of Work Behavior (revised edition). Homewood, IL: The Dorsey Press, 52.

Larson, G. E., and Saccuzzo, D. P. (1989) Cognitive correlates of general intelligence: Toward a process theory of g. Intelligence, 13, 5-31.

Laska, L. (2000) 99 Verdicts Against Wal-Mart. Walmart Litigation Project.

Lavigna, R.J. (1992) Predicting Job Performance from Background Characteristics: More Evidence from the Public Sector. Public Personnel Management, 21, 347-359.

Leeds, J.P. (1997) Psychological testing in security and law enforcement: a resource guide. Security Journal, 8, 3-10.

Leedy, P. D. (1997). Practical research: Planning and design (6<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice-Hall.

Lubinski, D., and Humphreys, L. G. (1997) Intelligence: A neglected aspect. Intelligence, 24, 1, 159-199.

Madigan, R. M., Scott, K. D., Deadrick, D. L., and Stoddard, J. A. (1986) Employment Testing: The us job service is spearheading a revolution. Personnel Administrator, 31, 9, 102-112.

May, D. (1978) Juvenile Shoplifters and the Organization of Store Security: A Case Study in the Social Construction of Delinquency. International Journal of Criminology and Penology, 6, 137-160.

McAdams, D. P. (1992) The five-factor model in personality: A critical appraisal. Journal of Personality, 60, 329-361.

McCrie, R.D. (1997) Note from the Editor in Chief. Security Journal, 8, 1-2.

McDaniel, M.A. (1989) Biographical Constructs for Predicting Employee Suitability. Journal of Applied Psychology, 74, 6, 964-970.

McDaniel, M.A., Whetzel, D.L., Schmidt, F.L., and Maurer, S.D. (1994) The validity of employment interviews: A comprehensive review and meta-analysis. Journal of Applied Psychology, 79, 4, 599-616.

McHenry, R. (1997) Tried and Tested. People Management, 23, January.

McIntire, S.A., Bucklan, M.A., and Scott, D.R. (1995) Job Analysis Kit. Odessa, FL: Psychological Assessment Resources.

McKelvie, S. J. (1994) Validity and Reliability Findings for an Experimental Short Form of the Wonderlic Personnel Test in an Academic Setting. Psychological Reports, 75, 907-910.

McRae, R. R. (1990) Traits and trait names: How well is Openness represented in natural languages. European Journal of Personality, 4, 119-129.

McRae, R. R., and Costa, P. T., Jr. (1989) Rotation to maximize the construct validity of the factors in the NEO Personality Inventory. Multivariate Behavioral Research, 24, 107-124.

Meglino, B.M., DeNisi, A.S., and Ravlin, E.C. (1993) Effects of previous job exposure and subsequent job status on the functioning of a realistic job preview. Personnel Psychology, 46, 803-822.

Mercer, M W. (1988) Turnover: Reducing the Cost. Personnel, 65, 36-42.

Michaelis, W., and Eysenck, H. J. (1971). The determination of personality inventory factor patterns and intercorrelations by changes in real-life motivation. The Journal of Genetic Psychology, 118, 223-234.

Miller, C. I. (1993) Supermarket Security Manual. Washington, D.C.: Food Marketing Institute.

Miller, L. T., and Vernon, P. A. (1996) Intelligence, reaction time, and working memory in 4 to 6 year old children. Intelligence, 22, 2, 155-190.

Mills, D. Q. (1985) Planning with People in Mind. Harvard Business Review July-August, 99-100.

Moffett, R. G. (1996) Relationship between the Big Five Personality Factors and BioData Factors. Doctoral Dissertation, Ann Arbor, MI: UMI.

Mount, M.K., and Barrick, M.R. (1998) Five reasons why the "Big Five" article has been frequently cited. Personnel Psychology, 51, 4, 849-857.

Mount, M.K., Barrick, M.R, and Stewart, G.L. (1998) Five Factor Model for predicting performance in jobs involving interpersonal interaction. Human Performance, 11, 2-3, 145-165.

Mount, M.K., Witt, A., and Barrick, M.R. (2000) Incremental validity of empirically-keyed biographical scales over GMA and the Big Five personality constructs. Personnel Psychology, 53, 299-323.

