THE ROYAL CANADIAN MOUNTED POLICE JOB SIMULATION EXERCISE: A VALID INSTRUMENT TO IDENTIFY POTENTIAL LEADERS?

By

JOANNE PRATT, B.A.

A thesis submitted in partial fulfillment of

the requirements for the degree of

MASTER OF ARTS

in

LEADERSHIP AND TRAINING

We accept this thesis as conforming

to the required standard

.....

Project Sponsor, Deputy Commissioner Beverley Busson, LL.B.

.....

Faculty Project Supervisor, Deputy Chief Constable Paul Tinsley, B.A., M.A., Ed.D.

.....

Committee Chair, Doug Hamilton, Ph.D.

ROYAL ROADS UNIVERSITY
June, 2004

Your file Votre référence
ISBN: 0-612-93764-X
Our file Notre référence
ISBN: 0-612-93764-X

ABSTRACT

The thesis is an exploratory study into whether the RCMP job simulation exercise (JSE) for promotion is a valid instrument for identifying potential leaders. The question is whether the JSE is biased in terms of a relationship between JSE scores and thinking styles of members. The study uses a mixed methodological approach to collect data in three areas from ten RCMP regular member participants based on interviews and the administration of the HBDI and CLEO instruments.

The study finds there are grounds to be concerned that the JSE may not be a valid instrument. While the study is limited in size, scope, and method of selecting participants, the study recommends that: (1) validity measures relied upon by the RCMP be re-examined; (2) further research be conducted on a larger scale; and (3) consideration be given to exploring alternative methods of measurement for promotion.

ACKNOWLEDGEMENTS

I have had the pleasure of working with many dedicated individuals over the years; some are natural leaders, some will never be leaders, while others must work hard at establishing themselves as leaders. The catalyst for this study is a desire to see the RCMP and the members who have devoted themselves to "wearing the white hat" flourish. I am not alone in seeking to improve the RCMP. In fact, I was pleasantly surprised to see the interest this study has sparked.

I wish to thank the members who volunteered their time to help me with this study. I cannot name them here, but suffice it to say that their contributions of time, their desire to help the RCMP, and me, and their honest, candid responses will have a positive affect on the future development of the promotional process.

I owe a debt of gratitude to Deputy Commissioner Busson, Project Sponsor and to Deputy Chief Constable Paul Tinsley, Faculty Project Supervisor. Without their assistance, guidance and support this study would not have been possible.

Most importantly I must thank my family. To Barbara, who put her life on hold to help keep our household running; we will go on that cruise soon. To Lindsey and Ewen, I apologize for my absence and distraction and I will make up for lost time. Last but not least, to my partner, Craig, I could not have completed this without your love, patience, encouragement and understanding.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE – A PROMOTION PROCESS IN TRANSITION

The Royal Canadian Mounted Police (RCMP) was created in 1873 (Macleod, 1976), and since that time, has evolved from a fundamentally military institution, to an organization focused principally on law enforcement, to a community-based policing organization, and finally to a learning organization (RCMP, 2002). Many of these evolutional developments were directly associated with external pressures for change from the public as well as from the federal, provincial, and municipal levels of government. However, not all changes have been due to external or social demands. Changes to the RCMP promotional system have been strictly an internal matter, and over the last seven to ten years, these changes have been significant and fundamental.

The Old Process

Prior to commencing a revision in 1993-94, the RCMP promotional process was a subjective and time-based enterprise. Under the old process, once a "member"[1] reached a certain minimum amount of service (e.g., 7 years for corporal, 13 years for sergeant, and 15 years for staff-sergeant (i.e., the non-commissioned officer (NCO) ranks)) she or he was considered eligible for promotion. However, on average, a significant number of years service beyond the minimum was actually required before an individual actually entered the promotion zone (e.g., corporal was approximately 14-16 years of service).

Under this process, if a promotional position needed to be filled, the position would be advertised, members would indicate an interest in that position, and a "Succession Planner" in Staffing and Personnel would compile a list of interested members and rank-order them. Members would be rank-ordered based on several criteria: accumulated scores from annual assessments submitted by a member's respective supervisor(s) over the preceding five years (weighted at 65%); years of service (weighted at 10%); and time in rank (weighted at 25%, unless the member was a constable). If the member was a constable, time in rank was not considered and years of service were weighted at 35 percent. Using these criteria, Succession Planners would reduce the eligibility list to 15 members and then review each member's personnel file, assessing the member's suitability for the position, eventually reducing the list to five members. Once five members were identified, a promotional board was struck and it reviewed the personnel files in detail, selecting the most qualified member based on past performance and the promotion board's judgment. All ties were broken by seniority (RCMP, 2000).

In addition to a number of internally generated concerns about the promotion system, in 1992, the Auditor General's Report on the RCMP identified specific deficiencies in the promotional system, including the fact that it failed to consider how a member would function at the next rank, and the inconsistency and subjectivity of the process (RCMP, 2000). Essentially, it became evident to the RCMP that it needed to modify an antiquated and ineffective promotional system. Therefore, significant revisions began in 1993, and since that time four

---

[1] Section 2 of the *Royal Canadian Mounted Police* Act, R.S.C. 1985, c. R-10 (as amended) (*RCMP Act*) defines "member" as a person appointed as a regular member of the RCMP, which for the purposes of this study, refers to a sworn police officer.

different promotional processes or "cycles" have been employed. The majority of changes to each "new and improved" cycle format were primarily based on feedback received from members participating in the processes, most often in the form of thousands of formal grievances.

The Current Promotional Process

The current promotional process appears to be quite simple. First, eligible members (who meet a minimum years of service or in-rank requirement) complete a multiple-choice situation-based/job simulation exercise (JSE) for the next NCO rank (i.e., corporal, sergeant and staff-sergeant). Second, once the JSE scores are known and the results distributed, Staffing and Personnel advertise vacant positions at the relevant NCO ranks, listing the specific eligibility requirements for each position. A member that is interested in competing for an advertised position, has met or exceeded the minimum passing score on the JSE[2], and holds the lower substantive rank, submits a preliminary qualification document outlining how she or he meets the job requirements for the specific position (e.g., five years of uniform experience). Third, after the closing date for indicating interest and filing the preliminary qualification document, ten members are selected by Staffing and Personnel to participate in the preparation of supporting documentation for the next step. The short list of ten members is based solely on scores from the JSE (i.e., rank-ordered from highest to lowest). The top five members from the list of ten (based on scores from the JSE) are then required to submit a detailed written Performance Report for

[2] The minimum passing score (MPS) is based on the candidate's total score and not determined for each competency. The MPS "was set according to a procedure that determined the lowest acceptable level of competence required to perform the duties and responsibilities associated

Promotion (PRP) and a Structured Resume (SR).

The PRP and SR are reviewed and scored by a promotional board (Board) based on defined benchmarks. In the PRP, the member must provide two examples of her or his experiences relating to each of eight core competencies (i.e., Leadership, Client-Centred-Service, Planning and Organization, Personal Effectiveness and Flexibility, Interpersonal Skills, Thinking Skills, Communication, and Continuous Learning) (RCMP, 1998). The SR outlines and relates the education and experience of the member (and for some positions a detailed explanation of how the candidate meets any additional "special requirements" (e.g., wiretap expertise)) for the position. The remaining five members remain on an alternate list and are also required to complete and submit a PRP and SR, although the Board only considers them if one or more of the original five members withdraws. Finally, after reviewing and scoring each PRP and SR for the five candidates, the Board rank-orders the candidates based on these scores. It is evident in reviewing the components of the new promotional process that obtaining a competitive score on the JSE is the most crucial step to be considered for promotion.

The RCMP (2000) describes the JSE as a 48-question multiple-choice examination that assesses the candidate's ability to identify the best response to a situation from the four options provided. Initially there were five options (one option was best (two marks), one was satisfactory (one mark), and three were ineffective (no marks)), but the JSE has since been revised. Now there are four options (one option is the best (two marks), and three are ineffective (no marks)).

---

with the target rank. It was based on the judgment of regular member subject matter experts" (RCMP, 2004e, p. 9).

The situations or JSE assess six of the eight core competencies (i.e., Leadership, Thinking Skills, Organization and Planning, Client-Centred Service, Personal Effectiveness and Flexibility, and Interpersonal Skills). The excluded core competencies (Communication and Continuous Learning, along with the other six competencies) are assessed by the Board within the framework of the PRP. It is important to note that the JSE "...assesses the candidate with respect to the requirements of the *next* rank, while the PRP assesses current and recent past performance at the candidate's *current* rank" (italics original) (RCMP, 2000, p. 14). The RCMP generally claims that the JSE identifies potential leaders (RCMP, 2000).

The Problem

There is an urgency to identify, promote and develop leaders within the RCMP in light of demographic data that suggests a pending mass exodus of senior leaders (Drodge & Murphy, 2002). One primary reason for having a promotional process is to allow an organization to identify potential leaders in an equitable manner. The future of the RCMP, or any large and complex organization for that matter, is dependent on the quality of leaders that are identified through promotional processes. It is, therefore, imperative that the promotional processes not eliminate individuals who show leadership potential (i.e., those who exhibit the core competencies, particularly leadership). Since the first step in identifying potential leaders in the RCMP is the JSE, the JSE must be valid, in that it identifies those candidates who are best suited for leadership positions.

Anecdotal evidence suggests, however, that some experienced and competent members

fail to achieve success on the JSE.[3] Some of these members consistently demonstrate excellent leadership abilities, yet they cannot translate those abilities into a successful result on the JSE. This suggests that some potential leaders are not successful in the new promotional process. It is hypothesized that one of the reasons these members are not successful on the JSE is that it may not properly account for individual "thinking styles." While behavioural competencies developed by the RCMP are based on concepts of higher-order thinking skills (i.e., the ability to synthesize, analyze etc., as defined in the Thinking Skills and other competency descriptions (RCMP, 1998)), it may be that candidates who exhibit such competencies are being inadvertently screened out of the promotion process by the JSE due to different "thinking styles." For example, are members who are left-brain or right-brain dominant advantaged or disadvantaged by the JSE, and as a consequence, in their ability to succeed in the NCO promotional process? If so, and equally important, do members who have not been successful on the JSE possess and demonstrate leadership abilities?

The Research Question

As can be seen, the lynch pin in the RCMP promotional process is the JSE. In effect, the score attained on the JSE determines whether a member is afforded an opportunity to compete in the next step of the promotional process. Thus, the JSE serves as a screening device for the RCMP to identify suitable candidates for advancement into leadership positions within the organization. Presently, leadership positions in the RCMP are formally defined by rank and can only be attained by successfully participating in the promotion process, in particular the JSE.

---

[3] Additionally, the author's experience and successful participation in the amended promotion processes (from constable to staff sergeant) has revealed that some experienced and competent

This raises some concerns regarding the use of the JSE as the initial screening instrument.

Therefore, the research question, generally, is whether the RCMP JSE is a valid instrument for identifying potential leaders. More specifically, the question is whether the JSE is biased in terms of a relationship between JSE scores and thinking styles of members (i.e., left- or right-brain dominant). Notably, this study will confine itself to the JSE promotional process related to the NCO rank of corporal.

The Organization

Like any large, international organization, the RCMP is very complex and operates in an extremely complicated environment. In order to illustrate the crucial need to identify all potential leaders within the RCMP, the following presents, briefly, the context in which these leaders are employed in terms of structure, accountability, strategy, decision-making considerations, and governance.

Structure

The RCMP is a national police force which employees over 20,000 police and civilian staff. RCMP headquarters is located in Ottawa, Ontario, and administratively it divides Canada into five regions (Atlantic, Central, Headquarters, Northwest and Pacific). Each region is further sub-divided into divisions (generally, but not exclusively, along provincial or territorial boundaries (e.g., British Columbia is "E" Division)) for a total of 15 divisions. Each division is further divided into districts (e.g., North District is the northern half of "E" Division) in which

---

members (who are also good "leaders") do not fare well on the JSE.

detachments (e.g., approximately 143 in "E" Division) and also units (federal or provincial entities not associated with detachments (e.g., Commercial Crime Section)) are situated. Thus, in any one division, the RCMP may have federal, provincial and municipal policing (by statute or contract) responsibilities. The RCMP can also undertake international policing obligations through contract directly with countries or sponsor agencies (e.g., training) and also participates in United Nations initiatives related to policing. Overall, the Commissioner in Ottawa is responsible for the management and control of the RCMP and all matters connected therewith, and each regional commander, through the Commissioner, is responsible for the activities and priorities in her or his respective region. The Commissioner and RCMP are ultimately under the direction of the Minister of Public Safety and Emergency Preparedness Canada (formerly a function performed by the then office of the Solicitor General) (RCMP, 2004d).

The RCMP has been undergoing significant restructuring, but in general, various decision-making committees review strategic organization, system, financial and human resource issues and forecast financial results of the organization (Ernest & Young, 1998). For example, in 1998, these committees were the Senior Executive Committee (SEC), the Resource Advisory Committee (RAC), and the Common Information Management Committee (CIM) (Ernest & Young, 1998), but these processes continue to be restructured and re-defined even today (RCMP, 2004a). Each division is accountable for its operations and each region (which usually has committee structures similar to the national model (e.g., Provincial Resource Allocation Committee)) is responsible for consolidating the forecasts and financial pressures for its divisions, which are submitted twice a year to the RAC. The RAC and CIM make recommendations to SEC, which in turn reviews and approves the recommendations where

deemed appropriate.

The RCMP is structured to address international, national, provincial and municipal concerns that contribute to public safety and security. The scope of RCMP jurisdiction tends to cross many boundaries of responsibility and necessitates interaction with a wide variety of interest groups, agencies and governments. In general terms, the RCMP interacts with the following: governments (federal, provincial and municipal) and their agencies, judicial mechanisms (three levels), media, civilian oversight, and public opinion, as well as each community in which the RCMP is deployed. Although policing is, operationally, expected to be independent from external influences (particularly political), the RCMP, similar to all government agencies, is subject to influence from a variety of external sources.

Accountability

The RCMP provides an annual performance report to Parliament that details public safety achievements within five policing areas (Federal, Contract, National Policing Services, Peacekeeping, and Protective Policing Services). Each topic area is sub-divided into categories accompanied by a self-reporting list of actions undertaken by the RCMP to address that specific category (e.g., money laundering) and a self-appointed rating (e.g., exceed, met, or did not meet our [RCMP] expectations) (RCMP, 2003c). Although this annual report is helpful to understand the concentration of funding, the report is not very specific. Developing, administering, and applying accurate performance measurements within the RCMP in terms of overall effectiveness, efficiency, and contributions to public well-being was, until recently, rather elusive.

Recent government priorities (i.e., fiscal, terrorism, etc.) have propelled the RCMP toward a new accountability system called the Balanced Scorecard (RCMP, 2003a). Kaplan and Norton (2001) have identified three distinct dimensions to the Balanced Scorecard approach:

1. Strategy. Make strategy the central organizational agenda. The Balanced Scorecard allowed organizations, for the first time, to describe and communicate their strategy in a way that could be understood and acted on.
2. Focus. Create incredible focus. With the Balanced Scorecard as a 'navigation' aide, every resource and activity in the organization was aligned to the strategy.
3. Organization. Mobilize all employees to act in fundamentally different ways. The Balanced Scorecard provided the logic and architecture to establish new organization linkages across business units, shared services, and individual employees. (p. 7)

The Balanced Scorecard gives the RCMP the ability to focus operational strategies and measure the results. More specifically, the Balanced Scorecard links day-to-day operations to identified strategic priorities (RCMP, 2003a).

Strategy

Each year the RCMP declares, in general terms, national policing priorities, which are often aligned with federal government priorities (e.g. "safe streets and communities"). These priorities are published yearly in the Commissioner's Directional Statement. For 2003-04, the RCMP priorities were: Organized Crime, Youth, Terrorism, Aboriginal Communities, and International Police Services (including Peacekeeping), with Integrated Policing as an overarching principal (RCMP, 2003b). The goals and priorities of the RCMP are developed through research, crime trends, input from focus groups (internal and external to the RCMP) and governmental priorities. It is these national goals that guide the development of objectives and,

in turn, program and investigational initiatives at the region, division, detachment and unit levels. Each detachment is responsible for liaising with the municipalities and incorporating the national and provincial strategies with local initiatives and concerns.

As noted by Anthony and Young (2003, p. 48), the success of a non-profit organization is measured by how much it contributes to public well-being. However, the RCMP, and police agencies in general, cannot always definitively measure performance in achieving goals, objectives, programs and initiatives. Strategic plans are developed at all levels of the organization against a backdrop of international, national, provincial, municipal, community, citizen, and crime demands. For example, at the detachment or unit level, prior to committing resources and funding toward a specific project or investigation, operational objectives are identified and anticipated outcomes are projected. Upon completion of that particular project, assessments and/or analyses are completed to determine whether the proposed objectives were achieved (which is not necessarily as simple as counting the "number" of "X's" produced).

Decision-Making Considerations

Although divisions are designed to reflect decentralized decision-making mechanisms, the reality is that if an organization has multiple goals and no good way to measure performance in attaining those goals, many important decisions cannot be delegated to lower level managers (Anthony & Young, 2003, p. 55).

On the national level, a central orchestrating and decision-making process is mandatory in order to maintain the integrity of national and international strategies. Historically, on the

provincial and local levels, detachments and units were relatively autonomous and free to provide services desired by the municipalities in concert with local crime trends. Recently, however, the RCMP has also begun to (re-)centralize decision-making mechanisms at the local level in order to foster significant re-alignment initiatives. For example, within the boundaries of the lower mainland of British Columbia, the RCMP is amalgamating support and investigational services (e.g., Homicide, Emergency Response Teams, Identification, Traffic, Robbery, etc.) and integrating detachments into specific area commands (e.g., Burnaby, Coquitlam and Ridge Meadows detachments will become one area command). The purpose of changing from decentralized to centralized decision-making processes is to provide more efficient service by streamlining. Rather than having multiple detachments committing a certain amount of (redundant) administrative, support, or investigational resources to address systemic issues (e.g., handling employee expense claims or responding to organized crime), municipalities will fund integrated teams and share resources and personnel. The difficulty though, due to certain demographic realities (e.g., retirements) and funding pressures, is that there are simply insufficient personnel to fill current vacancy patterns (nor will there be for a number of years).

Governance

All federal government agencies, including the RCMP, are subject to Treasury Board guidelines and policies regarding funding and expenditures. As well, the RCMP is governed financially by various federal enactments (e.g., *Financial Administration Act,* 1985). Further, governing principles arise from the *RCMP Act* (1985) which outlines the general structure of the RCMP, its various responsibilities and the Code of Conduct for personnel. External and internal accountability mechanisms are created under the *RCMP Act* to deal with public complaints (e.g.,

Asian Pacific Economic Conference, 1997) through the Commission for Public Complaints Against the RCMP, as well as internal complaints or grievances by employees (e.g., civilian External Review Committee). The *Canada Labour Code* (1985) also applies to the RCMP with respect to occupational health and safety matters. A wide range of other federal and provincial enactments can also have application to the operations of the RCMP. The judiciary (e.g., civil suits, criminal cases, constitutional decisions) also has considerable impact on the operations of the RCMP (as does the media), which can have significant financial consequences (e.g., the cost of disclosure in criminal cases). Thus, there are numerous mechanisms in place to monitor the activities, internal and external, of the RCMP.

Summary

This brief overview underscores the organizational imperative for the RCMP to identify and promote its most promising leaders. The promotion process, as it currently stands, however, may not be identifying all potential leaders within the RCMP. Thus, this study is but one small step toward exploring the use of the JSE as the filter and gatekeeper for leadership development, and hopefully it will contribute to a better understanding about the identification and advancement of leaders within the RCMP.

CHAPTER TWO – INFORMATION REVIEW

The purpose of this chapter is provide a literature review of Royal Canadian Mounted Police (RCMP) organizational documents that relate to the Job-Simulation Exercise (JSE), along with a brief exploration of academic subjects relevant to assessing leadership abilities. The aim of the literature review is to provide a general understanding of the issues surrounding the RCMP's selection of the JSE for the initial stage in the promotional process. The review will not be an exhaustive treatise about the RCMP, leadership, cognitive processes, or multiple-choice examinations (MCEs); rather, it will frame, for later discussion, some of the issues that may complicate the RCMP's general assertion that the JSE is a valid instrument to identify leaders.

In terms of organization and substance, the literature review addresses five areas. First, the review will examine the JSE from the RCMP perspective. Second, the review will explore validity measures and compare them to those relied upon by the RCMP with respect to the JSE. Third, the review will undertake a brief exploration of the concept of leadership and how the RCMP has defined and applied leadership in terms of the core competencies for promotion. Fourth, the review will explore the relationship between individual cognitive processes. Finally, the review will examine the limitations of MCE testing instruments.

Review of Organizational Documents

The RCMP has been proactive in trying to develop a valid and fair system of promotion for non-commissioned officers (NCOs). In order to be accepted by members, the process must

be, and be seen to be, valid and fair to all participants. The RCMP must also be satisfied that the process reflects the values of the organization and is effective in identifying all potential leaders from the population of eligible members. Therefore, it is evident that a unique balance between organizational and individual objectives must be achieved for the NCO promotion process to be considered successful.

As noted in Chapter 1, in an attempt to identify members who possess leadership ability, the RCMP has developed eight core competencies (RCMP, 1998). The RCMP (2004d) states that "a 'core competency' refers to an individual's demonstrated KSAs [knowledge, skills and ability] in areas that are central to successful performance in the RCMP, regardless of rank, responsibilities, position or function" (p. 15). Although leadership is identified as a single core competency, it can be theorized that leadership is, in fact, the umbrella under which the remaining seven competencies exist. In other words, truly effective leaders must generally exhibit all of the eight competencies (and perhaps many other unidentified traits).

The NCO promotion process is "based on a generalist model [where]...all RCMP members, regardless of their specialization or current duties, must qualify for promotion to a given rank by writing a force-wide [JSE] simulation" (RCMP, 2004e, p. 10). The RCMP refers to its promotional MCE as a JSE, but it can "also be referred to as 'low-fidelity simulations' because they require candidates to select the best response among several to a written description of a situation rather than requiring candidates to perform the task in an actual simulated work

setting" (RCMP, 2004e, p. 11).[4] Although every candidate is required to meet a minimum passing score on the JSE, such a score does not necessarily translate into success for the purposes of the next stage of the promotion process, as the higher scores are used to strike a short-list of candidates for consideration by a promotion board.

Thus far, the RCMP have prepared and released four Technical Reports for each target rank in the NCO promotional cycles (i.e., corporal, sergeant and staff-sergeant). The reports are for the following NCO promotion cycles: Cycle 1 (1994-1996), Cycle 2 (1996-1998), Cycle 3 (1998-2000), and 2000 (which is the most recent report) (RCMP, 2004e). Each report details the evolution of the JSE and promotional processes, the rationale behind the numerous changes, and an analysis of the results.

Throughout these various cycles, the JSE[5] has evolved in terms of structure and responses. For example, in Cycle 1 and Cycle 2, the JSE was a knowledge-based examination or JKE (Job Knowledge Exam). In Cycle 1 there was one correct answer. In Cycle 2, the questions had either one or two "satisfactory" responses worth one point. During Cycle 3, the JSE was simulation-based, but the candidate had a choice of five options (i.e., one designated "best" response worth two points, one "satisfactory" response worth one point, and three ineffective responses worth zero points). Therefore, guessing was encouraged if the answer was unknown to the examinee. After Cycle 3, the examinations were no longer released to candidates and the writing of the JSE became an annual event.

---

[4] A behavioural assessment center would be an example of a "high-fidelity simulation."

According to instructions located in a JSE booklet (the last available to members) administered by the RCMP, entitled "RCMP NCO Promotion Cycle 3" (1998), examinees are advised to "identify the *best course of action* [long-range comprehensive solutions] to take in the situation described", and in certain other situations, examinees are asked "to identify the ***best initial*** [short term] course of action" (italics and bold original) (p. 2). The JSE instructions continue by stating:

> You should also be aware that, for all the items, you are only being asked to identify the best course of action from among those listed. While you may feel that there is an even better course of action that has not been included among the answer options, you are restricted to selecting the best answer option available to you in the item. (p. 2)

Despite amendments to the JSE, its purpose has remained constant, in that the JSE "...assesses the candidate with respect to the requirements of the *next* rank, while the PRP [Performance Report for Promotion] assesses current and recent past performance at the candidate's *current* rank" (italics original) (RCMP, 2000, p. 13). According to the RCMP, the general goal of the JSE is not to test the knowledge of RCMP policies and procedures, but to assess the examinee's "ability to apply the principles of management and supervision to the problems presented to you in this simulation exercise" (p. 2).

Effective 2000, the RCMP implemented numerous changes to the NCO promotion process and JSE (RCMP, 2004e):

1. For all three ranks, each simulation item had one designated "best"

---

[5] I will generally use JSE to refer to the RCMP examination and MCE to refer specifically to multiple-choice instruments, but both can be, and on occasion will be, used interchangeably.

response worth one point and three "ineffective" responses worth zero points.

2. Based on similar job functions, there was some overlapping content in the sergeant and staff sergeant exams: 30/48 items were in common and 18/48 items were unique for each rank.

3. There was no disclosure of exams in this year allowing for the removal of the costly cycle approach to promotion, yearly opportunities to write the JSE's, and the retention of JSE scores for up to four years. (p. 10)

The RCMP (2004d) describe the JSE as:

> ...48 scenarios that are usually one or two paragraphs long. Each scenario puts the candidates into hypothetical situations, describing who they are (e.g., NCO i/c [in charge] of a small detachment, investigator, etc.), what context they are in (e.g., urban or rural area, administrative or contract function, etc.), what the main issue is (e.g., interpersonal relations problem, leadership problem, etc.), and who is involved (e.g., co-worker, superior, members of the public, etc.). Each scenario concludes with a question to be answered (e.g., what is the best course of action to take?), followed by four options; one being the best action to take worth one point and three ineffective actions worth zero points. Each question is printed on a separate page. (p. 10)

The RCMP (2004d) relied upon the following assumptions regarding the JSE:

1. to use the multiple choice format to maximize efficiency and accuracy of scoring;

2. to use a competency-based approach to align with other human resource functions within the RCMP (i.e., Staffing, Training, Career Management, Performance Management);

3. to determine a minimum passing score to limit the likelihood of promoting a person lacking the required knowledge, skills or abilities;

4. to allow simulations to present an array of different contexts (e.g., contract, federal, administrative, etc.); and

5. to identify only one satisfactory response for each item. (p. 16)

Indeed, it is a considerable task to develop a NCO promotional system for such a complex organization. The RCMP has adopted the JSE with good intentions, yet despite the

efforts to remain fair and unbiased, there have been numerous variances in JSE results reported in the four Technical Reports that would suggest that there are some troubling issues to consider regarding the use of the JSE.

For example, there were statistically significant differences in candidates' mean scores on the JSE among certain subgroups (i.e., geographical (division and region), language, and age). Specifically, in "C" Division (Quebec), mean scores were lower than scores in ten other divisions in 1998 out of a total of 15 divisions (RCMP, 2000, p. 38) and nine other divisions in 2000 (RCMP, 2004e, p. 30). For example, the mean score (30.8) for the Corporal JSE was 2.5 points lower than the mean score for "E" Division (British Columbia). The RCMP (2000) has posited that these differences may result from the lower participation rates in "C" Division, the fact that only federal work is carried out in "C" Division, or that it is reflective of the different opportunities and experiences afforded members in other divisions. In other words, a member responsible for a detachment in a small northern community may have more and varied opportunities to exercise/develop essential skills and/or competencies than a member who has worked in a more structured and compartmentalized setting. However, the RCMP (2004d) suggests that because the job analyses have indicated that such skills are required at the next rank, the simulation will be fair even if it reveals certain divisional differences (p. 39). The difficulty, of course, is that the RCMP has also assured members that they would not be disadvantaged in the promotional process based on their postings or the type of work performed, which the foregoing suggests is not necessarily the case (RCMP, 2003d).

In terms of language, candidates who completed the 1998 Cycle 3 JSE in English had

higher mean scores (67.4[6]) than those who read the JSE in both English and French (65.8), and were statistically significantly higher than those who completed the JSE in French (60.8) (RCMP, 2000, p. 41). The RCMP (2004d) found these findings held true in the next promotional cycle JSE in 2000, noting "...the mean score of candidates who read the simulation in English [32.8] was significantly higher than that of candidates who read the simulation in French [31.4]..." (p. 34). These findings may be attributed to the same logic used above when discussing the lower mean score of candidates participating from "C" Division, but again, there is apparently some disparity in results on the JSE which has implications for the validity and fairness of the promotion process, and the JSE in particular.

In terms of education, candidates with a university degree achieved higher mean scores (68.4–1998; 33.7–2000) than both college (66.1-1998; 32.4-2000) and high school (66-1998; 31.8-2000) educated candidates but the differences were not statistically significant (RCMP, 2000; RCMP, 2004e).

In terms of gender, visible minorities, Aboriginal candidates, and alternate writing date for the examination, there were no statistically significant differences discovered regarding candidates' mean scores on the JSE during Cycle 3 (RCMP, 2000). However, for the 2000 NCO promotion process, female mean scores (35) were statistically significantly higher than males (31.2) for the sergeant JSE. The majority group mean score (32.7) was statistically significantly higher than that of Aboriginal (30.4) and visible minority groups (31.1) for the corporal JSE.

---

[6] It should be noted that JSE scores for Cycle 3 were scored out of possible 96 (because there was two points for the correct answer and one point for satisfactory answers), while the 2000 Cycle

The majority group mean score (32.8) was higher than the Aboriginal group mean score (29.4), but lower than the visible minority score (33.0) on the sergeant JSE (RCMP, 2004e, p. 33).

In Cycle 3, regarding the variable of amount of contract policing experience (i.e., provincial, municipal and/or uniform related experience), there was no statistically significant difference among candidates' mean scores for the staff sergeant JSE. However, this variable had a negative relationship with candidates who wrote the sergeant JSE, but a positive relationship with the candidates who wrote the corporal examination (RCMP, 2000, p. 45). In other words, the amount of contract policing experience appeared to influence JSE results (i.e., negative and positive). In the 2000 cycle, candidates who had contract and CPS (community policing) postings had higher mean scores than candidates in federal posting for the corporal JSE, while candidates from contract postings writing the sergeant and staff-sergeant JSE also scored higher than candidates from federal postings (RCMP, 2004e, p. 38).

While it is interesting to note that contract policing experience may be related to JSE results, the same can also be said regarding years of service and time in rank. For example, during the Cycle 3 staff sergeant JSE, candidates' performance tended to decline as candidate seniority increased. Additionally, the same results occurred with a candidate's time in rank. During the 2000 writing cycle, "a significant negative relation was found between performance on the corporal JSE and years of service in the RCMP" (RCMP, 2004e, p. 38).

The negative relation between years of service and results on the JSE may be attributed to

---

was scored out of 48 (because there was only one correct answer).

a number of factors. For example, one possible explanation may relate to the findings of McDaniel and Nguyen (2001), who have researched job simulation instruments. They have speculated that there is a negative correlation between length of time on the job and results on JSE's because, "one learns most of the job knowledge needed for job performance in the early years of experience and each additional year of job experience contributes less and less job knowledge" (p. 107). Additionally, McDaniel and Nguyen speculate that "the correlations between situational judgment tests with job knowledge are probably larger that that of job experience because job experience is a less than perfect measure of job knowledge" (p. 107).

Although it is claimed that the current JSE is not a knowledge-based examination, as it has been in the past, when one looks at the criteria used by the RCMP to establish the content validity of the JSE, it is evident that job knowledge remains a component. For example, to ensure the JSE was content-valid, the RCMP (2004d) utilized the following:

1. used job analysis (and core competencies) to identify essential competencies and major tasks/responsibilities at the corporal, sergeant and staff sergeant ranks;
2. involved regular member subject matter experts (SMEs) directly in the development of the simulation items (including the scoring key);
3. based the simulation items on critical incidents provided by regular members;
4. had regular member SMEs rate the appropriateness of the items; and
5. had the items reviewed by relevant policy centers. (p. 29)

The RCMP (2004d) have stated that the means used to ensure the JSE was content-valid also "helped ensure that the items formed a representative, realistic, and accurate sample of the situations RCMP corporals, sergeants and staff sergeants are confronted with on the job" (p. 29). Hence job knowledge and job experience can likely influence JSE results.

Overall then, the RCMP's (2004d) "comparative analysis found that mean candidate JSE scores *differed* based on division, gender, designated group membership, language, type of posting, length of service, level of education, and date of the exam" (emphasis added) (p. 41). However, the analyses did not produce any "*conclusive* evidence" (emphasis added) to suggest that the JSE was biased against any particular group; rather, the RCMP concluded "that the simulation provides an equal opportunity to all members to demonstrate their job-relevant skills and abilities" (RCMP, 2004e, p. 41). However, in the context of an NCO promotional process that is advanced on the premise of overall validity and fairness, it is disconcerting that there are statistically significant differences in how certain identifiable categories of members are succeeding with respect to the JSE. While the RCMP argues that there is no "conclusive" evidence that the JSE is "biased" against any particular group, these results may raise separate concerns about *prima facie* discrimination on a prohibited ground (e.g., language, gender, race, age, or place of origin), which, however, is not a focus of this study. [7]

While the JSE may provide an equal opportunity to all members to participate and demonstrate job-relevant skills and abilities, there appears to be some basis to assert that the JSE method of measurement and format are not clearly identifying all potential leaders within the RCMP. The remaining aspects of this literature review will focus on psychometrics, leadership,

---

[7] For example, see generally the *Canadian Human Rights Act*, R.S.C. 1985, c. H-6, section 15 of the *Canadian Charter of Rights and Freedoms*, Schedule B of the *Constitution Act, 1982*, R.S.C. 1985, Appendix II, No. 44 enacted by the *Canada Act* (U.K.), c. 11, and *British Columbia (Public Service Employee Relations Commission) v. British Columbia Government and Service Employees' Union (B.C.G.S.E.U.)*, [1999] 3 S.C.R. 3 (known as the *Meirion* decision) with respect to establishing *prima facie* discrimination on prohibited grounds.

cognitive processes, and MCEs, which will provoke further discussion regarding the validity of the JSE.

Review of Supporting Literature

Having reviewed the JSE from the RCMP perspective, this next section will now discuss the remaining four areas: validity measures and a comparison to the measures relied upon by the RCMP; the concept of leadership and how the RCMP has defined and applied leadership; individual cognitive processes; and, the limitations of MCE instruments.

A Discussion about Psychometrics

This study intends to assess and explore the general validity of the JSE. In this case, validity "refers to the extent to which an empirical measure adequately reflects the *real meaning* of the concept under consideration" (italics original) (Babbie, 2001, p. 143). Although the RCMP has undertaken a considerable amount of work in revising the promotional process and developing the JSE, the question appears to linger about whether the outcome of the NCO promotional process truly reflects the intent of the process: identifying potential leaders.

Remember that this study's research question actually speaks to two issues. The first issue concerns the validity of the JSE. In other words, does the JSE accomplish what it claims to do in terms of identifying potential leaders? The second issue is related to the first, in that it explores whether there is a systematic relationship between JSE scores and thinking styles. In other words, is the JSE biased against particular thinking styles (i.e., left-brain or right-brain

dominant)? If it is, then validity is diminished to the extent that it eliminates members who possess and display good leadership.

Typically and traditionally, there are three types of validity that are of significance in any form of measurement: content, criterion, and construct (Rubio, Berg-Weger, Tebb, Lee & Rauch, 2003). In the Technical Report pertaining to the Cycle 3 promotional process, the RCMP highlighted that content and criterion validity were considered during the development and subsequent administration of the JSE (RCMP, 2000), but there was little reference to construct validity.

The RCMP (2000) has identified and relied upon three forms of validity to support the JSE. The first is "face validity", or the extent to which the candidate members perceive the JSE to be job relevant. The second is "criterion-related validity", which is established by correlating the JSE results with other criteria (e.g., supervisor ratings). The third is "content validity", which refers to the:

> degree to which a test constitutes a fair and representative sample of tasks relating to the ability it is designed to assess…[it] is not a statistical measure, but rather entails a *judgment* [italics original] of how well the test represents the knowledge, skills and abilities required for the job. (RCMP, 2000, pp. 16-17)

In this study, each form of validity identified by the RCMP will be examined in detail from the various technical reports prepared by the RCMP. The objective, however, will be to consider whether the JSE is valid in that it does not screen out potential leaders based on the way they process information (e.g., based on left or right-brain dominance). In essence then, part of this study is about whether there is a systematic bias inherent in the JSE based on thinking styles

of members.

Reliability

In terms of reliability of the JSE, it would appear that this criterion is a work in progress. For promotion cycles 1–3, and the 2000 NCO promotion process/cycle, the technical reports all indicate that test-retest reliability was not possible. The first three cycles precluded test-retest because the tests were released to the candidates. In the fourth cycle (2000 NCO promotion process) there was no test-retest available as this was the first time the examinations were not released. It is significant to note that in all of the technical reports (Cycles 1-3 and the 2000 NCO Promotion Process) there is no evidence regarding the testing or piloting of the JSE as an instrument of evaluation. Therefore, it is difficult to comment on the extent of available reliability evidence for the purpose of this study. Keeping in mind that this study is concerned with JSE validity, it is important to note that reliability is a necessary (although insufficient) condition for validity. Lack of reliability documentation, then, provides at least a *prima facie* basis to question the validity of the JSE.