Mumford, M.D., Snell, A.F., and Reiter-Palmon, R. (1994) Personality and background data: Life history and self-concepts in an ecological system. In G.S. Stokes , M.D. Mumford, and W.A. Owens (Eds.), Handbook of industrial and organizational psychology (2<sup>nd</sup> ed., vol. 3). Palo Alto, CA: Consulting Psychologists Press, 583-625.

Murphy, D. J. I. (1986) Customers and Thieves. Hants, England: Gower.

Murphy, K. R. (1999) The challenge of staffing a postindustrial workplace. In D. R. Ilgen & E. D. Pulakos (Eds.), The changing nature of performance: Implications of staffing, motivation and development. San Francisco: Jossey-Bass, pp. 295-324.

Murphy, K.R., and Shiarella, A.H. (1998) Implications of the multidimensional nature of job performance for the validity of selection tests: Multivariate frameworks for studying test validity. Personnel Psychology, 51, 4, 822.

Nathan, B. R. and Alexander, R.A. (1988) A Comparison of criteria for test validation: A meta-analytic investigation. Personnel Psychology, 71, 432-439.

National Retail Institute (1996) Retail Industry Indicators. Washington, D. C.: NRF.

Neill, W. J. (1981) Modern Retail Risk Management. Sydney, Australia: Butterworth's.

Norusis, M.J. (1997) SPSS 7.5 Guide to Data Analysis. Upper Saddle River, New Jersey: Prentice Hall.

Norusis, M.J. (1999) SPSS Regression Models 10.0. Chicago. IL: SPSS.

Nunnally, J. C. (1978) Psychometric Theory. New York: McGraw-Hill, 87.

Oakes, D.W. (1999) Cognitive Ability and Personality Predictors of Training Program Skill Acquisition. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Olea, M. M., and Ree, J. M. (1994) Predicting Pilot and Navigator Criteria: Not Much More Than g. Journal of Applied Psychology , 79, 6, 845-851.

Ones, D. S. (1994) Personality and job performance: a critique of the Tett, Jackson and Rothstein (21991) meta-analysis. Personnel Psychology, 44, 703-707.

Ones, D. S., Viswesvaran, C., and Reiss, A. D. (1996) Role of Social Desirability in Personality Testing for Personnel Selection: The Red Herring. Journal of Applied Psychology, 81, 6, 660-679.

Ones, D. S., Viswesvaran, C., and Schmidt, F. L. (1993) Comprehensive Meta-Analysis of Integrity Test Validities - Findings and Implications for Personnel Selections and Theories of Job Performance. Journal of Applied Psychology, 78, 4, 679-703.

Pallone, N. J. (1992) The MMPI in Police Officer Selection: Legal Constraints, Case Law, Empirical Data. Journal of Offender Rehabilitation, 17, 3/4, 171-188.

Parsons, F. (1909) Choosing a Vocation. Boston: Houghton-Mifflin, 5.

Paunonen, S.V., Rothstein, M.G., and Jackson, D.N. (1999) Narrow reasoning about the use of broad personality measures for personnel selection. Journal of Organizational Behavior, 20, 3, 389-405.

Pearlman, K., Schmidt, F. L., and Hunter, J. E. (1980) Validity generalization results for tests used to predict job proficiency and training success in clerical occupations. Journal of Applied Psychology, 65, 373-406.

Pettijohn, C. E., Pettijohn, L. S., and Taylor, A. J. (2000) Research Note: An Exploratory Analysis of Salesperson Perceptions of the Criteria Used in Performance Appraisals, Job Satisfaction, and Organizational Commitment. Personal Selling and Sales Management, 20, 2, 77-80.

Phillips, J. D. (1990) The Price Tag of Turnover. Personnel Journal, 69, 58-61.

Piedmont, R.L. (1998) The Revised NEO Personality Inventory: Clinical and Research Applications. Plenum Press, New York.

Piedmont, R. L., and Weinstein, H. P. (1993) A psychometric evaluation of the new NEO PI-R facet scales for Agreeableness and Conscientiousness. Journal of Personality Assessment, 60, 302-318.