Criterion or Predictive Validity.

The RCMP (2004d) have accepted that "criterion validity is evaluated by correlating ratings or ranking on the assessment instrument (predictor) with a measure of job performance (criterion) such as supervisor ratings (performance appraisals), peer ratings or production output" (p. 12). Further, " the relation between test performance and existing information on current employees' job performance can be examined (concurrent validity), or between test results and information on job performance to be gathered in the future (predictive validity)" (p. 12).

Having said that, the RCMP has not explored the criterion validity of the JSE; rather the RCMP has apparently relied upon "generalized finding[s]" by citing previous research conducted externally (and unrelated) to the RCMP. In other words, the RCMP (2000) has relied upon research studies that have examined the validity of multiple-choice simulation exercises in other employment contexts and have adopted those findings to support or validate the JSE for the RCMP. Specifically, one study that the RCMP uses to make generalized assumptions about the validity of the JSE is that of Motowildo, Dunnette and Carter (1989, 1990, as cited in RCMP, 2000). These researchers were tasked with developing a test for entry-level management positions within the telecommunications industry. They focused on managerial skills and abilities that are common across management functions as a basis for developing a situational MCE-based test. For this study, the results (correlations ranging between 0.28 to 0.37) indicated that the test was valid for predicting performance for the management positions under consideration. The RCMP (2004d) accepted that the NCO JSE simulations were designed to measure managerial abilities that are commonly assessed through situational judgment tests in other managerial settings, and therefore, are not unique to the RCMP organization.

Using a generalized validation process, the RCMP (2000) has concluded that "simulation exercises are valuable selection tools and situational judgment tests are a promising alternative to lengthy, expensive assessment centers. This would be especially true when these procedures are used in conjunction with other valid assessment techniques" (p. 16). Having said that though, one would need to be assured that the JSEs, whether in a telecommunications field or in a policing environment, are consistent and comparable in order to draw any generalized

conclusions (i.e., format, time, etc.). As noted, the development of the simulations for the RCMP JSE was based on SMEs from within the RCMP environment. The desired competencies may be consistent with any managerial position, but the context, environment and experience may be rather unique. In sum then, the research validates the use of a JSE in terms of testing and methodology, but does not validate the instrument itself.

Construct Validity

Babbie (2001) has stated that "[c]onstruct validity is based on the logical relationship among variables" (p. 143). When developing a form of measurement, one will also have some theoretical assumptions about the outcome of that form of measurement (Babbie, 2001). For instance, in the case of the RCMP, the measurement form is the JSE and the theory is that the outcome of the JSE will predict future performance in the construct of leadership. But one must ask whether the JSE actually does that. There is no evidence presented in the Technical Reports to suggest that the theory has been tested and supported within the context of the RCMP or policing environment in general.

Relying upon generalized findings is an acceptable practice as long as the simulation exercises are measuring similar knowledge, skills and abilities (RCMP, 2004e). According to the RCMP (2004d), "...validity evidence is enhanced by the fact that the NCO simulations were designed to measure managerial abilities that are commonly assessed through situational judgment test in other managerial settings" (p. 13). McDaniel and Nguyen (2001) have, however, cautioned:

> although situational judgment test have been used for many decades, our

> knowledge base is relatively small...we know that these tests generally correlate with general cognitive ability and other factors but know little concerning how to build the tests to assess the constructs we wish to measure. (p. 110)

Face & Content Validity.

Rubio, Berg-Weger, Tebb, Lee and Rauch (2003) have defined content validity by the "extent to which the items on a measure assess the same content or how well the content material was sampled in the measure. Content validity can be characterized as face validity or logical validity" (p. 94).

The RCMP (2000) has concluded that the nature, content and construction of the JSE meets the content validity test. The RCMP (2000) has identified the following criteria as being relevant to the examination of content validity:

1. the simulation exercise must be based on a thorough job analysis that describes the tasks comprising the job and the context; and
2. developers should solicit the evaluations of experienced job incumbents or others who are familiar with the job. (p. 19)

During Cycle 3, the first criterion was addressed by having fourteen RCMP employees, representing eleven policy centers, review each JSE item to ensure consistency with RCMP policies, practices, and strategic direction (RCMP, 2000, p. 25). The second criterion was addressed by having 45 RCMP regular members, representing all regions and functions, develop the JSE items over a course of six workshops.

Additionally, face validity was examined by the RCMP with the use of a questionnaire administered to candidates after completion of the JSE. During the Cycle 3 promotional

examination for staff sergeants (that was written by 742 candidates), 80% agreed that the simulation items were "generally relevant to the task performed by staff sergeants in the RCMP", and 61% agreed that the simulation exercises provided "a fair assessment of members' abilities, regardless of their job function or duties". However, only 34% agreed, 35% were neutral, and 30% disagreed that the simulation exercise "provided a good indication of how well members would perform at the next level" (emphasis original) (RCMP, 2000, p. K-2).

In the fourth Technical Report (RCMP, 2004e) relating to the 2000 promotion process, the RCMP have lessened the emphasis on face validity, explaining that "[c]ontent validity refers to the degree to which a test constitutes a fair and representative sample of tasks relating to the abilities it is designed to assess" (p. 12). The RCMP has concluded:

> the extent to which the test stimulus resembles the job content, referred to as face validity, is less important than the content validity. A content valid test involves tasks or processes that are representative of the job in question, regardless of the stimulus material used. (p. 12)

To this end, the simulations underwent a thorough job analysis "which enumerates and describes the tasks comprising the job and the context in which they occur" and developers "solicit[ed] the evaluations of experienced job incumbents or others who are familiar with the job" (p. 13).

Leadership

In order to understand the type of leader the RCMP is seeking to identify and promote, it is important to explore some of the complex and varied aspects that relate to leaders and leadership. The RCMP has developed the NCO promotional system to identify and promote individuals into leadership roles within the organization. Drodge and Murphy (2002) have

observed, however, that "[l]eadership is far too complex a phenomenon to portray as a commodity that, once identified, can be bottled and distributed to a hungry organization" (p. 1). The task of identifying leaders through some form of selection process must, therefore, take care not to be over simplistic in a complex world. Care must also be taken not to rely on untested assumptions about how to identify leaders and the means to measure or assess desired leadership qualities in individuals.

The body of literature pertaining to the subject of leadership is quite extensive, yet there continues to be varying opinions regarding what constitutes a "leader" or "leadership" (Kouzes & Posner, 1997; Yukl, 2002; O'Toole, 1995). Conceptually, Yukl (2002) has identified and categorized leadership into three specific skill categories: "technical", "interpersonal" and "conceptual". Each category consists of a variety of special skills. For example, technical skills can include a leader's knowledge about methods, processes, procedures and techniques; interpersonal skills can include the degree of knowledge the leader has about human behaviour, communication, and the ability to establish effective and cooperative relationships; while conceptual skills can include a leader's general analytical and logical thinking ability.

This review will adopt as a conceptual framework Yukl's (2002) three categories of leadership skills and will provide the reader with an understanding of the diverse skill sets required of leaders and when individuals are considered to be demonstrating leadership abilities. Yukl's typology also provides a useful framework in which to compare and contrast competing theories about leaders and leadership.

Technical Skills

Yukl (2002) identifies technical skills as knowledge about administrative practices (i.e., methods, processes, procedures and techniques for specialized activities) along with the ability to use tools and equipment relevant to that activity. In many circles, this skill set also appears to be associated with the activities and expectations of an effective manager or administrator. Thus, this skill necessitates a brief look at the recent debate regarding the differences, if any, between leaders and managers.

Are there differences between a leader and a manager? Are these two seemingly separate entities related? Can you be one without being proficient at the other? It can be suggested that the qualities and traits of a leader (e.g., flexibility, innovation and adaptation), and conversely, the quality and traits of a manager (e.g., stability, order and efficiency) are both desired, and simply coinciding evidence of the overall quality one would look for in a leader or leadership position. Yukl (2002) affirms that "[m]ost scholars seem to agree that success as a manger or administrator in modern organizations necessarily involves leading" (p. 6).

Kent, Crotts and Azziz (2001) have separated the functions of organizations and individuals into management functions and leadership functions. Specifically, they are of the opinion that "...management has a great deal to do with allocating and insuring the effective use of resources", while "leadership is more related to the marshalling, energizing and unifying of people toward the pursuit of a vision" (p. 221). But, as noted by Yukl (2002), "[s]trong management alone can create a bureaucracy without purpose, but strong leadership alone can create change that is impractical" (p. 6).

Contrary to the view that managing and leading are two separate functions, Walls (2002) has observed that "[m]anagement means getting results through proactive behaviour that other people carry out. To envision management apart from leadership is like performing a symphony without using the violin sections" (p. 22). While a leader can lead without managing (e.g., an informal leader) and a manager can manage without being a leader, pigeonholing different types of people or functions into leaders or managers "is not supported by empirical research; people do not sort neatly into these two extreme stereotypes" (Yukl, 2002, p. 5). While seemingly separate, it is evident that both managers and leaders are reliant upon and deploy leadership skills and abilities that overlap. It appears to be the degree of overlap of these skills that predicts the level of effectiveness.

Interpersonal Skills

In general terms, Yukl (2002) has identified interpersonal skills of leaders as possessing knowledge about human behaviour and interpersonal processes. Specifically, he has listed empathy, social sensitivity, speech fluency, persuasiveness, tact, diplomacy, listening skill, and knowledge about acceptable social behaviour. All of these skills are necessary for a leader to be effective. Having said that though, if one possesses these skills does this necessarily translate into leadership? It is worth having a brief look into this aspect of leadership further.

Drodge and Murphy (2002) have highlighted one important difference between leaders and leadership. Leaders can be developed, while leadership "...is far more elusive and dependent upon the attributions of followers, the leader's behaviour, and the particular

environment" (p. ii). With so many influencing factors, it is little wonder that there is no overall consensus concerning the attributes of a leader.

Nevertheless, there are, in addition to the skills Yukl (2002) has identified, some common traits of effective leaders that have been accepted and agreed upon by scholars. Kent, Crotts and Azziz (2001, p. 224) have summarized in table form many scholars' views about leader behaviour(s). For this study the Kent, Crotts and Azziz table has been modified to include Yukl's (2002) views of the behaviour of leaders and is presented in Table 2.1 (Common Traits of Leaders) below. It would appear that, for the most part, all of these authors have identified similar behaviours in leaders, but have not, however, agreed on how to classify that behaviour.

Table 2. 1 Common Traits of Leaders

Bass (1985), Bass & Avolio (1994) (as cited in Kent et al., 2001)	Bennis & Nanus (1985) (as cited in Kent et al., 2001)	Conger (1989) (as cited in Kent et al., 2001)	Kotter (1980) (as cited in Kent et al., 2001)	Kouzes & Posner (1995) (as cited in Kent et. al, 2001)	Kent et al. (1996) (as cited in Kent et al., 2001)	Yukl (2002)
	Attention through vision	Sensing opportunity & formulating a vision	Establishing direction	Inspiring a shared vision	Visioning	Articulating an appealing vision
Intellectual stimulation		Empowering others to achieve the vision		Challenging the process	Creating possibilities	Empowering and expressing confidence in followers
Charisma	Meaning through communication	Communicating a vision that inspires			Communicating for meaning	Strong, expressive forms of communicating a vision
Individualized consideration	Deployment of self	Encouraging commitment in followers	Aligning people	Enabling others to act	Enlisting and developing stakeholders	Taking personal risk and self-sacrifice to attain the vision and building identification with the group or organization
Inspiration	Trust through positioning	Building trust through personal commitment	Motivation and inspiring	Encouraging the heart	Building spirit and willfulness	Managing follower impressions of the leader
Idealized influence	Attention through vision			Modeling the way	Managing one's self	Role modeling behaviour

Bass (1985), Bass & Avolio (1994) (as cited in Kent et al., 2001)	Bennis & Nanus (1985) (as cited in Kent et al., 2001)	Conger (1989) (as cited in Kent et al., 2001)	Kotter (1990) (as cited in Kent et al., 2001),	Kouzes & Posner (1995) (as cited in Kent et. al, 2001)	Kent et al. (1996) (as cited in Kent et al., 2001)	Yukl (2002)
						consistent with the vision

Drodge and Murphy (2002) view leadership as "...a social process arising from both the behaviour of a formal leader and the attributions of followers" (p. 2). As one can see, leadership is influenced by the quality of working relationships established by the leader.

Bartone, Snook and Tremble (2002) have published an interesting longitudinal study concerning cognitive and personality predictors of leader performance in a military environment. The sample consisted of a single class of U.S. Military Academy (West Point) students. The study administered a variety of tests over a four year period. Briefly, their findings suggest a positive correlation between the sex of the individual (females significantly higher than males), logical reasoning, social judgment, and cadets' results on college entrance examinations with leader performance. Bartone, Snook and Tremble (2002) also noted that problem solving and strategic thinking abilities did not predict performance for this particular group, but may be relevant with more senior leaders. They further observed "highly effective leaders are those who are more attuned to themselves as well as their social worlds, and who are more adept and open in evaluating their own reactions as well as those of others" (p. 331). Finally, they acknowledged that their study only addressed a finite number of variables, and as such, they encouraged further study to identify other factors that can influence leader development. For example, they have hypothesized that individuals "high in hardiness are more resilient when exposed to a range of environmental stressors, remaining healthy and performing well despite

high stress level" (p. 335).

Specific to the RCMP as an organization, Drodge and Murphy (2002) conducted a case study concerning leadership. The study focused on "factors facilitating the emergence of leadership, not leadership competencies, which are at best a snap shot in time based upon individual attributions" (p. iv). The Drodge and Murphy study identified some specific leadership qualities identified by RCMP personnel as follows:

1. Moral integrity and community values are a fundamental aspect of conduct.

2. Followers have a need to feel personally valued by the leader (i.e., that the leader is working to provide them with the tools to do their job and that the leader is providing them with challenging opportunities for development).

3. Openness to new learning, being self-reflective, communicating effectively, demonstrating operational knowledge and skills of local issues, demonstrating community values, and articulating a vision. (p. v)

Drodge and Murphy noted that:

> ...leadership is not a stable phenomenon because it is always subject to changing needs and values, to new demands by different stakeholders, and by a range of systemic fluctuations in the environment. While the leader may remain relatively constant in terms of the traits held and exhibited, the context within which a leader operates is a moving target and will exert a large influence over whether leadership emerges. (p. 37)

Thus far, Yukl's (2002) typology of technical and interpersonal skill sets for leaders suggests two conclusions. First, technical skills define effective leadership by balancing skills of leaders and of managers. Second, interpersonal skills define leadership by balancing leader and follower behaviours. However, both technical and interpersonal skill sets are reliant upon a leader's ability to function within an environment. Hence, the third skill set of the leader,

conceptual skills, becomes paramount in sustaining effective leadership capabilities.

Conceptual Skills

Yukl (2002) has listed the conceptual skills of a leader as follows: general analytical ability; logical thinking; proficiency in concept formalization and conceptualization of complex and ambiguous relationships; creativity in idea generalization and problem solving; and ability to analyze events and perceive trends, anticipate changes, and recognize opportunities and potential problems (inductive and deductive reasoning) (p. 54). Essentially, these skills can be summed up into two terms: strategic thinking and strategic planning.

Mitzenberg (1994, as cited in Graetz, 2002) explained that strategic planning "concerns analysis and stablizing and formalizing systems and procedures [i.e., the technical skills of a leader as discussed above]; [strategic] thinking involves synthesis-encouraging intuitive, innovative and creative thinking at all levels of the organization" (p. 456). Greenwalt (1997) has termed this activity "critical thinking" and defines it as a leader having the "propensity and skill to engage in an activity with reflective skepticism" (p. 80). Liedtka (1998, as cited in Graetz, 2002, p. 456) has outlined five attributes of strategic thinking which are paraphrased below as:

1. a holistic view regarding the organization and how each part influences each other;
2. a focus on intent to thinking beyond existing resources and emerging opportunities (i.e., traditional planning focuses on creating a "fit" between resources and opportunities);
3. an understanding of the interconnectivity of past, present and future;
4. hypothsisis generating and testing (i.e., What if? Followed with "If...then...?"); and
5. the capacity to be intelligently opportunistic (i.e., to recognize and take advantage of newly emerging opportunities).

Graetz (2002) has observed that "[t]he ability to 'think strategically' depends on the interaction between situational factors in the organizational setting and the characteristics of the individuals involved" (p. 458). Therefore, it is essential that leaders be attuned to their environment and individuals involved, and that they have an understanding about themselves. In other words, every leader must be aware of their personal preferences, thinking styles and cognitive abilities. For example, Graetz (2002) conducted a study involving 46 individuals and administered a Life Time Assessment Test (LTAT), which is based on the Herrmann Brain Dominance Instrument (HBDI). The test identifies an individual's preferred behavioural style. Once the LTAT was administered, she then had the individuals participate in a scenario planning exercise. Of interest, "the results indicated that the relaxed dominant profile across all groups was 'imaginist'. However, under pressure, the majority evacuated to the analyst quadrant" (p. 460).

Further, Graen (1989, as cited in Allinson, Armstrong & Hayes, 2001, p. 203) concluded that "subordinates in effective leader-member exchanges tend to have a cognitive decision-making style compatible with that of the leader." Additionally, a study conducted by Allinson, Armstrong and Hayes (2001) found that:

> leaders appear to be more nurturing, less talkative and more liked and respected, the more intuitive they are than their members. Equally, leaders see themselves as being less dominant, and members are more dominant, the more analytic members are than their leaders. (p. 213)

And Manz and Neck (as cited in Houghton & Neck, 2002) discovered that "[t]hose individuals who envision the successful performance of a task or activity beforehand are much more likely to

perform successfully when faced with the actual situation" (p. 674). Graetz (2002) believes that "if organization[al] leaders wish to foster strategic thinking capabilities at many different levels of the workplace, they not only have to consider whether their people have the appropriate mix of skills and personal attributes, but also whether they themselves have the leadership qualities required to convey a 'sense of direction, discovery and destiny'" (p. 460).

In examining each of Yukl's (2002) skill sets, it is argued that for leadership to exist, all three sets (i.e., technical, interpersonal, and conceptual) must be present in a leader. By briefly examining the elements of leadership within this framework, one can acknowledge that there is some degree of flexibility between terms when attempting to define leadership. Within the context of the RCMP, the core competencies capture the essence of each of the skill sets as defined by Yukl. Therefore, it would appear that, in terms of leadership definition, the RCMP are in overall agreement with many noted scholars. Though the RCMP's leadership definitions or concepts are consistent with the literature, the more fundamental issue to this study is whether these competencies are adequately measured in terms of the individuals participating in the promotional processes, particularly with regards to the JSE.

Cognitive Processes

Behind every action is a thought. Therefore, having insight in how an individual prefers to process information is critical to an organization seeking to recognize and develop leaders. Nasmyth, Schultz and Williams (2003) have noted that "[h]ow leaders assess situations, make decisions and apply leadership strategies is influenced by thinking preferences controlled by functions located in cortical and limbic structures with in the brain" (p.1). Cognitive styles are

relatively "fixed" for individuals, although some change in behaviours is possible, but over time an individual reverts to her/his preferred method of thinking (Kagen & Moss, 1963; Miller, 1991; Messick, 1976; Kogan, 1980; Robertson, 1985; and Kirton, 1989, all as cited in Allinson, Armstrong & Hayes, 2001). It is, therefore, essential to understand what the preferred method of thinking is for an individual, or individuals, in an organization. By understanding each individual's preferred thinking method, greater understanding can be applied to conflict in the workplace and to overall efficiency within the organization, as well as understanding performance on testing instruments, such as MCEs.

For example, Buffinton, Jablokow and Martin (2002) conducted a study pertaining to project team dynamics and cognitive style. Overall, they concluded the team with the largest cognitive gap reported the greatest amount of conflict. In other words, groups with individuals who had very different and/or opposite thinking styles were more apt to be in conflict and be less productive. Hence, if the participants knew or understood the reason for the conflict, perhaps efforts could be taken to align working teams with compatible thinking styles. If "[t]he reality is that while an organization may begin with a rational plan, what evolves may be something quite different to the actual intention" (Graetz, 2002, p. 456), then at least one would feel more comfortable knowing that the organizational leaders possess strong conceptual skills.

When identifying leaders, organizations must find a means to assess leaders. Nasmyth, Schultz and Williams (2003) have observed that "leaders are expected to vary their leadership skills depending on the internal and external conditions they encounter... [and] leaders must be able to recognize, adapt and take advantage of opportunities to help the organization thrive" (p.

1). In the RCMP, leaders are expected to have, and will not advance, unless certain aspects of their behaviour and thinking skills have been demonstrated and assessed. This leads one to wonder if thinking skills are related to thinking styles? In particular, certain thinking styles may be more related to higher-order thinking processes expected of leaders (e.g., synthesis and analysis). The RCMP has identified higher-order thinking skills as necessary qualities for NCOs or leaders within the organization (RCMP, 1998). Hence, this calls for an exploration of the concept of thinking styles, academic performance and thinking styles, and assessment of thinking styles (Sternberg, 1994; Au, 1997; Sadler-Smith, 1999; Armstrong, 2000; Cano-Garcia & Hughes, 2000; Zwanenberg, Wilkinson & Anderson, 2000; Heffler, 2001; Zhang, 2001 & 2002b; Riding, Grimley, Dahraei & Banner, 2003).

Thinking Styles

This research project is only one of many studies that is searching for "a generalisable approach to the use of biodata in the prediction of performance and the measurement of personal attributes such as personality, vocational interest and cognitive capacities and preferences" (Zwanenberg, Wilkinson & Anderson, 2000, p. 365). There is an ever-expanding use of terms and language as the cognitive thinking concept evolves and is explored by a litany of researchers. This variance in definitions may be explained in terms of three reasons: researchers are interested in only one dimension; researchers are using different measurement instruments; and/or researchers theoretical bases are very different (Cano-Garcia & Hughes, 2000). In order to clearly understand the implications of thinking style research, one must begin with a clear understanding of the labels being used (many of which seem to be interchangeable depending on the researcher). However, as the literature is reviewed, it will become evident that many labels

and concepts overlap with others, in some instances significantly.

Zhang (2002b) notes that, in the literature regarding thinking styles, there are a variety of style labels (e.g., learning styles, cognitive styles, and thinking styles). Zhang further clarified that styles are not abilities, but rather an individual's preferred way(s) of processing information and of using the abilities that they have (p. 332). It must be noted that thinking styles (under any label) usually are not exclusive to an individual. In other words, individuals develop and practice a mixture of styles as they live, learn, and develop (Silver, Strong & Perini, 1997). Thinking and cognitive styles refer to the same concept, while learning styles "can be considered as a thinking sub-product" (Cano-Garcia & Hughes, 2000, p. 423).

Sternberg and Grigoreni (1997, as cited in Zwanenberg, Wilkinsen & Anderson, 2000) and Riding and Rayner (1998, as cited in Zwanenberg, Wilkinsen & Anderson, 2000) agree that learning styles should be viewed as a subset of what they see as the main center of attention: cognitive styles. Sternberg and Grigorenko further classify cognitive styles as cognition-centred, personality-centred, or activity-centred (as cited in Zwanenberg, Wilkinson & Anderson, 2000).

Zhang (2001) cited and expanded on Sternberg's classification of individual thinking styles into five dimensions described as mental self-government. Specifically, he identified five dimensions and included a description of a variety of styles for each dimension. I created Table 2.2 (Five Thinking Style Dimensions) to illustrate the five dimensions and styles of thinking:

Table 2. 2 Five Thinking Style Dimensions

Functions	Forms	Levels	Scopes	Leanings
Legislative Likes creative strategies	Monarchic Prefers to focus on one thing at a time	Global Pays more attention to the overall picture of an issue and to abstract ideas	Internal Enjoys working independently	Liberal Enjoys novelty and ambiguity
Executive Tends to focus more on the implementation of tasks with set guidelines	Hierarchical Tends to distribute attention to several prioritized tasks	Local Engaged in tasks that require work with concrete details	External Engaged in tasks that provide opportunities for developing interpersonal relationships	Conservative Tends to adhere to the existing rules and procedures in task performance.
Judicial Concerned with evaluating the products of others' activities	Oligarchic Work toward multiple tasks but may not like to set priorities			
	Anarchic Likes flexibility to work on tasks as to what, where, when and how.			

Zhang (2002a) formed the opinion that seven of the thinking styles could be categorized into two types: "[t]he first type (legislative, judicial, global, and liberal) is creativity generating and requires complex information. The second type (executive, local and conservative) requires simplistic information processing" (p. 248).

Zhang (2002a) reiterates his findings from an earlier study in 2000, in which he and Sternberg found the first type of thinking style (legislative, judicial, global, and liberal) had a

positive correlation to "deep learning"[8] and scored higher on the holistic scale, but lower on the analytic. One could also use the terminology "field independent" for these individuals (Witken, 1977, as cited in Ford & Chen, 2001). The second type of thinking style (executive, local, and conservative) best related to "surface learning"[9], and scored higher on the analytic scale. One could also use the terminology "field-dependent" for these individuals (Witken, 1977, as cited in Ford & Chen, 2001). These references to deep and surface learning are similar in definition, research, and findings of Scouller (2000).

Sternberg (1994) has written an article concerning the need for educators to be aware of the difference thinking styles of individuals. Specifically, he cautioned teachers to be aware of the variety of individual thinking styles, and for teachers to remain flexible in teaching and methods of assessment. Sternberg (1994) noted that traditional assessment methods, like a MCE, benefit individuals with an executive (i.e., likes structure) and conservative (i.e., follows convention) style, while more modern methods (i.e., performance assessment) benefit individuals with a legislative (likes to create, invent and design solutions) style (p. 38).

Academic Performance and Thinking Styles

Riding, Grimley, Dahraei and Banner (2003) conducted a study to explore the "relationships between working memory, cognitive style and gender on (a) overall learning

---

[8] Deep learning refers to a strategy aimed at understanding and engaging with the material being taught and reveals a sense of interest and enjoyment in learning (Scouller, 1996).

[9] Surface learning "refers to a strategy aimed at reproducing rather than understanding the material, and a motive to pass with minimal effort and interest" (Scouller, 1996, p. 13).

behaviour, and (b) performance on a range of school subjects" (p. 149). They defined working memory as:

> ...an active information-processing resource of limited capacity which is necessary for performing cognitive tasks such as comprehension, reasoning, and learning...Basically, new information is processed in working memory while its meaning is determined prior to the transfer of this to the more permanent long-term memory. (p. 150)

If there is a difference among individuals regarding comprehension, reasoning, and learning, and it can relate to the transfer of information from working memory to long-term memory, then it is relevant to any method of assessment to ascertain what effect this difference would have on an individual's ability to "...complete cognitive tasks such as problem solving, reasoning, acquiring new vocabulary words, and reading comprehension (Riding, Grimley, Dahraei & Banner, 2003, p. 151). Regarding the cognitive style of individuals for the Riding et al. study, each of the participants (206 Grade eight students) were asked to complete the Cognitive Styles Analysis instrument which assessed individuals and their position on two cognitive styles: Wholistic-Analytic and Verbal-Imagery. Participants were also asked to complete an assessment tool regarding their working memory that the researchers called the Information Processing Index. In the end, Riding et al. (2003) concluded that memory made a marked difference for Analytics and Verbalisers, but had little effect for Wholists or Imagers. Additionally, cognitive styles that do best for females were the opposite for males. In other words, there was difference in outcomes between the cognitive styles of individuals. They also noted that little research has been conducted that takes into account individual variables and the interaction of those variables on the overall effects on assessment methods (i.e., the end results).

Armstrong (2000) observed that the difficulties in interpreting the relationship between cognitive style and ability is, in part, due to the selection of methods used to measure those abilities. For example, individual cognitive style may be related to the:

> ...differences in the left/right hemispheric specialization of the brain...left cerebral hemisphere to be specialized for primarily analytic, rational and sequential information process and the right cerebral hemisphere to be specialized for primarily intuitive, holistic and simultaneous information processing. (p. 324)

Generally, the left hemisphere of the brain is responsible for logical thought while the right hemisphere specializes in synthesis (Allinson, Armstrong & Hayes, 2001). To best illustrate the difference between left and right brain hemispheres in a working context, Allinson, Armstrong and Hayes (2001) suggest that:

> an analytic person would tend to be compliant, prefer a structured approach to decision making, apply systematic methods of investigation and be especially comfortable when handling problems requiring a step by step solution. An intuitive individual...would tend to be relatively nonconformist, prefer a rapid, open-ended approach to decision-making, rely on random methods of exploration and work best on problems favouring a holistic approach. (p. 203)

Therefore, if individuals are processing information differently, is it possible for one MCE to accurately assess whether an individual possesses, and can demonstrate, the leadership qualities an organization is seeking? Is the MCE a measure of intellectual (or leadership) ability or simply a filtering mechanism for those whose cognitive styles are not engaged by this method of testing? Stated another way, when using a MCE, are some individuals advantaged or disadvantaged based on their thinking style?

Armstrong (2000) best defined intellectual ability as to "...*what* kind of information is being processed by *what* operation, in *what* form and how well, whereas cognitive styles refer to

the manner or mode of cognition- to the question of *how"* (italics original) (p. 325). Similarly, Zhang (2002a) differentiates style from ability by stating that style refers to preference or things one likes to do regardless of whether one does them well or not, while ability refers to things one can do (i.e., a skill).

Zhang (2001), after conducting a study involving 424 university students from Hong Kong and Mainland China, concluded that individual thinking styles "demonstrated good predictive validity for academic achievement" (p. 631). Further, Zhang also noted that those students who used legislative, judicial and liberal styles did not achieve as positive academic results as those students who preferred to use internal or hierarchical thinking styles. Zhang's research confirmed the findings of Cano-Garcia and Hughes (2000, p. 413), wherein it was discovered that students who could be considered "internal", "legislative in a negative sense", and "executive", were academically more successful than those students who were not so categorized.

However, in Zhang's (2001) study, the results from the Hong Kong sample and the China sample were different. In the China sample, high academic achievement was negatively related to executive, conservative thinking styles. Zhang hypothesized that this difference was due, in part, to the way in which students are assessed in China. Zhang's study highlights the need to consider and assess culture in terms of thinking styles, performance, and measurement for purposes of evaluation.

Armstrong (2000) conducted a study regarding the influence of individual cognitive style

on performance in management education. One significant finding by Armstrong was that individuals who were "Analytic" in their cognitive style out performed "Intuitive" individuals in terms of grades. What is interesting, however, is that although the measurement methods in business education appear to favour analytic style, "intuition is favoured over analysis where key managerial process are involved" (Armstrong, 2000, p. 334). Armstrong's cautionary note has also been identified by Zhang (2002b) in a study about thinking styles. Zang's findings also confirmed that "educational institutions tend to favour students who are more conforming in their thinking styles and who are more analytic in their mode of thinking, but to [sic] penalize those students who are more norm-challenging and those who focus more on the larger pictures of issues" (p. 342). In other words, repeated studies have confirmed that creative thinking is penalized, although it is creative thinking that is often heralded as critical to future career and organizational successes (Zhang, 2002b; Sadler-Smith, 1999), particularly, as noted above, in relation to leadership.

Armstrong (2000), perhaps best summarized the ideal scope of methods of assessment by stating "if assessment methods cannot be devised which are totally independent of orientation bias, perhaps they can at least ensure that equal amounts of analysis and intuition are assessed during the learning process (a whole brain approach)" (p. 336). Obviously, this begs the question regarding learning institutions, testing methods, outcomes, and the practical realities of organizational life (for example, in the RCMP): are the performance measurement instruments (i.e., JSEs) truly assessing all individuals, and are the outcomes reflective of the abilities of the individuals being assessed?

Assessment of Thinking Styles

There are numerous models that conceptualize and measure learning and/or thinking styles, and some seem to overlap in terms of the various traits that are discussed. For example, Zhang (2001) notes that Harasym, Leong, Juschka, Lucier, and Lorschieder (in a work from 1996) found that each learning style assessed by the Gregor Style Delineator corresponded to certain traits assessed within the Myers-Briggs Type Indicator (MBTI). Additionally, Sternberg (1994) examined the correlation of thinking scales to scales in the MBTI and discovered significant overlap between thinking styles and personality types. Dewar (2000) provides a comprehensive and useful summary of the theory behind the creation of the MBTI[10]:

> The Myers-Briggs Type Indicator (MBTI®) is an inventory used to determine personality dispositions and preferences based on Carl Jung's theory of psychological types. Carl Jung postulated that apparently random behaviour on an individual's part is really not random at all but has a pattern to it. This pattern will reflect the person's preferences for taking in information and making decisions. It will also reflect the world in which a person feels most comfortable - the outer world of action or the inner world of ideas. Jung suggests that this behaviour is inborn, much like being born right or left-handed. (p. 1)

Zhang (2002b) has also used the Style of Learning and Thinking (SOLAT) tool in a study in relation to thinking styles and assessment. This method of measurement assesses an individual as specializing in left-brain or right-brain dominance, but Zhang believed that the SOLAT is, in fact, measuring two different modes of thinking – holistic versus analytic (p. 250).

---

[10] I have participated in the MBTI, and was impressed with the degree of accuracy of this inventory model in identifying my learning preferences. Further, based on my informal inquisitive and preliminary inquiries with other RCMP members who have also participated in the MBTI (as part of their Royal Roads University studies), it appeared that their inventory type had some correspondence to their JSE score (i.e., extroverts appeared to have less success or lower scores on the JSE than did introverts). It was this informal, and admittedly, unscientific finding that triggered my interest in exploring the JSE further, and became the genesis of this current study.

In Zhang's literature review he refers to a study conducted in 1979 by Bracken, Ledford and McCallum in which they found that students who were designated as left-brain dominant were more successful on MCEs than were right-brain dominant students. They went on to conclude that a "right-brain dominant student may be penalized in instructional situations in which multiple-choice measures are used exclusively" (p. 250). Naturally, this leads one to question whether an individual's brain dominance affects her or his JSE results.

Multiple-Choice Examinations

The RCMP has adopted the MCE instrument (in the form of the JSE) as the initial method to test and identify members for entry into the NCO promotional system. In other words, the RCMP has chosen the MCE format to identify potential leaders for advancement. Given the construction and application of the JSE, it is vital to understand and consider some of the issues that arise when employing and administering MCEs to candidates, and this section will explore briefly some of those issues. In particular, in relation to MCEs, cognizance must be taken of construction and application considerations that can have a positive or negative impact on results depending on an individual's thinking style.

There are benefits, along with concerns, regarding the MCE as a testing instrument; however, the ultimate goal of a MCE, or any test for that matter, is to relate test items directly to specific knowledge, behaviours, or competencies identified by the assessors (Hoepfl, 1994, p. 25). This final portion of the literature review will briefly discuss the benefits of the MCE, higher-order thinking and MCE results, cognitive style considerations, and finally, concerns regarding the use of the MCE as an assessment measure.

Benefits of Using a MCE

Without question, the MCE format is currently the most popular selection or testing instrument (Cantor, 1987), and the reasons for its popularity essentially relate to the ease and low cost of administering this method of assessment (Dufresne, Leonard & Gerace, 2002). The MCE presents a method that is efficient in testing large populations, allows for greater scoring reliability than in constructed response testing (i.e., short answer or essay questions), and provides better breadth of content coverage (Rogers & Harley, 1999; Walker & Thompson, 2001; Tanner, 2003).

In addition to the benefits of testing large populations, one study noted that MCE "test items have a lower probability of guessing correct answers than in the case of true/false test items, they are easy to administer and grade, and most importantly, they are [purportedly] best able to measure higher-order cognitive processes" (Johnson, 1989, as cited in Hoepfl, 1994, p. 25). Due to the popularity of MCE, it is easy to see, on the surface, why this is an attractive method for large scale testing and/or selections in organizations like the RCMP. In fact, as already noted, efficiency and accuracy were expressly cited by the RCMP as reasons for adopting the MCE format in the JSE (RCMP, 2004e, p. 16).

It must be noted, however, that Haladyna, Downing and Rodriguez (2002) observed that "[p]erceived overreliance [sic] on the MC [multiple-choice] format to measure the recall of knowledge instead of higher level learning has resulted in disenchantment with MC testing" (p. 310). Despite the assertion by Johnson (1989, as cited in Hoepfl, 1994, p. 25) that an MCE can measure higher-order thinking, it is not a widely supported or held view (Bloom, Madaus &

Hastings, 1981; Hoepfl, 1994; Hancock, 1994; Paxton, 2000; Tanner, 2003), perhaps with one qualification. The MCE may be able to provide extensive coverage with problems that require higher-level thought, but the key to using the MCE to test higher-order thinking is to supplement it with an essay (Tanner, 2003, p. 35) or with a greater variety of concurrent assessment instruments (e.g. short answer, in-basket exercise, interviews, etc.) or approaches (Haladyna, Downing & Rodriguez, 2002, p. 310).

It is easy to understand the attractiveness of using the MCE for large scale testing, and indeed, large scale testing is the context in which the RCMP is utilizing this method of evaluation. However, regardless of its popularity, ease, and reliability in scoring, there are concerns about the MCE that may outweigh its benefits.