Piedmont, R. L., and Weinstein, H. P. (1994) Predicting Supervisor Ratings of Job Performance using the NEO Personality Inventory. Journal of Psychology: Interdisciplinary & Applied, 128, 3, 255-266.

Piquero, A., and Paternoster, R. (1998) An application of Stafford and Warr's reconceptualization of deterrence to drinking and driving. Journal of Research in Crime and Delinquency, 35, 3-39.

Porter, J. (1999) Stealing a march. Retail Week, November 26, 1999.

- Pulakos, E. D., and Schmitt, N. (1996) An evaluation of two strategies for reducing adverse impact and their effects on criterion-related validity. Human Performance, 9, 241-258.
- Pulakos, E.D., and Schmitt, N. (1995) Experienced-based and situational interview questions: studies of validity. Personnel Psychology, 48, 2, 289-309.
- Purpura, P. P. (1989) Modern Security and Loss Prevention Management, Stoneham: Butterworth, 111-114.
- Purpura, P.P. (1993) Retail Security and Shrinkage Protection. Stoneham, MA: Butterworth-Heinemann.
- Rapp, B. (1989) Shoplifting and Employee Theft Investigations. Port Townsend, WA: Loompanics Unlimited.
- Rea, L. M., and Parker, R. A. (1997) Designing and conducting survey research: A comprehensive guide. (2nd ed.). San Francisco, CA: Jossey-Bass.
- Ree, M. J., and Earles, J. A. (1993) g is to psychology what carbon is to chemistry. Current Directions in Psychological Science, 2, 1, 11-12.
- Ree, M. J., and Earles, J. A. (1996) Predicting Occupational Criteria: Not Much More than g. In I. Dennis and P. Tapsfield (Eds.), Human Abilities, 151-165.
- Ree, M. J., and Earles, J. A. (1991) The stability of g across different methods of estimation. Intelligence, 15, 271-278.
- Ree, M. J., Earles, J. A., and Teachout, M. S. (1994) Predicting job performance: Not much more than g. Journal of Applied Psychology, 79, 518-524.
- Rilakos, E. D., and Schmitt, A. (1996) An Evaluation of Two Strategies for Reducing Adverse Impact and Their Effects on Criterion Related Validity. Human Performance, 9, 3, 241-258.
- Robertson, I.T. (1993) Personality and Personnel Selection. In C.L. Cooper and D.M. Rousseau (Eds.), Trends in Organisational Behaviour. Chichester: Wiley and Sons.
- Robertson, I. T., and Downs, S. (1979) Learning and the Prediction of Performance: Development of Trainability Testing in the U. K. Journal of Applied Psychology, 64, 42-50.

Robertson, I., Gibbons, P., Baron, H., MacIver, M., and Nyfield, G. (1999) Understanding Management Performance. British Journal of Management, 10, 5-12.

Robertson, I. T., and Kinder, A. (1993) Personality and job competences: The criterion-related validity and some personality variables. Journal of Occupational and Organizational Psychology, 66, 225-244.

Rodeghier, M. (1996) Surveys with Confidence. SPSS: Chicago, IL, 159.

Rogers, T. B. (1995) The psychological testing enterprise: An introduction. Pacific Grove, CA: Brooks/Cole Publishing.

Rosse, J.G., Miller, H.E., and Barnes, L.K. (1991) Combining Personality and Cognitive Ability Predictors for Hiring Service-Oriented Employees. Journal of Business and Psychology, 5, 4, 431-445.

Rosse, J., and Levin, B. (1996) Personality Testing: Hiring Solution or Scam. Boulder County Business Report.

Rothstein, H.R., Erwin, F.W., Schmidt, F.L., Owens, W.A., and Sparks, C.P. (1990) Biographical Data in Employment Selection: Can Validities be Made Generalizable? Journal of Applied Psychology, 75, 2, 175-184.

Ryan, A. M., and Lasek, M. (1991) Negligent hiring and defamation: Areas of liability related to pre-employment inquiries. Personnel Psychology, 44, 2, 293-319.