Higher-Order Thinking and the MCE

One of the most significant criticisms regarding the use of MCEs seems to revolve around the alleged inability of MCEs to assess higher-order thinking skills compared to the ability of constructed-response tests (i.e., essay and short answer) to measure higher-order skills (Hancock, 1994). According to Tanner (2003), part of the difficulty in assessing higher-order thinking is the "ability that a task requires of a learner is specific to the person and to the situation" (p. 31). Au (1997) has noted that MCEs are "considered as a restructuring task because they require students to select the best answer from a number of statements (or answers) which are usually open to two or more semantic interpretations" (p. 245). Au suggests that this type of assessment is more suited for individuals with greater analytic skills.

Bloom, Madaus and Hastings (1981) have noted that "according to Bloom's taxonomy of educational objectives, cognitive processes are arranged from lower- to higher-order thinking skills: knowledge, comprehension, application, analysis, synthesis, and evaluation" (as cited in Hoefpl, 1994, p. 25). It has been noted by Tanner (2003) that "each [thinking skill] level includes all preceding levels so that the ability to analyze, for example, includes the abilities to apply learning in a variety of settings, to comprehend (interpret), and to have knowledge (some grasp of specific facts)" (p. 29). Further, Bloom, Madaus and Hastings (1981) explained that "knowledge, comprehension, application, and analysis can be regarded as *convergent* thinking processes and testing for these can be in a form in which the correct or best answer can be determined in advance" (emphasis added) (as cited in Hoepfl, 1994, p. 25). In other words, they are suitable for an MCE style examination. However, the advanced higher-order thinking processes of synthesis and evaluation are *divergent* thinking processes and lead to unique responses (emphasis added) (Hoepfl, 1994; Hancock, 1994). As such, they are not suitable for MCEs, and require open-ended question styles. In other words, MCEs may not truly measure the more important and advanced competencies or skills associated with effective leaders.

When discussing what qualifies as higher-order thinking, Tanner (2003) observed that higher-order thinking requires some transformation of the information by the learner (p. 28). In other words, information, and the transformation of that information, is subjective and may not be adequately measured through a MCE instrument.

Cognitive Style Considerations

Thus far, the benefits and applicability of the MCE to assess an examinee's higher-order

thinking abilities have been briefly discussed. In addition to these two areas, it is important to consider the applicability of an examinee's cognitive or thinking style, and how that style may affect the outcome of a MCE. For example, some examinees are able to answer questions very quickly, but tend to make more errors (impulsives), and others might take longer to answer (reflectives), but they make fewer or no errors (Friedman and Cook, 1995).

Two researchers, Waring and Farthing (1999), conducted a study and determined that an examinee's impulsive response style can affect performance on MCEs. In this study, Waring and Farthing identified examinees as either impulsive or reflective by using the Matching Familiar Figures Test and then administered two MCEs in a computerized format. One of the MCEs was self-paced and the other would not register an answer on the MCE for 25 seconds. The data suggests that the impulsives, when allowed to work at their own pace, tended to answer the questions more quickly and less accurately than the reflectives. As these researchers observed, one way to reduce errors by impulsives may be to slow their response time. Although this was an astute observation, Waring and Farthing correctly noted that their study is the only one in this area to measure cognitive style in adults, and more research is required before any generalizations can be drawn. The cautionary note presented by Waring and Farthing is that "some individuals use a cognitive response strategy that may be detrimental to peak performance in certain test-taking situations" (p. 126) (e.g., MCEs).

Another aspect of cognitive style is an examinee's risk preference. As an individual encounters questions on a MCE her or his level of confidence in the selected answer may vary. Although, in the end, the examinee may have selected the correct answer, one cannot state with

any accurate degree of confidence that the examinee possesses a strong grounding in the examination content (or knowledge). If, however, a test was constructed to incorporate an examinees level of confidence (i.e., a confidence scale for each question) there may be an increased level of success where examinees can indicate their level of confidence (Walker & Thompson, 2001).

In addition to risk preference, test anxiety may also be a factor in examinees' results. Test anxiety can lead to misleading results in terms of an examinee's knowledge and abilities, as certain examinees can be prone to changing their answers during a MCE (Friedman & Cook, 1995). Having said that, Freidman and Cook (1995) located one study conducted by Green (1981) who found that high and low anxiety examinees profited from changing answers on MCEs, but high-anxious examinees made significantly more changes than low-anxious examinees. This is evidence to suggest that there needs to be an understanding of all factors, including cognitive ability, of examinees who participate in a MCE instrument, particularly if the MCE is to be used as a sole method of evaluation and screening.

Scouller (1996) discovered that examinees who preferred a MCE to essay style examination were more successful in taking MCEs than examinees that preferred essay style examinations. Thus, the method of testing appears to correlate to an individual's preferred testing method. Scouller further asserts that depending on the type of examination (i.e., MCE or essay), examinees prepared differently for the actual test. For example, examinees who knew the test was a MCE only prepared for the examination with surface learning approaches rather than deeper learning approaches for essay style examinations. Scouller (2000) highlights the

difference between surface and deep learning approaches as follows:

> [t]he term 'surface' refers to a strategy aimed at reproducing rather than understanding material, and a motive to pass with minimal effort and interest. The term 'deep' refers to a strategy aimed at understanding and engaging with course material and reveals a sense of interest and enjoyment in learning. (p. 13)

In addition, Scouller (1996) found examinees perceived that a MCE tested lower cognitive ability than if the examination were an essay style. In other words, examinees believed that a MCE would assess only lower cognitive abilities. This perception was based solely on the examinee's belief and was not related to the examinee's knowledge of the literature in this area. Examinees accepted and prepared for the MCE with the perception that only lower-order thinking skills were being assessed.

A study conducted in 1993 (Armstrong, 1993, as cited in Friedman & Cook, 1995) concentrated on examinees' cognitive styles with performance on MCEs. Prior to the study, the examinees were assessed as either field dependant or independent using the Group Embedded Figures Test (Witken, Oltman, Raskin, & Karp, 1971, as cited in Friedman & Cook, 1995). In the construct of this study, some of the questions had grammatical errors. As predicted, the field independent examinees were able to use these cues to help them answer test items correctly (Friedman & Cook, 1995). It has been noted, however, that as individuals mature, they can become more field independent and reflective (Friedman & Cook, 1995). Therefore, it appears that age may be an important factor in any research regarding cognitive processes, MCEs, and interpreting related findings.

Further Concerns with the MCE

In addition to the apparent inability of MCEs to assess higher-order thinking skills, and the lack of account for the diverse nature of individual cognitive styles, there are additional general issues/concerns regarding the appropriateness of utilizing MCEs. Kottke (2001) observed that "[o]ne potential problem with MCEs is that although one option per item is keyed as correct, examinees may select a distracter for legitimate reasons" (p. 256). In short, the MCE does not permit an individual to qualify her or his choice. In addition to selecting a distracter for a legitimate reason, the examinee may also select the correct answer by simply guessing. Rogers and Harley (1999) observed that "[g]uessing, if present, will tend to lead to the overestimation of achievement" (p. 235). The art of guessing (i.e., when in doubt pick "c") leads one to conclude that there is a limited ability to interpret the findings or results on a MCE, and it is difficult, if not impossible, to accurately interpret why the correct answer was chosen (Walker & Thompson, 2001). In fact, with MCEs, examinees "answers are, at best, only suggestive of their underlying knowledge" (Dufresne, Leonard & Gerace, 2002, p. 174).

Further, Hancock (1994) noted that selection format items or MCEs "should not be used to assess the ability of an individual to write, to design scientific experiments, to speak a foreign language, or to assess any other overtly performance-oriented objective" (p. 15). Additionally, Hancock aptly stated "[t]he items that are used in MCE assessments must first be true to the objectives that are sought to be taught, and must not compromise those objectives for the sake of administrative convenience" (p. 15). Hancock (1994) observed that the concept of cognitive complexity is often confused with item difficulty in terms of MCEs. He further noted that complexity and difficulty are distinct attributes that are often not even correlated in a MCE.

Hoepfl (1994) cautions that "[l]ow test scores may be saying as much about the quality of the test items as they are about the examinee's abilities" (p. 26).

The actual construction of the MCE can also lead examinees to develop a certain amount of "testwiseness". A MCE can be constructed to use ambiguous questions to discriminate or filter students (Au, 1997). As noted by Rogers and Harley (1999), "[p]eople who construct multiple-choice items often find it difficult to construct items with a full set of plausible distracters or foils. The result is distracters that serve as testwise cues that testwise students can use to their advantage" (p. 236). Rogers and Harley (1999) also found that when the number of options was reduced from four to three the impact of testwiseness was lessened (p. 242).

Summary

As has been noted, the ultimate goal of a MCE, or any test for that matter, is to relate test items directly to specific knowledge, behaviours or competencies identified by the assessors (Hoepfl, 1994, p. 25). However, while examinees can become skilled in taking MCEs, that "does not mean that they develop as problem-solvers and thinkers, nor that they have the ability to go beyond the routine and can exercise personal judgment" (Paxton, 2000, p. 112). In other words, "examinees can develop [superficial] 'surface' rather than deep learning strategies which means they can come to conceive of knowledge as a collection of unrelated facts that they can reproduce without reflecting on either their purpose or strategy" (Entwistle, 1997, as cited in Paxton, 2000, p. 113).

While the ease and cost associated with administering a MCE makes it an attractive

testing mechanism to use in a large-scale promotion process, a MCE also has limitations that may be dependant on individuals' cognitive preferences. Equally, if not more importantly, a MCE may not measure higher-order thinking skills. Because the RCMP has adopted the MCE style of examination for testing candidates for eligibility in the promotional process, it must acknowledge both random and systematic (bias) error in the MCE format and take proactive steps to ameliorate any negative effects, specifically on promotional candidates, and generally on the organization.

As one can see from the brief look into the world of performance assessment, there are no straightforward mechanisms to identify and promote leaders within organizations. The MCE is an attractive instrument, but it has limitations and concerns regarding its use to assess individuals. This brief literature review has highlighted and raised many issues and concerns regarding the validity of the JSE, some of which will be explored in more detail in an attempt to evaluate the JSE as the exclusive instrument of choice for the RCMP in the initial selection phase for NCO promotions.

CHAPTER THREE – RESEARCH METHODOLOGY

The purpose of this study is to focus on the validity of the Royal Canadian Mounted Police (RCMP) Job Simulation Exercise (JSE) to identify potential leaders, utilize research skills to explore that issue, engage an RCMP sponsor, and ultimately bring awareness and recommendations for future research or action relative to the JSE. This chapter will provide details about the research methods, sample description, data collection instruments, data collection procedures, and finally, the data analyses employed during this study.

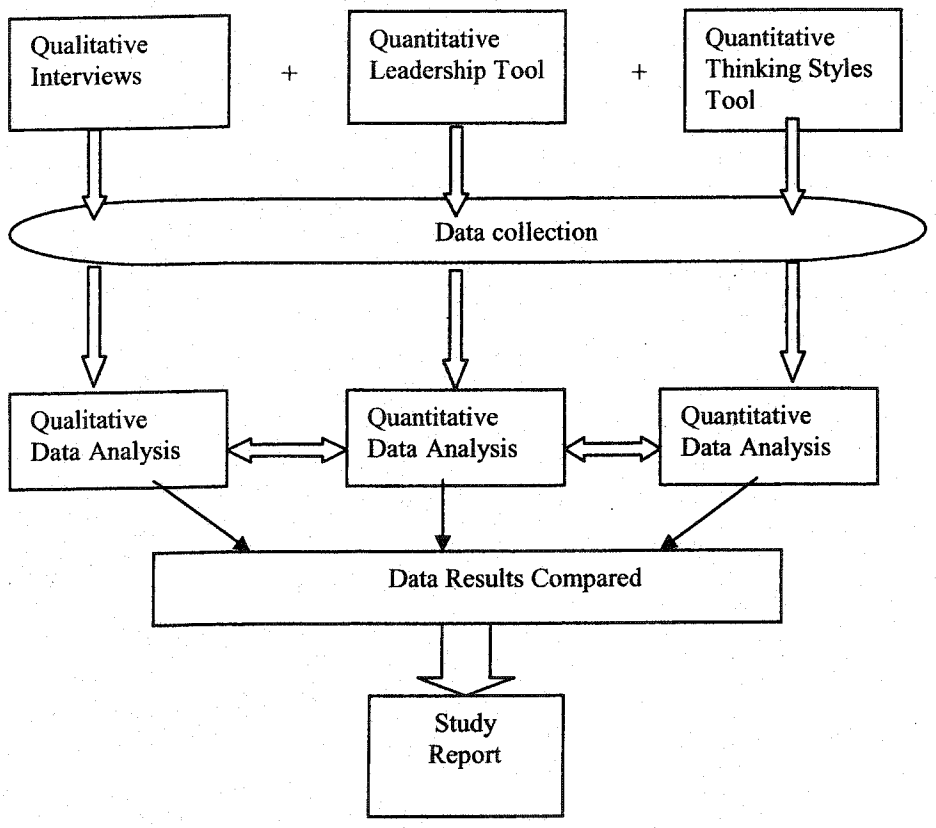
Research Methods

Based on the literature review, and the general understanding it has provided regarding the issues surrounding the JSE instrument, this study proceeded by using a mixed methodological approach to collect data in three areas from a sample of RCMP regular member research participants. First, data was collected on participants' perceptions of the non-commissioned officer (NCO) promotion process and leadership abilities (interview). Second, data was collected to determine participants' preferred "thinking style" (utilizing a testing instrument). And third, data was collected to obtain a global perspective on participants' leadership abilities (utilizing a form of 360 degree assessment).

The "mixed methods" approach was used in an attempt to limit the "biases inherent in any single method" (Creswell, 2003, p.15). As a result, both quantitative and qualitative data were concurrently collected from sample research participants. Obtaining data using a mixed methods approach should provide a sufficient basis to reach some tentative conclusions about the

JSE and highlight avenues for further exploration. The qualitative data was obtained from interviews with research participants, while the quantitative data was obtained by administering both leadership and thinking styles measurement tools to the participants (which is amplified further in "Data Collection" below). All of the data, qualitative and quantitative, were then compared. The methodology is illustrated in Figure 3.1 (Concurrent Triangulation Strategy), and has been best described by Creswell (2003, p. 217) as "concurrent triangulation strategy".

Figure 3. 1 Concurrent Triangulation Strategy



McNiff (2001) noted that "action research" is about knowledge exploration, and the processes involved in that exploration can lead to personal and organizational growth. In particular, she observed that:

> Knowledge is neither good nor bad. However, when it manifests as social practice it becomes value laden, for it is in social practice that issues of what counts as good or bad arise. How knowledge is used decides whether it should be designated 'of the good' or 'for the good'. This raises questions of how we understand 'good'. (p. 137)

With this academic context in mind, this study is exploratory in terms of taking a critical look at the validity of the RCMP JSE to identify potential leaders.

Sample Description

This study identified a small but logically representative sample (on selected criteria) of RCMP regular members who have participated in the NCO promotion process. The sample ultimately consisted of an equal number of members who were successful (5) and unsuccessful (5) on the JSE. The sample group of participants was selected on the basis of the author's personal knowledge, recommendations by supervisors, and solicitations for volunteers, and as such, it was a sample of convenience.

Specifically, this study focused on the initial leadership position in the RCMP, the NCO rank of corporal. This rank was selected because it provides the largest potential pool of candidates and it represents the first formal leadership position within the RCMP. An attempt was made to replicate the percentage of male, female, average years of service, education, and language in the sample group as found in the RCMP at the constable level, which is the candidate pool for the corporal rank. The study sample was compared to the most recent Technical Report for the NCO Promotion Process 2000 (RCMP, 2004e). It must be noted that for mean age and mean service, the study sample figures are representative of the participants' current status (i.e., as of the date of interview, and not the date that each would have written the JSE). Therefore,

the mean age and service results are higher than the NCO Promotion Process 2000 figures. It must also be noted that there was an attempt to include an Aboriginal member, but unfortunately this member did not wish to participate in this study. Table 3.3 (Sample Candidate Comparison) provides a comparison between the sample for this study and the candidates in the 2000 NCO promotion process.

Table 3. 3 Sample Candidate Sample

	Study	NCO Promotion Process 2000
Number of Candidates	10 Males = 7 (70%) Females = 3 (30%) Aboriginals = 0 (0%) Visible Minority = 0 (0%)	5633 Males = 4711 (83.6) Females = 921 (16.3%) Aboriginals = 265 (4.7%) Visible Minority = 177 (3.1%)
Mean Age	43.8	39.2
Mean Service	19.5	13.9
University Degree	50%	23%
Wrote JSE in English	90%	84.5%
Wrote JSE in French	10%	5.6%

Initially, 12 regular members (i.e., six who were successful on the JSE and six who were not successful on the JSE[11]) were contacted and asked to participate in this study. Each participant was advised that the study was to explore whether the RCMP JSE is a valid instrument to identify potential leaders. Additionally, the participants were advised that their participation would comprise three activities (i.e., an interview, thinking style assessment, and leadership assessment). Each participant was further advised that data gathered from the three data collection methods would be recorded and, where appropriate, summarized, in an anonymous format, in the body of the study. At no time would any specific comments be

[11] "Successful" is a subjective term. All potential participants met the minimum passing score on the JSE, but some scores were not high enough to be competitive. For the purposes of this study, successful equates to promotion. The definition of successful is further discussed in Chapter 6.

attributed to any participant that would identify the individual unless specific agreement had been obtained beforehand. Finally, each participant was advised that they were not compelled to participate in this study and that she or he could withdraw at any time (and in fact one did withdraw due to a vacation commitment). Similarly, if participants elected not to take part in the research project, their information would also be maintained in confidence. Each participant then completed and signed a "Research Consent Form", a copy of which is attached as Appendix "A".

Data Collection Instruments

As noted, Zhang (2002b) located a study conducted in 1979 by Bracken, Ledford and McCallum in which they found that students who were designated as left-brain dominant were more successful on multiple choice examinations (MCEs) than were right-brain dominant students. Hence, the concern is that a RCMP member's brain dominance might affect results on the JSE.