Rynes, S. L. (1993) Who's selecting whom? Effects of selection practices on applicant attitudes and behavior. In N. Schmitt, W. C. Borman., and associates (Eds.) Personnel Selection in Organizations. San Francisco, CA: Jossey-Bass, 240, 270-274.

Sackett, P.R., Gruys, M.L, and Ellington, J.E. (1998) Ability-personality interactions when predicting job performance. Journal of Applied Psychology , 83, 4, 545-556.

Sackett, P. R., and Ostgaard, D. J. (1994) Job-Specific Applicant Pools and National Norms for Cognitive Ability Tests: Implications for Range Restriction Corrections in Validation Research. Journal of Applied Psychology, 79, 5, 680-684.

Sackett, P. R., Schmitt, N., Ellingson, J. E., and Kabin, M. B. (2001) High-stakes testing in employment, credentialing, and higher education: Prospects in a post-affirmative action world. American Psychologist, 56, 302-318.



Salgado, J.F. (1998) Big Five personality dimensions and job performance in Army and civil occupations: A European perspective. Human Performance, 11, 2-3, 271-288.

Salgado, J. F. (1999) Personnel Selection Methods. In C. L. Cooper and I. T. Robertson (Eds.) International Review of Industrial and Organizational Psychology, 14, 1- 54.

Salgado, J. F., and Rumbo, A. (1994) Personality and job performance in financial managers. Unpublished manuscript, University of Santiago de Compostela.

Sandler, N. W. (1985) How to Protect your Business. Elmsford, NY: The Benjamin Company.

Saville, P., and Wilson, E. (1991) The reliability and validity of normative and ipsative approaches in the measurement of personality. Journal of Occupational Psychology, 64, 219-238.

Schlueter, G.R., O'Neal, F. C., Hickey, J., and Seiler, G. L. (1989) Rational vs. Non-Rational Shoplifting Types: The Implications for Loss Prevention Strategies. International Journal of Offender Therapy and Comparative Criminology, 227-239.

Schmidt, F. L., and Hunter, J. E. (1977) Development of a General Solution to the Problem of Validity Generalization. Journal of Applied Psychology, 62, 529-540.

Schmidt, F. L., and Hunter, J. E. (1981) Employment testing: Old theories and new research findings. American Psychologist, 36, 10, 1128-1137.

Schmidt, F. L., and Hunter, J. E. (1998) The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 years of research findings. Psychological Bulletin, 124, 2, 262- 274.

Schmidt, F. L., Hunter, J. E., and Outerbridge, A. N. (1986) Impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job performance. Journal of Applied Psychology, 71, 432-439.

Schmidt, F. L., Ones, D. S., and Hunter, J. E. (1992) Personnel Selection. In M. Rosenzweig and L. Porter (Eds.), Annual Review of Psychology, 43. Palo Alto, CA: Annual Reviews, 627-670.

Schmidt, M. J., Guion, R. M., and Raymark, P.H. (1994) Development of an instrument to identify personality-related position requirements. Working Paper. University of Florida.

Schmidt, M. J., and Ryan, A. M. (1993) The Big Five in Personnel Selection Factor Structure in Applicant and Non-applicant Populations. Journal of Applied Psychology, 78, 6, 966-974.

Schmidt, N., Gooding, R., Noe, R. A., and Kirsch, M. (1984) Meta-analyses of validity, studies published between 1964 and 1982 and the investigation of study characteristics. Personnel Psychology, 37, 407-422.

Schoenfeldt, L. F. (1985) Review of the Wonderlic Personnel Test. In J. V. Mitchell (Ed.), The Ninth Mental Measurements Yearbook. Lincoln, NE: The University of Nebraska Press, 1757-1758.

Schreischeim, C. A., Kinicki, A. J., and Schriesheim, J. F. (1979) The effect of leniency on leader behavior descriptions. Organizational Behavior and Human Performance, 23, 1-29.

Sennewald, C. A., and Christman, J. H. (1992) Shoplifting. Stoneham, MA: Butterworth-Heinemann.

Shapland, J. (1995) Preventing Retail Sector Crimes. In M. Tonry and D. Farrington (Eds.) Building a Safer Society: Strategic Approaches to Crime Prevention. Chicago: The University of Chicago Press, 320.