Herrmann Brain Dominance Instrument (HBDI)

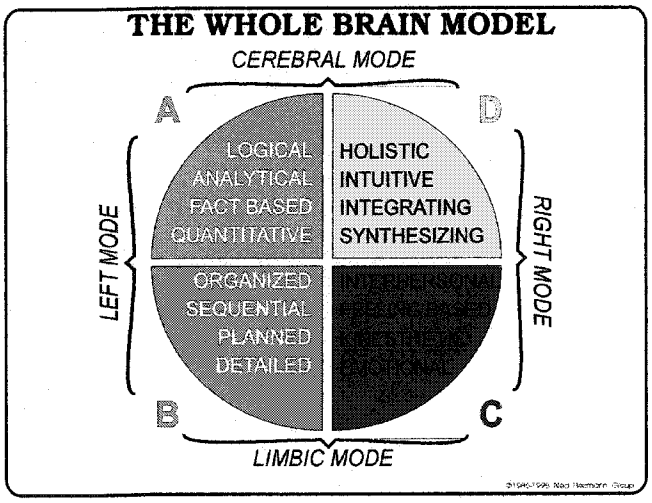
In order to explore the issues of brain dominance and JSE results further, this study utilized the Herrmann's Brain Dominance Instrument (HBDI) to determine the participants' brain dominance. Nasmyth, Schultz and Williams (2003) succinctly describe the HBDI as:

> a model of brain dominance [that] combines Sperry's (1975) split-brain concept with MacLean's (1978) triune brain concept differentiating thinking by the right and left-brain hemispheres, as will as cerebral and limbic sections. The result is a brain dominance model, which serves as a unified metaphor of the human thinking process. (p. 3)

Nasmyth, Schultz and Williams (2003) further describe the HBDI as a model that

"produces a four-quadrant profile of preferred modes of thinking applied to a metaphorical brain dominance model" (p. 3). Herrmann (1996, p. 30) developed the HBDI four-quadrant model that is outlined in Table 3.4 (Herrmann Brain Dominance Model).

Table 3. 4 Herrmann Brain Dominance Model[12]



Bunderson (1980) further described the HBDI as producing a "whole-brained" profile. He explained that the HBDI is derived from nine main scores and several minor scores that have proven useful in making certain inferences. The following is a breakdown of the scores as presented by Bunderson (1980, p. 7-9):

1. **Left versus right brain dominance.** It is useful to measure an overall left versus an overall right brain dominance without making the cerebral/ limbic distinction. Two overall scores are given by the instrument, one for left and one for right.
2. **The four quadrant constructs.** These constructs are the fundamental constructs in the four-fold model of brain dominance.
    a. *Upper left*—This construct implies a cluster of processes related to the preference for mathematical, technical, analytical, and logical thinking.

[12] From The Whole Brain Business, 1996, p. 30. Copyright Herrmann International, 1999. Reprinted with permission.

These preferences express themselves in school, in work, in interpersonal relationships and in hobbies.

b. *Lower left*—The construct of lower left refers to preferences for those processes which deal with an organized, planned, orderly, and step-by-step approach and avoidance of risk and novelty.

c. *Lower Right*—This construct refers to a class of processes described as a concern for emotions, interpersonal warmth, and feelings, and as an interest in music and communication through speaking, writing, and reading.

d. *Upper Right*—This construct refers to the synthesizing and intuitive modes of thought: holistic, visual, imaginative thinking.

In addition to the four quadrant scores described above, adjective pairs scores are often singled out as reflections of preferences for the four quadrants. These are generally highly correlated with the overall scoring and indeed form a part of it. However, they show which quadrants are preferred when one is forced to make a choice.

3. **Cerebral versus Limbic scores.** Even though there is more evidence for an overall left versus overall right dominance mode, it is sometimes useful to look at the balance in a particular individual or group between cerebral (upper) and limbic (lower) processing. Two scores are provided which statistically combine the left and the right cerebral for an overall cerebral score, and the left and the right limbic for an overall limbic score.

4. **Introversion/Extroversion.** This bipolar dimension is an old standby in personality theory. It refers to the extent to which an individual prefers to look within (introvert) for information about the world versus looking outside, especially to other people (extrovert). This dimension is measured in the Myers-Briggs Type Indicator, an instrument for classifying types of personalities based in the theories of the psychologist Carl Jung. The HBDI I/E score has been correlated with the Myers-Briggs Type score and is highly related. Introversion/Extroversion is rated on one 9 -point scale in the HBD instrument, and other items also reflect this distinction.

5. **Minor scores.** The consolidated score sheet, generated when the HBDI is scored, breaks out several of the different components that go into the overall quadrant scores. This breakout sometimes provides additional diagnostic information. For example, Ned Herrmann has observed that a higher score in motion sickness, especially for a left-brained individual, is an indication that the individual may be more receptive to experiences which will broaden his or her acceptance of a less preferred quadrant, and thus move him/her toward being more "whole brained."

6. **The "whole-brained" construct.** This construct is a key one for personal growth. A person's preferences for different types of thought are not seen as inexorably fixed. While each dominance pattern is good and valuable in

> its own right, being characteristic in many cases of whole occupational groups with demonstrable social value, it is of adaptive value for an individual to utilize brain processes situationally. The circular profile grid displays a graphic metaphor of "being whole brained." While only a small fraction of the population is quadruple dominant, an individual can benefit from recognizing areas of avoidance and can practice less predictable and less stereotyped modes of thought, depending on the situation. (bold and italics original)

The HBDI was chosen for this study because of its validated use in determining thinking styles (Bunderson, 1980; Bunderson, 1988; Bunderson & Ossen,1980; General Electric Scientific and Technical Report #4; Bunderson, Ossen & Herrmann, 1982; and General Electric Scientific and Technical Report #10 as cited in Nasymth, Schultz and Williams, 2003). The HBDI is administered by having the participant complete a questionnaire, which can be completed on-line or manually. The HBDI consists of 11 categories (i.e., biographical information, handedness, school subjects, work elements, key descriptors, hobbies, energy level, motion sickness, adjective pairs, introversion/extroversion, and twenty questions) divided into 120 response items that result in a visual and easy to read "picture" of an individual's thinking preferences (The Ned Herrmann Group, 2000a). For example, one component of the HBDI asks the participant to rate work elements (e.g., administrative, writing, innovating etc.) according to her/his strength in that activity. Another component of the HBDI requests the participant to select eight adjectives (e.g., logical, creative, musical etc.) which best describe the way the participant sees her or himself. The final component of the HBDI is a set of 20 questions/statements to which the participant is asked to check the appropriate column (i.e., strongly agree, agree, in between, disagree, or strongly disagree). Two examples of these questions are: "I feel that a step-by-step method is best for solving problems"; and, "I can frequently anticipate the solutions to my problems" (The Ned Herrmann Group, 1999, p. 4).

The HBDI will provide insight into whether members with certain thinking styles (i.e., left-brain or right-brain dominant) faired better, worse, or equally on the JSE. Right-brain dominant individuals are generally holistic, innovative, visual, lateral and strategic thinking, effectively synthesize, and are catalysts for change (The Ned Herrmann Group, 2000a). Left-brain dominant individuals are generally analytical, evaluative, qualificatory, technical, and fiscal oriented, like feasibility studies, and can perform critical assessments (The Ned Herrmann Group, 2000a). The rationale behind utilizing the HBDI is that it will assist in determining whether the JSE is systemically biased toward one thinking style or the other. Further, other appealing features were that HBDI could be done on-line, was not cost prohibitive, and provided consultative support.

Competencies for Leading Effectively in Organizations (CLEO)

As noted in Chapter Two, leadership is about relationships and perceptions. Therefore, in addition to the HBDI, a second tool was used to assess participants' leadership effectiveness utilizing a 360° assessment, which measures observations about an individual. For the purposes of this study, the "Competencies for Leading Effectively in Organizations" (CLEO) instrument (CLWEST & Royal Roads University, 2002) was used, which provides an assessment of each participant by her or his supervisor(s), peers, subordinates, and self. As a cautionary note, the 360 assessment can mean that "a high degree of validity and reliability is gained through the use of multiple respondents [i.e., peers, subordinates, and self] [but] perceptions are, at best, "snap shots" in time and are dependant on the environment at the time the questionnaire is administered" (CLSWEST & Royal Roads University, 2002, p. 5).

CLEO assesses 11 competencies (i.e., 1. Character, 2. Ethics, 3. Style, 4. Creativity, 5. Team-building, 6. Communication Skills, 7. Research and Inquiry, 8. Teaching and Learning Skills, 9. Systems Theory, Thinking and Planning, 10. Organizations and Organizational Change, and 11. Leadership). These 11 competencies are comparable to the eight core competencies (i.e., 1. Leadership, 2. Planning and Organizing, 3. Personal Effectiveness and Flexibility, 4. Interpersonal Skills, 5. Thinking Skills, 6. Client-Centred Service, 7. Continuous Learning, and 8. Communication) identified by the RCMP (2003c). It is for this reason, combined with other appealing features (i.e., on-line completion, not cost prohibitive, and provision of consultative support) that the CLEO was chosen as an instrument of measure for this study. For ease of reference and comparison, Table 3.5 (Competency Comparisons) provides an overview of both the RCMP (2003c, pp. 7-8) and CLEO competencies (CLSWEST & Royal Roads University, 2002, p. 8).

Table 3. 5 Competency Comparisons

RCMP Core Competencies[12]	CLEO Competencies[13]
Leadership: Attracts and mobilizes energies and talents to work toward shared objectives that are in the best interests of the organization, the people comprising it, and the people it serves. Encourages partnerships. Inspires other, by example, to perform to the highest standards in accordance with the RCMP mission, vision, values and commitments. Sets, and/or involves other in setting, goals that are challenging, realistic and measurable. Actively participates with and/or empowers other individual and teams to accomplish goals and objectives. Assesses and	Character: The extent to which the underlying qualities of character of the leader ensure stability, reliability, and responsibility. Ethics: The extent to which the leader models and promotes honesty and integrity within and with others. Leadership:

[12] As a reminder to the reader, the JSE only assesses six of these eight competencies. Continuous Learning and Communication are not assessed in the JSE, but are relevant to the next step in the promotion process.

[13] From CLSWEST & Royal Roads University, 2002, p.8. Copyright 2002 by Phil Cady. Reprinted and adapted with permisson.

RCMP Core Competencies[12]	CLEO Competencies[13]
manages risk. Makes, and/or inspires other to make, innovative and responsible decision. Accepts responsibility for outcomes and is accountable. Promotes the ongoing review of policies and practices to ensure continued consistency with the RCMP mission, vision, values and commitments. Establish and maintains relationships and atmospheres of trust and respect. Recognizes contributions and successes. Proactively seeks to improve the work environment and the quality of service delivery.	The extent to which the leader is an aware, meaningful, responsible participant open to learning, willing and able to explore, discover, and develop competencies in a variety of areas within and with others while living a balanced and creative life
Planning and Organizing: Analyses, plans, implements, evaluates and adjusts goals, objectives and/or course of action to meet needs in a changing environment. Practice responsible risk management. Sets priorities, makes decisions and takes necessary course of action, based on multiple demand and available human, financial and material resources. Evaluates processes and outcomes to ensure continuous improvement in service delivery.	Organizations and Organizational change: The extent to which the leader understands the structural and systemic nature of organizations and organizational change and can assist others as they apply that understanding to explore, develop, and accomplish creative organizational objectives in specific organizations and among organizations in local and global contexts.
Personal effectiveness and flexibility: Adjusts behaviour to the demands of the work environment in order to remain productive through periods of transition, ambiguity, uncertainty and stress. Persistently strives for excellence even in difficult situations. Adapts behaviour to changing circumstances in order to reach a goal or to address diverse and changing client/community needs. Demonstrates perseverance and a willingness to perform beyond the normal range of job expectations and requirements, when necessary. Takes initiative and enthusiastically strives to do an outstanding job.	Style: The extent to which the leader works effectively with people in a leadership capacity, is able to modify his/her personal style to accomplish reasonable objectives, and can apply skills to keep his/her priorities in appropriate balance. Creativity: The extent to which the leader is farsighted, open to exploring and developing new and imaginative ideas, and willing to take risks in testing creative ideas under conditions of uncertainty.
Interpersonal Skills: Interacts sensitively and respectfully with all individuals and groups to develop mutual understanding and productive relationships to enhance quality service delivery. Demonstrates compassion. Coaches, mentors and works effectively in teams and in partnerships. Identifies and resolves issues through consultation, negotiation and consensus building and/or other appropriate processes.	Team Building Skills: The extent to which the leader encourages healthy and open social interaction among individuals, facilities, collaboration, and encourages group organization and group achievement.
Thinking Skills: Works with others to identify needs and conceptualize issues in diverse, dynamic or complex circumstances, giving consideration to client/community, organization, and employee	Systems Theory, Thinking and Planning: The extent to which the leader understands and applies systems theory and systems thinking within and with others as he or she explores relationships among individuals in groups and teams, among

RCMP Core Competencies[12]	CLEO Competencies[13]
interests. Acquires and analyses appropriate information and considers alternative strategies to achieve objectives. Assesses risk, develops innovative solutions and evaluates potential outcomes of various actions before making decisions. Establishes priorities, makes decisions and takes actions that are consistent with the RCMP mission, vision, values and commitments. Assess outcomes in consultation with client/community. Applies sound, ethical reason in all situations Client-centred service: Identifies clients and their needs. Establishes and maintains partnerships. Provides clients with opportunities for active participation and consultation on decision that are relevant to their needs and concerns, while balancing competing interest. Accepts responsibility for quality service delivery. Seeks innovative approaches for improvement based on client feedback. Responds to client/community needs in a manner consistent with the RCMP mission, vision, values and commitments, RCMP Service Standard and the philosophy of community policing	groups in organizations, in organization in national and global settings, and in a variety of local and global ecosystems.
Continuous Learning: Continuously identifies areas that need improvement in terms of self and organizational development in order to enhance service delivery and accomplish personal and organizational goals. Develops and maintains awareness of internal and external trends, programs and issues as they relate to service delivery and personal and organizational goals. Addresses learning requirements by: independently keeping abreast of research and new directions, reading, seeking appropriate experiences, training, course work, community involvement, and other means. Shares information and techniques and applies them to daily work.	Research and Inquiry: The extent to which the leader understands and can use sophisticated approaches to research to enhance her or his own learning, to work with others and they do the same, and to apply the results of research on various levels and in variety of organizations within and with others to enhance knowledge, decision-making and performance. Teaching and Learning Skills: The extent to which the leader teaches and learns well and explores, discovers, and develops creative teaching/learning environments with and for others.
Communication: Presents issues and information, orally and in writing, in a clear and credible manner. Tailors communication to intended audience and uses appropriate tools and strategies to convey information. Listens to, understand and values other perspectives and modifies approach to ensure understanding and/or achieve results. Responds to and uses appropriate non-verbal communication. Exercises open, honest and bilateral communication and projects a professional image.	Communication Skills: The extent to which the leader listens well and presents ideas clearly and effectively when speaking and writing and uses practical skills in communication to encourage creativity among others.

It should be noted that, although competencies are categorized here, many characteristics/skills listed within each competency description (whether RCMP or CLEO) overlap into other competencies. In other words, the skills listed in each of the competencies are not mutually exclusive to that one competency, and can, in fact, apply to multiple competencies. All of the competencies describe skills and abilities that are desirable in leaders and each are necessary for leadership to occur. In reviewing the behaviour-based competencies identified by the RCMP and CLEO, one can readily see the general and specific similarities. One benefit of utilizing the CLEO instrument is that it will allow a quantitative comparison of the participant sample assessed by their supervisors, peers, and subordinates with the participant sample scores on the JSE. A limitation, however, was that all participants did not obtain feedback for all three dimensions (All, Self and Boss) of the CLEO instrument.

Interviews

Once the sample members were identified and consented to participate in the study, each participant was interviewed in order to better explore the issue of the JSE as an instrument of assessment. Each interview followed a set of "grand tour" questions and permitted exploration on a one-to-one basis. The questions focused on how the participants see themselves as leaders, how they have been assessed as leaders by supervisors (e.g., through Performance Evaluation and Review Reports, Performance Logs, Performance Report for Promotion, etc.), how they felt about the JSE, how they prepared for the JSE, how many times they have written the JSE, and their JSE results. A copy of the interview questions is attached as Appendix "B".

Data Collection Procedures

As noted, this study followed the concurrent triangulation strategy. Therefore, all three data gathering methods were conducted independently. This method was used to avoid "tainting" or introducing any researcher bias to the participants by sharing results of the measurement tools during the interview process. Although the HBDI and CLEO instruments were completed first, the results of both were not discussed with the participant prior to the interview.

Ultimately, 10 out of the 12 potential participant members identified agreed to volunteer for the study. Upon receiving consent from the ten volunteer participants, their names were forward to two consultants: one for the HBDI and the other for the CLEO. Instructions regarding the completion of each on-line (i.e., through the internet) instrument were then forwarded to each participant electronically. Both tools were completed by each participant logging into a website using a password. Both instruments took approximately 30 minutes each to complete and were completed at a time convenient to the participant. For the CLEO, participants also had to identify specific individuals (i.e., peers, subordinates, and supervisors) to complete a questionnaire to assess the requesting participant's leadership abilities. This questionnaire was also completed on-line and took approximately 30 minutes to complete. Each participant was requested to identify three to eight assessors for the CLEO.

Once the HBDI and CLEO instruments were completed, the author, to arrange the interview portion of this study, personally contacted each participant. The interview (refer to Appendix "B") canvassed general demographic information (i.e., age, gender, years of service,

etc.), followed by twenty questions (five questions about leadership, nine questions about the JSE, and five questions about education). The interview concluded with an open-ended question to solicit any other comments regarding the JSE the participant may wish to provide.

Data Analysis

Once the HBDI data was gathered, the intent was to determine if there were systematic differences in the thinking styles between those participants who were successful on the JSE and those who were not successful on the JSE. Further, the CLEO data would assess the level of leadership abilities for successful and unsuccessful participants on the JSE. Finally, the interview material was to supplement the HBDI and CLEO data (i.e., demographic information) and general reflections about the JSE.

The participants' JSE results and demographic information was obtained directly from the participants during the interview portion of this study. The JSE results for each participant (maximum score of 48) were plotted on a graph and used for comparison purposes. The JSE score is based on the candidate's response to 48 multiple-choice scenarios (eight scenarios for each of the six assessed competencies[14]) with the correct response worth one point. Unfortunately, a breakdown of the JSE results by competency for each participant was not available[15] and so direct comparisons between JSE scores and CLEO scores by competency were

---

[14] The RCMP (2000) noted, "given the complexity and realism of the scenarios comprising the simulation items, it is unlikely that any item could solely assess a single competency. It is more realistic to expect that each item actually assesses several of the competencies, each in a different 'mix'"(p. 26).

[15] To the author's surprise, none of the participants for this study were able to produce their respective feedback documents which would have provided a breakdown of their JSE score by

not possible. Having said that, it is argued here that a leader possesses all of the competencies to varying degrees and therefore comparisons between total scores is both appropriate and meaningful, although somewhat limited.