Sherman, E., and Sherman, L. (1996) False Arrest Suit Allowed for Man. Security Law Newsletter, 16, 6, 62.

Sherman, L.W., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P., and Bushway, S. (1997) Preventing Crime: What Works, What Doesn't, What's Promising. College Park, MD: University of Maryland and The US Department of Justice.

Shippmann, J.S., and Prien, E.P. (1989) An assessment of the contributions of general mental ability and personality characteristics to management success. Journal of Business and Psychology, 3, 423-437.

Silva, J. M., and Jacobs, R. R. (1993) Performance as a function of increased minority hiring. Journal of Applied Psychology, 78, 591-601.

Sklar, S. L. (1982) Shoplifting: What You Need to Know About the Law. New York: Fairchild Publications.

Snyderman, M., and Rothman, S. (1988) The I. Q. Controversy, The Media and Public Policy. New Brunswick, NJ: Transaction Books.

- Spearman, C. (1904) General Intelligence, objectively determined and measured. American Journal of Psychology, 15, 201-293.
- Spearman, C. (1927) The Abilities of Man. New York: MacMillan.
- Spearman, C. (1939) Thurstone's Work Re-worked. Journal of Educational Psychology, 30, 1-16.
- SPSS (1999) SPSS Base 10.0 Applications Guide. Chicago: SPSS.
- Stafford, M.C., and Warr, M. (1993) A Reconceptualization of General and Specific Deterrence. Journal of Research in Crime and Delinquency, 30, 123-135.
- Stake R.E. (1995) The Art of Case Study Research. Thousand Oaks, CA: Sage Publications.
- Sternberg, R.J. (1998) How Intelligent is Intelligence Testing? Scientific American: Exploring Intelligence, 9, 4, 12-17.
- Sternberg, R. J., and D. K. Detterman (1986) What is Intelligence? Contemporary Viewpoints on its Nature and Definition, (Eds.). Norwood, NJ: Ablex.
- Sternberg, R.J., Forsythe, G.B., Hedlund, J., Horvath, J.A., Wagner, R.K., Williams, W.M., Snook, S.A., and Grigorenko, E. (2000) Practical Intelligence in Everyday Life. Cambridge, U.K.: Cambridge University Press, 2000.
- Sternberg, R. J., and Wagner, R. K. (1993) The g-centric view of Intelligence and Job Performance is Wrong. Current Directions, 2, 1, 1-4.
- Sternberg, R. J., Wagner, R. K., Williams, W. M., and Horvath, J. A. (1995) Testing Common Sense. American Psychologist, 50, 912-927.
- Stewart, G. L. (1999) Trait bandwidth and stages of job performance: Assessing differential effects for conscientiousness and its subtraits. Journal of Applied Psychology, 84, 959-968.
- Stewart, G. L., Larson, K. P., and Candy, R. L. (1996) The Joint Effects of Conscientiousness and Self-Leadership Training on Employee Self-Directed Behavior in a Service Setting. Personnel Psychology, 49, 143-164.
- Stokes, G. S., Mumford, M. D., and Owens, W. A. (Eds.) (1994) Individual charactersitics handbook: Theory, research, and use of biographical information in selection and performance prediction. Palo Alto: CPP Books.

Stokes, G.S., and Toth, C. (1996) Background data. In R.S. Barrett (Ed.) Fair Employment Strategies. Quorum Books.

Stough, C., Brebner, J., Nettlebeck, T., Cooper, C.J., Bates, T., and Mangan, G.L. (1996) The relationship between intelligence, personality and inspection time. British Journal of Psychology, 87, 255-268.

Strauss, A., and Corbin, J. (1990) Basics of Qualitative Research. Newbury Park, CA: Sage Publications.

Stross, R. E. (1996) Microsoft's Big Advantage - Hiring Only the Supersmart. Time Online.

Tett, R.P. (1998) Is Conscientiousness Always Positively Related to Job Performance? TIP, 36, 11-4.

Tett, R. P., Jackson, D. N., and Rothstein, M. (1991) Personality measures of predictors of job performance: A meta-analytic review. Personnel Psychology, 44, 703-742.

Thorndike, E. L. (1921) Intelligence and its measurement: A symposium. Journal of Educational Psychology, 12, 123-147.