For this exploratory study, raw JSE scores (i.e., minimum is 0 and maximum is 48) were compared directly with CLEO assessments. Each individual identified assessors from the three categories (i.e., Self, All and Boss). Each assessor used a 5-point scale with a descriptor for each number (i.e., 1 = Not at all, 2 = to a slight extent, 3 = to a moderate extent, 4 = to a great extent, and 5 = to a very great extent). Each of the 11 competencies has 10 questions, and each of the 10 questions have a minimum of 1 point and a maximum of 5 points. The minimum possible score for a competency was, therefore, 10 points (compared to "0" for JSE) and the maximum possible score was 50 points (compared to 48 for JSE). Each CLEO competency, along with the overall mean score, was compared to the overall JSE score. Although CLEO scores do not allow for a "0" score (as does the JSE), the maximum scores (50 compared to 48) are almost identical. And because the lower range to upper range of both the JSE and CLEO have similar interpretations, there is no need to transform scores in order to make meaningful comparisons (especially considering the exploratory nature of this study). Table 3.6 (Score Ratings) has been created for ease of comparison.

---

competency. In addition, Staffing and Personnel was also unable to produce the feedback documents for the participants. Finally, as previously noted, there are no Technical Reports yet produced past 2000.

Table 3. 6 Score Ratings

RATING	JSE SCORE	CLEO SCORE
HIGH	**40+**	**40+**
ABOVE AVERAGE	**36 – 39**	**35-39**
AVERAGE	**33-35**	**30-34**
BELOW AVERAGE	**30-32**	**25-29**

Once the CLEO and JSE scores were compared and plotted on graphs, HBDI profiles were then analyzed. This analysis was conducted by visually comparing the graphs to the brain quadrant dominance of the participants. In other words, descriptive HBDI profiles, provided by the consultant, were plotted, by quadrant, into a graph resulting in a visual profile for each participant.

Once the interview, CLEO and HBDI data, graphs/tables, and comparisons were completed, it was possible to make some tentative findings and recommendations, as outlined in Chapter 4.

CHAPTER FOUR - RESEARCH STUDY RESULTS AND DISCUSSION

This study was an exploration into the RCMP's reliance on the Job Simulation Exercise (JSE) as an initial step in the non-commissioned officer (NCO) promotion process. The sample size was limited, yet the findings are quite dramatic. In order to best describe the findings, each participant's profile and results will be discussed in detail. In particular, each participant's CLEO and the HBDI results will be compared to the JSE results. For the purposes of clarity, when discussing the CLEO assessments,[16] the following terms will be used to identify various groups of assessors: "Self", "All" and "Boss."[17] Additionally, the information gathered during the interview portion of this study will be discussed, followed by a summary for each participant. This chapter will close with some general conclusions and recommendations arising from the analyses of the HBDI, CLEO, interview, and JSE results.

Participant 1

Participant 1 is currently posted to a plainclothes federal section. Participant 1 has uniform experience at a large urban detachment, and has previous experience in other plainclothes sections, as well as operational and administrative support.

---

[16] The overall CLEO scores should be viewed cautiously, as there are missing data (e.g., some candidates did not have scores from all three dimensions, Boss, All, & Self). As well, for some candidates, there is an apparent lack of consistency between the "Self" dimension and the other two dimensions.

[17] "Self" refers to the participant's ratings of her/himself; "All" refers to the assessment of peers and direct reports (i.e., subordinates); and, "Boss" refers to the assessment of supervisors.

CLEO & JSE Results

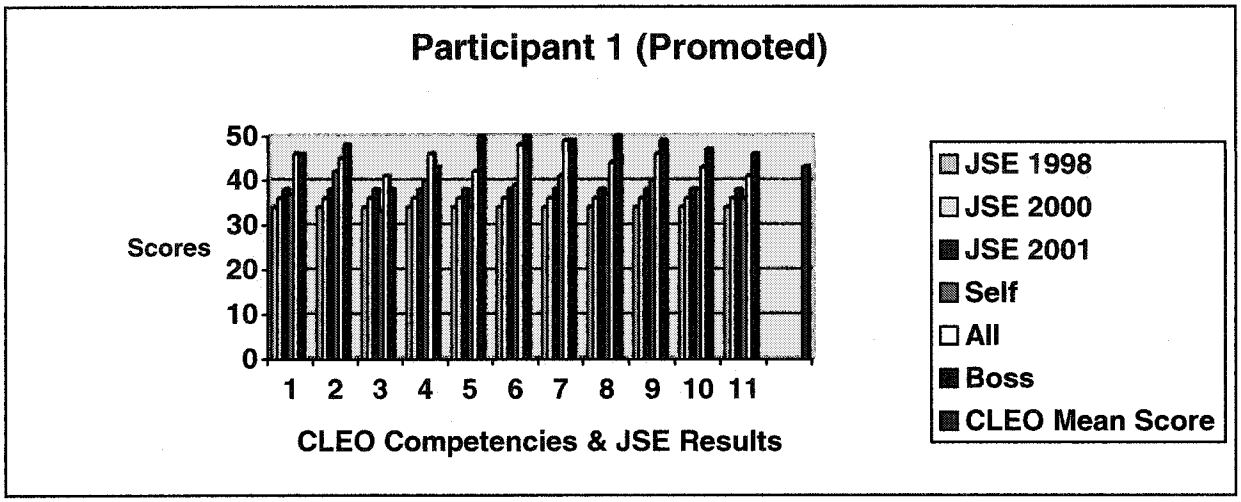
Participant 1 wrote the JSE three times. Although a minimum passing score was attained each time, the scores can generally be considered average (i.e., 34, 35 and 38). These JSE scores were not consistent with the CLEO assessment. In fact, as shown in Figure 4.2 (CLEO and JSE Results for Participant 1), in all 11 competencies assessed using the CLEO instrument, "Boss" and "All" rated Participant 1 extremely high, with overall mean scores of 44.6 and 47. respectively, while the JSE scores (34, 35, and 38) are more reflective of an average to above average evaluation.[18] The margin of difference between the CLEO assessment and JSE results was the most significant for Participant 1 compared to any of the other nine participants in this study. Only one CLEO competency (i.e., Style) was similar with JSE results, while the remaining ten competencies were all assessed significantly[19] higher in the CLEO and indicate that Participant 1 is a leader within the RCMP. Having said that, it is interesting to note that Participant 1's "Self" mean score (37.9) is similar to Participant 1's last JSE score (38).

---

[18] The mean corporal JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9. While Participant 1's scores are above these averages, a score of 34 or 35 would not allow Participant 1 to compete for promotion in the areas of her/his interest.

[19] In this study, the term "significant" is not used statistically, in terms of probability, but rather is used qualitatively to suggest noteworthy results.

Figure 4. 2 CLEO and JSE Results for Participant 1



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building Skills 6- Communication 7- Research & Inquiry 8- Teaching & Learning 9- Systems Theory, Thinking and Planning 10- Organization and Organizational Change 11- Leadership

HBDI Results

As shown in Figure 4.3 (HBDI Profile for Participant 1), Participant 1 has a Preference Code of 1111. Essentially, this means that all four quadrants (i.e., A, B, C and D) are dominant (i.e., quadruple dominant), or, in other words, this individual comfortably uses all four quadrants of the brain. This is a rare profile and only occurs in 3% of the population (The Ned Herrmann Group, 2000b). There were, however, some variances between quadrants. The thinking style most preferred was A Quadrant (86). The second most preferred styles of thinking were B and C Quadrants, which each produced the same overall scores (74). The least preferred, but only by a small margin, was the D Quadrant (68).

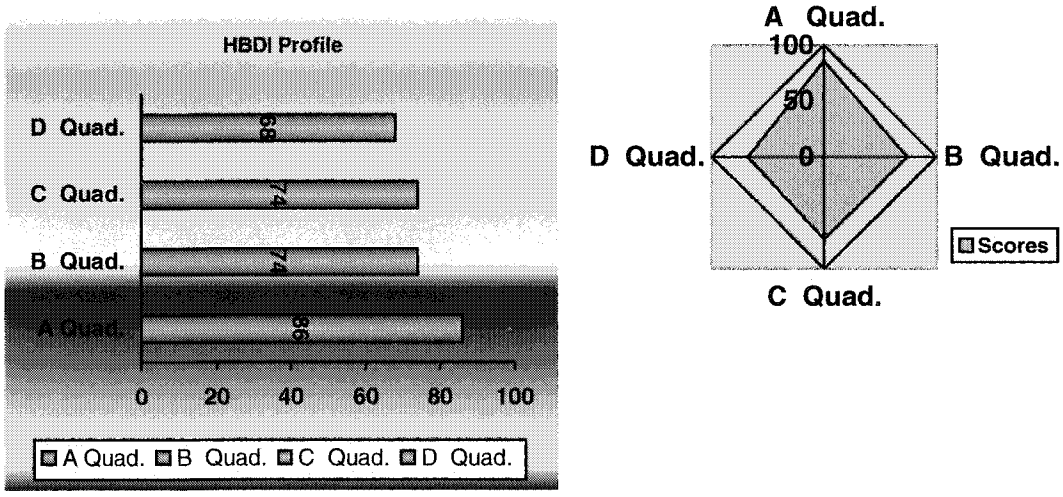
According to The Ned Herrmann Group (2000b), Participant 1:

> would be characterized by being well balanced and having sufficiently strong preferences in all four quadrants to develop the understanding and the ability to use each of the processing modes...Occupations with this profile are those that required effective processing in all four quadrants. Examples would be chief

> executive officers, chairmen of the board, and other executive officers with multifunctional responsibilities. (p. 24)

In A Quadrant, descriptors of Critical, Rational, Logical and Analytical were chosen by Participant 1 to best describe her/his thinking style. In B Quadrant, descriptors of Controlled and Reader were chosen, with Reader being the overall "Key Descriptor" for this individual. In C Quadrant, descriptors of Intuitive and Reader were chosen. Finally, in D Quadrant, descriptors of Intuitive and Synthesizer were chosen.

Figure 4. 3 HBDI Profile for Participant 1



Interview[20]

Participant 1 is a member who has an undergraduate degree and a professional degree, and currently has 12 years of service. Participant 1 wrote the JSE three times before being promoted to corporal. Participant 1, although promoted, felt that her/his repeated failure to obtain competitive marks has prevented her/him from reaching a promotional board for positions

[20] Due to confidentiality, personal communications with the participants cannot be cited by name or date, but are attributed to each specific participant throughout the paper.

for which Participant 1 was well qualified and interested. Participant 1's "low" scores forced her/him to consider positions in areas that s/he was less interested. Participant 1 felt that, with her/his third score of 38, the only reason s/he got promoted was because the timing for filling the position was at the end of the promotion cycle, it was an "off beat" position (i.e., not a lot of interest was shown in the position by members and it had specific/unusual requirements), and that "the bottom of the barrel made the Board." In essence, Participant 1's promotion came to fruition due to timing, lack of interest by other members, and because there were unusual "technology" requirements attached to a rather specialized position.

Participant 1's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities, but conceded that these qualities needed to be developed. For example, this individual is also participating in the Officer Candidate Development Program (OCDP) (which is used to identify and promote individuals to the commissioned rank of Inspector) and recently wrote the "in-basket" testing exercise as part of that promotion process. Participant 1 commented that s/he has not had to deal with many of the examples described in the in-basket exercise, and as a result, s/he could only rely on theory, not experience, to answer the questions. It is of interest to note that Participant 1 received 81.3% on the "in-basket" exercise on Factor 1 (Leadership Style and Practices), which was consistent with the CLEO assessment and inconsistent with the JSE results.

Throughout the various stages in her/his career, there were numerous examples of Participant 1's leadership abilities that have been formally commented upon by various

supervisors.[21] For example, in 1992, a supervisor commented: "Cst. ... is a true credit to the RCMP. ...is the type of individual that should be looked upon to provide the future leadership of the Force" and "[t]he level of service provided and responsibilities assumed by Cst. ... were well beyond [the] current rank." Further, in 1993, a supervisor commented: "Cst. ... exerts a positive influence among the Detachment members by setting [a] high standard for [her/him]self and [her/his] work. [S/he] projects enthusiasm and professionalism at all times. Cst. ... is well at ease at directing the general public while in contact and projects a calming influence upon some of the more excitable members of the public." Most recently, in 2003, a supervisor commented: " Cpl. ... provided upward leadership by providing well thought out, positive input at the appropriate times. This input was a result of [her/his] well developed critical thinking abilities which includes [her/his] ability to link new information to the larger picture (global issues). ...I strongly recommend that [s/he] consider the Officer Candidate Program as I feel [s/he] has all the attributes required to excel in the very senior levels of management within the RCMP."

When discussing the promotion process, Participant 1 believed that the current process does not meet the needs of the RCMP. For example, Participant 1, who does not have a lot of supervisory experience, posed the question: "Can I supervise five constables? – Probably. But can I see the big picture issues? Yes." Participant 1 felt that the issue was about generalization of the promotion process and whether having a generalized process was effectively identifying the most competent individuals. More specifically, Participant 1 observed that "while the process

[21] All supervisor comments quoted within this paper were from documents provided by the participants and personally reviewed by the author. In order to maintain confidentiality, citations will not be provided, nor will these documents be included in the References. However, the specific comments of the supervisor(s) are attributed to each participant throughout the paper.

may succeed in selecting the most qualified person from those that make the [promotion] Board, but to make the Board, one needs to score well on the JSE."

When discussing the JSE, Participant 1 was not sure why s/he was not successful on this examination. On one feedback document from a JSE, Participant 1 vividly recalled scoring 2 out of 8 on the leadership competency, and when s/he wrote the OCDP "In –basket" s/he was in the 81% range for leadership. Participant 1 felt that the discrepancy was in the examination style. Participant 1 has difficulty thinking "out of the gray zone" and when s/he could write out her/his answers s/he scored higher. Participant 1 felt that personality was not taken into account on the JSE and that many examples would have a different approach and outcome in the "real world". As noted by Participant 1, during the JSE the candidate was asked to select the "best" response, but how is one defining best? Participant 1 also commented that there was no method to explain your rationale on the JSE.

Essentially, Participant 1 felt the JSE is failing to do what it needs to do, and that one cannot possibly measure the impact this will ultimately have on the RCMP as an organization.

Summary

Participant 1 was an interesting subject for this study. On one hand, s/he received a most deserved promotion while still relatively junior in service. Having said that, however, the JSE has had a negative impact on her/his promotional opportunities (in particular on positions s/he feels qualified for, and was interested in), and did not seem to equate, at all, with the ratings of the assessors in the CLEO or her/his present and past supervisors (although it is of interest to

note that Participant 1'self assessment is similar to her/his JSE results). Additionally, given the credentials, respect, abilities, and assessments of this individual, one cannot help but question the validity of the JSE. The thinking style of Participant 1 suggested that this individual used all quadrants comfortably, although A Quadrant was slightly more dominant than the other three.

As noted by Bunderson (1980), only a small fraction of the population is quadruple dominant and it is a profile that many others strive to attain. The ability of an individual to utilize brain processes situationally, and avoid less predictable and less stereotyped modes of thought, is, therefore, an important measure and indicator for leaders. Participant 1 is an individual who is quadruple dominant, and is recognized as a leader by her/his "Boss" and "All" (but not by "Self"), but has only been successful in obtaining a promotion because of timing and unusual requirements for a job. It appears that the JSE may have failed to assess this member accurately.

Participant 2

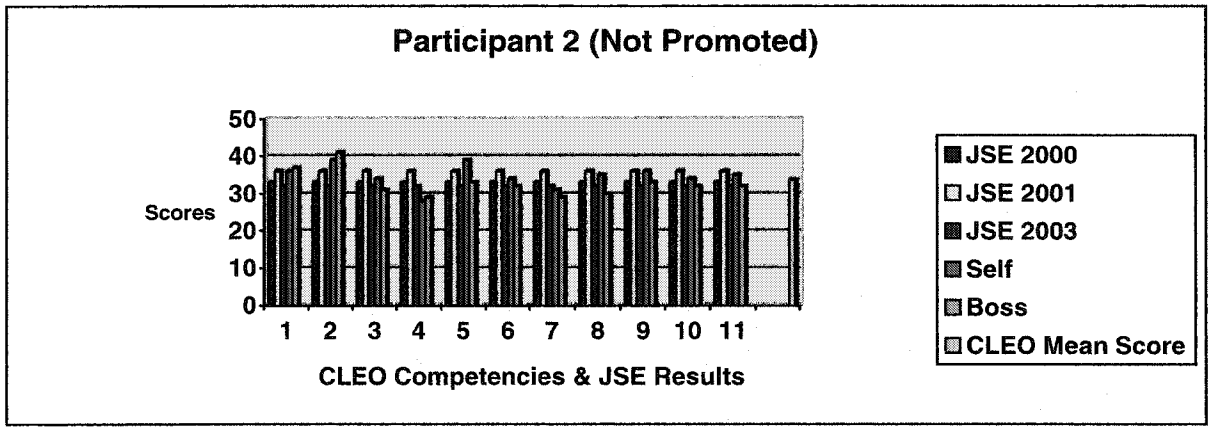
Participant 2 is currently posted to large urban detachment in a plainclothes position. Participant 2 has uniform and some limited, plainclothes experience.

CLEO & JSE Results

Participant 2 wrote the JSE seven times (including two when the JSE was still a knowledge-based examination). Although a minimum score was attained each time, the scores can be considered average (i.e., 34, 33, 34, 33, 36, 36, and 32). Generally, the JSE results were

consistent with the CLEO assessment. As shown by Figure 4.4[22] (CLEO and JSE Results for Participant 2) in all but two competencies (i.e., Character and Ethics), Participant 2's supervisors (Boss) rated her/him lower (with an overall mean score of 32.8) than Participant 2 rated her/himself (34.6) and equal to or lower than her/his JSE results (34, 33, 34, 33, 36, 36, and 32).

Figure 4. 4 CLEO and JSE Results for Participant 2



CLEO Competencies
1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational change 11- Leadership

HBDI Results

As shown in Figure 4.5 (HBDI Profile for Participant 2), Participant 2 has a Preference Code of 1122. This is the most common profile, and the most common profile for males (The Ned Herrmann Group, 2000b). Essentially, this means that A Quadrant and B Quadrant are the two most dominant quadrants (i.e., double dominant profile), or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 2 is left-brain dominant. The thinking style most preferred was A Quadrant (87). The second most

[22] For ease of comparison, Figure 4.4 contains only Participant 2's JSE results for the years where there was significant change in the scores. Therefore, 1994 (34), 1996 (33), 1998 (34) and 2002 (36) were not included. Also note, Participant 2 did not request assessors in the "All" category complete the CLEO assessments, hence the omission of "All" in Figure 4.4.