Thurstone, L. L. (1938) Primary Mental Abilities. Psychometric Monographs, No. 1.

Tokar, D. M., Fischer, A. R., and Subich, L. M. (1998) Personality and vocational behavior: A selective review of the literature, 1993-1997. Journal of Vocational Behavior, 53, 115-153.

United Nations (1999) Strategies for Crime Prevention: Discussion Paper on the Theme of the Eighth Session of the Commission on Crime Prevention and Criminal Justice. UN Commission on Crime Prevention and Criminal Justice.

U.S. Census Bureau (2001) Profiles of General Demographic Characteristics: 2000 Census of Population and Housing. Washington, D.C.: United States Department of Commerce.

U. S. Council of Economic Advisors (1999) Economic Indicators. Washington, D. C.: United States Government Printing Office.

Van Maanenbergh, D. (1995) Effective Retail Security: Protecting the Bottom Line. Port Melbourne: Butterworth-Heinemann, Australia, 191.

Vernon, P. A. (1987) New developments in reaction time research. In P. A. Vernon (Ed.) Speed of information processing and intelligence. Norwood, NJ: Ablex Publishing, 1-20

Vincher, A.J., Schippmann, J.S., Switzer, F.S., and Roth, P.L. (1998) A meta-analytic review of predictors of job performance for salespeople. Journal of Applied Psychology, 83, 4, 586-597.

Voydanoff, P. (1990) Economic Distress and Family Relations: A Review of the Eighties. Journal of Marriage and Family, 52, 11, 1099-1115.

Walker J. (1996) Retail Detective Training Manual: How to Conduct the Observation, Surveillance & Apprehension of Shoplifters. Austin, TX: Thomas Investigative Publications, 8-24.

Wall Street Journal, (1994), December 12.

Waller, N. G., and Ben-Porath, Y. S. (1987) Is it time for clinical psychology to embrace a five-factor model of personality? American Psychologist, 42, 9, 887-889.

Walsh, D. P. (1978) Shoplifting: Controlling a Major Crime. London: MacMillan.

Walters, L. C., Miller, M., and Ree, M. J. (1993) Structured interviews for pilot selection: No incremental validity. International Journal of Aviation Psychology, 3, 25-38.

Weinrach, S. G. (1979) Trait and Factor Counseling: Yesterday and Today. In S. G. Weinrach (Ed.), Career Counseling: Theoretical and Practical Perspectives. New York: McGraw-Hill, Inc., 68.

Weshler, D. (1981) WAIS-R Manual. New York: The Psychological Corporation.

Whyte, W. H. (1956) The Organization Man. New York: Simon & Schuster.

Widiger, T. A. (1992) Review of the NEO Personality Inventory. In J. J. Kramer and J. C. Conoley (Eds.), The Eleventh Mental Measurements Yearbook. Lincoln, NE: The University of Nebraska Press, 603-605.

Williams, J.R., and Levy, P.E. (1992) The effects of perceived system knowledge on the agreement between self-ratings and supervisor ratings. Personnel Psychology, 45, 835-846.

Wonderlic, E. F. (1961) Wonderlic Personnel Test. Northfield, IL: E. F. Wonderlic and Associates.

Wonderlic, E. F. (1983) Wonderlic Personnel Test Manual. Northfield, IL: E. F. Wonderlic and Associates.

Wonderlic, E. F. (1992) Wonderlic Personnel Test User's Manual. Libertyville, IL: E. F. Wonderlic and Associates.

Wright, P. M., Kacmar, K. M., McMahan, G. C., and Deleeuw, K. (1995) P=f (MxA): Cognitive Ability as a Moderator of the Relationship Between Personality and Job Performance. Journal of Management, 21, 6, 1129-1139.

Yam, P. (1998) Intelligence Considered. Scientific American: Exploring Intelligence, 94, 7-11.

Zerbe, W. J., and Paulhaus, D. J. (1987) Socially desirable responding in organizational behavior: A reconception. Academy of Management Review, 12, 250-264.

Zikmund, W. G. (1991). Business research methods. (2nd ed.). Chicago, IL: Dryden Press.