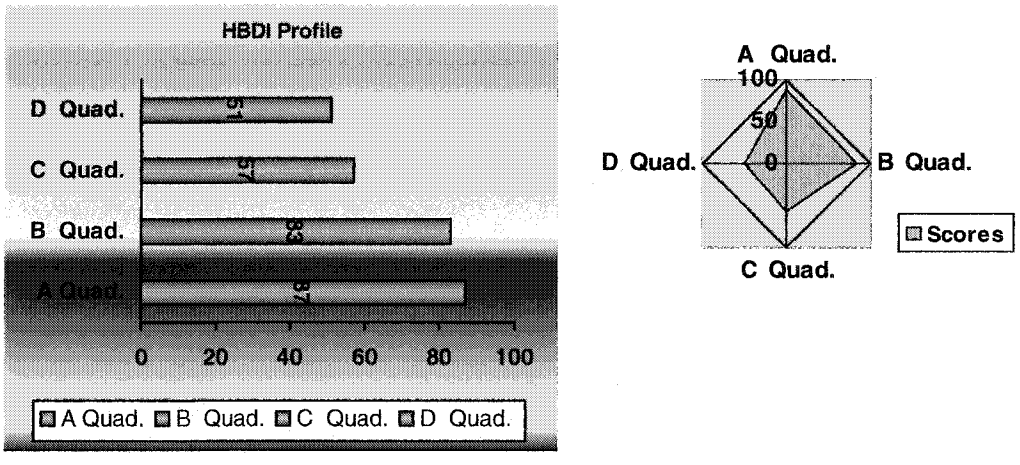
preferred style of thinking was B Quadrant (83). The least preferred quadrants were C Quadrant (57) and D Quadrant (51).

According to The Ned Herrmann Group (2000b), Participant 2:

> Is characterized by a logical, analytical, technical orientation and is effective in rational problem solving from the Upper Left A quadrant, Lower Left B quadrant...the interpersonal, emotional, and spiritual modes of Lower Right C and the holistic, creative, and synthesizing modes of Upper Right D would be at the secondary level, yet functioning. (p. 9)

In A Quadrant, descriptors of Critical, Rational, Logical and Analytical were chosen by Participant 2 to best describe her/his thinking style. In B Quadrant, descriptors of Conservative and Detailed were chosen, with Conservative being the overall "Key Descriptor" for this individual. In C Quadrant, descriptors of Spiritual and Intuitive were chosen. Finally, in D Quadrant, a descriptor of Intuitive was chosen.

Figure 4. 5 HBDI Profile for Participant 2



Interview

Participant 2 obtained a graduate degree prior to being hired by the RCMP and currently

has over 22 years of service. S/he has written the JSE seven times and while s/he has exceeded the minimum passing score each time, Participant 2 has failed to reach a promotion board. Participant 2 felt that her/his repeated failure to obtain competitive marks has prevented her/him from reaching promotional boards for positions for which s/he was well qualified and interested. Of particular interest was the decline in Participant 2's JSE score during the last writing. Participant 2 related her/his decline to the environment in which that JSE was written. For example, the best scores that Participant 2 obtained were written on "alternate writing" dates (i.e., s/he wrote the examination on a different date than the majority of the candidates).[23] Alternatively, the worst score was obtained, as described by Participant 2, "when all of the young eager constables showed up, and many of the older constables were no longer writing, I felt like leaving before the exam began, but I didn't. I should have left, but I didn't." In other words, the better marks for Participant 2 were obtained when s/he wrote the JSE in a calmer and less exposed manner. During the last writing, Participant 2 felt out of place with the other more junior constables writing the examination, essentially losing any and all focus that s/he should have had while taking the JSE. In essence, Participant 2 felt defeated before s/he answered the first question.

Participant 2's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Throughout the various stages in her/his career, there were numerous examples of

---

[23] It should be noted that in the NCO Promotion Process 2000, members who wrote on alternate dates, on average, were lower than members who wrote on the primary writing date.

Participant 2's leadership abilities that have been formally commented upon by various supervisors. For example, in 1997, a supervisor commented: "In the absence of an NCO [s/he] is often sent to the scene of serious offences to guide our junior members...Cst. ... is most deserving of [her/his] first promotion." In the same assessment, two different supervisors also commented: "[t]he caliber of [her/his] supervision is unquestionable, leaving [her/his] subordinates with clear [and] concise direction."; and, "[i]t is a measure of [her/his] maturity, experience and responsibility that Cst. ...'s advise, guidance and direction are accepted by [her/his] peers without regard to [her/his] theoretical ability to provide them." In 2001, a supervisor commented: " Cst. ... leads by example and inspires the junior members to strive to achieve the highest standard of police service," and "this rater can say without hesitation that Cst. ... is one of the strongest General Duty members that he has ever worked with or supervised." Most recently, in 2003, a supervisor commented: "Cst. ... consistently demonstrates the ability to lead. Cst. ... has a strong presence, confidence and an ability to create a sense of pride and teamwork among Watch members."

When discussing the promotion process, Participant 2 understood the need to have a process for selection and limiting the number of individuals who can advance, yet s/he questioned whether the JSE was the best process. Participant 2 believed that there was too much emphasis placed on the JSE results to limit the number of individuals who can compete for promotion.

When discussing the JSE, Participant 2 was of the opinion that the scores on the JSE were not representative of the skills and abilities of the members who wrote the examination.

Participant 2 described the JSE more like a "hit and miss" tool than a measure of an individual's ability. During the actual writing of the JSE, Participant 2 felt that fatigue was a factor in her/his lack of success. More specifically, s/he felt that the JSE was like a "mind-maze" in that s/he had too many thoughts for each question and in the end s/he would second-guess or re-consider her/his answers (i.e., you are working on question 15 but still thinking about an earlier question). Participant 2 was of the opinion that the JSE doesn't measure an individual's ability to be a police officer and related that her/his spouse sat down and wrote one of the practice examinations and scored higher than s/he did. Participant 2 felt the answers to many of the JSE questions were not asking or dealing with what you would do in reality.

Summary

Regarding Participant 2, it would appear that the JSE results were consistent with the CLEO assessed competency ratings. It is also evident that the JSE scores have been relatively consistent scores over the years (with the exception of the last JSE). Participant 2 is clearly a left-brain thinker as was evidenced by her/his HDBI profile. Normally, left-brain individuals are more successful on multiple-choice examinations (Bracken, Ledford and McCallum, 1979 cited in Zhang, 2002b); however, this was not the case for Participant 2. Overall, the consistency between the JSE and the CLEO assessment was quite remarkable for this particular participant.

Participant 3

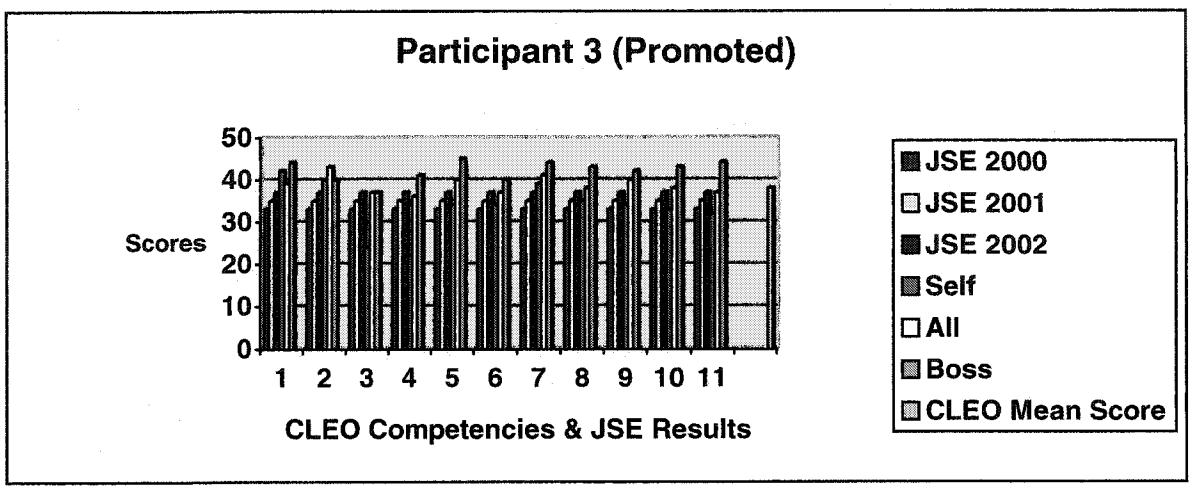
Participant 3 is currently in a plainclothes position at a large urban detachment. Participant 3 has extensive uniform and plainclothes experience.

CLEO & JSE Results

Participant 3 wrote the JSE four times. Although a minimum score was attained each time, the scores can generally be considered average (i.e., 33, 33, 35, and 37). As shown in Figure 4.6,[24] (CLEO and JSE Results for Participant 3) these JSE results were not consistent with the CLEO assessment of five of the 11 competencies (i.e., Character (mean score of 41.6); Ethics (mean score of 41); Team Building Skills (mean score of 39.6); Research and Inquiry (mean score of 41.3); and, Systems Theory, Thinking and Planning (mean score of 38.6)). The CLEO mean scores would appear to indicate high to above average scores. It was interesting to note, however, that Participant 3's JSE results in 2002 were consistent with the CLEO assessment from "All" in the following competencies: Creativity (36); Communication (37); Teaching and Learning (38); Organization and Organizational Change (38); and Leadership (37). Having said that, it was also of interest to note that the JSE results were clearly not consistent with the CLEO assessment from "Boss" in all competencies except Style, with "Boss" rating this individual significantly higher with an overall mean score of 42, while in only one competency (i.e., Style), the JSE results were consistent with "All" and "Boss" (37). In other words, this individual has mixed results in terms of consistency between the JSE and the CLEO assessment. The overall mean score for the CLEO instrument was 38 which is an above average score, while Participant 3's first three JSE (33,33, and 35) are average. Only the final JSE score (37) is similar to Participant 3's CLEO overall mean score.

[24] Again, for ease of comparison, the JSE score that was redundant (i.e., 1998 (33)) was not include in this Figure.

Figure 4. 6 CLEO and JSE Results for Participant 3



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

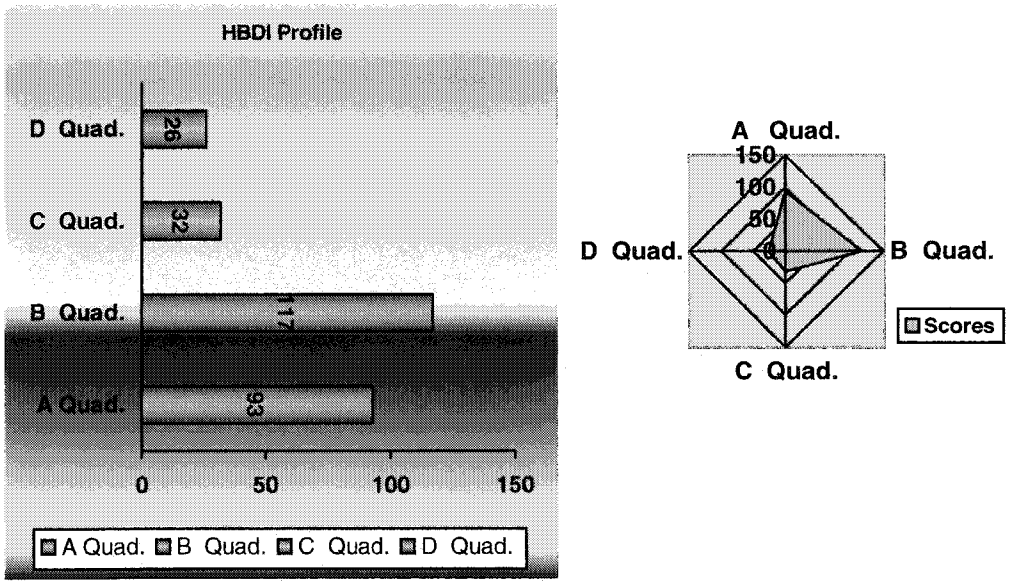
As shown in Figure 4.7 (HBDI Profile for Participant 3), Participant 3 has a Preference Code of 1133. Essentially, this means that A Quadrant and B Quadrant were the two most dominant quadrants (i.e., double dominant profile), or, in other words, this individual prefers, to a significant degree, to use these two quadrants more than the remaining two quadrants. Hence, Participant 3 was left-brain dominant. The thinking style most preferred was B Quadrant (117). The second most preferred style of thinking was A Quadrant (93). The least preferred quadrants, and significantly so, were C Quadrant (32) and D Quadrant (26).

According to The Ned Herrmann Group (2000b), Participant 3:

> Is characterized by the distinct lack of preference – even avoidance- for the characteristics of the Right modes of C and D… The preferences for the Left modes of processing would be even more pronounced in this profile as they are reinforced by the extreme lack of preference for the Right mode. (p. 10)

In B Quadrant, descriptors of Conservative, Sequential, Detailed and Reader, with Detailed, being the overall "Key" descriptor for this individual, were chosen by Participant 3 to best describe her/his thinking style. In A Quadrant, descriptors of Factual, Rational, Logical and Analytical were chosen. In C Quadrant, a descriptor of Reader was chosen. Finally, in D Quadrant, there were no descriptors in this quadrant that Participant 3 felt were characteristic of her/him.

Figure 4. 7 HBDI Profile for Participant 3



Interview

Participant 3 is a member who is just shy of obtaining a post secondary degree and currently has over 24 years of service. Participant 3 has written the JSE four times and while s/he has exceeded the minimum passing score each time, it was only on the final writing, with a score of 37, that s/he made a promotion board and was successful. Participant 3 believed that s/he would have been promoted sooner without the JSE being part of the NCO promotion

process.

Participant 3's understanding about leadership is consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual has never considered her/himself to be a leader (i.e., that someone would chose to follow), yet s/he self-described qualities like honesty, integrity, and reliable, which are some of the desired qualities of leaders. It should be noted that in the CLEO assessment, Participant 3 rated her/himself lower than "All" and "Boss".

Participant 3 only provided one example of documented supervisory comments: "Cst. …leads by example in [her/his] duties on a day to day basis."

In discussing the current promotion process, Participant 3 commented that it was an improvement over the processes of the past. However, Participant 3 believed that allowing a seven-year member to write the JSE was too junior and should be increased. Additionally, regarding the Performance Report for Promotion (PRP) process, s/he believed that this aspect of the process advantaged the more junior members. In other words, more senior constables do not have the same level of enthusiasm to write a PRP when compared to a young, non-cynical member who was single, eager, and works overtime on her or his days off.

When discussing the JSE, Participant 3 found it amazing that members with good experience could write the JSE and come out with a score in which over one third of the answers were wrong. Further, s/he found that the JSE was the most controversial component in the NCO promotional process that the RCMP has implemented to date. To Participant 3, an individual

can, in reality, have poor "people skills", but can still excel on the JSE. In the four hours allotted to complete the JSE, Participant 3 usually has 20 minutes left to review her/his questions and is exhausted when the JSE is complete. Participant 3 stated that s/he answered the questions based on "real-life" experience, but with the JSE, you don't have to be a police officer to do well and fails to see how the JSE is helping to identify leaders in the RCMP.

Summary

Generally, the JSE results were not consistent with the CLEO assessed competency ratings. While the JSE results have been relatively consistent over the years, Participant 3 did score slightly higher in 2002, which allowed her/him to make it to a promotion board where s/he was successful. It would appear that once the impediment of the JSE was passed, the member distinguished her/himself during the remaining selection process (e.g., PRP) and was promoted. Participant 3 is clearly a left-brain dominant thinker as is evidenced by the HDBI profile.

Participant 4

Participant 4 is currently posted to a plainclothes unit at a large urban detachment. Participant 4 has uniform experience at a large urban detachment, and has previous experience in other plainclothes sections.

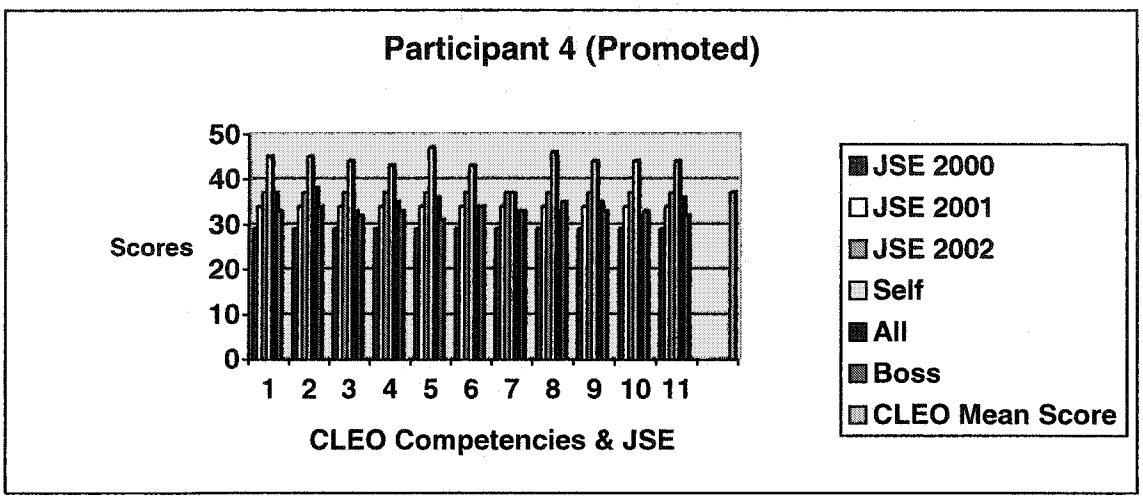
CLEO & JSE Results

Participant 4 wrote the JSE four times. Although minimum scores were attained, the scores can generally be considered below average to average (i.e., 28, 29, 34, and 37). As shown

in Figure 4.8[25] (CLEO and JSE Results for Participant 4), given the wide range in JSE scores for Participant 4, it was difficult to assess the overall level of consistency between the JSE scores and the CLEO assessments. If one were to examine only the score of 34, there would be a higher level of consistency between the JSE score and the CLEO instrument in that "All" and "Boss" rated Participant 4 as average, with overall mean scores of 34.6 and 33 respectively. There was no consistency with the earlier JSE scores (i.e., 28 and 29) and the CLEO ("Self", "All" or "Boss"). However, when one examined the most recent score of 37, there was only consistency with that score and the CLEO assessment ("All") in four competencies: Character (37); Ethics (38); Team Building Skills (36); and Leadership (36). Hence, the remaining seven competencies (i.e., Style (33); Creativity (35); Communication (34); Research and Inquiry (32); Teaching and Learning (33); Systems Theory, Thinking and Planning (35); and, Organization and Organizational Change (32)) were inconsistent with the CLEO assessment ("All"), and the JSE mean score (37). Further, the above average JSE score of 37 is not consistent with the CLEO assessment ("Boss") in all 11 competencies, with the supervisor rating Participant 4 significantly lower with a mean score of 33. In terms of self-assessment using the CLEO instrument, Participant 4 was also inconsistent with the JSE results and CLEO competencies by rating her/himself higher in all competencies with a mean score of 43.8. The high self assessment brought the CLEO overall mean score up to 37.1, which is not reflective of Participant 4's leadership abilities.

[25] For ease of comparison, for JSE scores that were similar (i.e., 28 and 29), only one score is shown in Figure 4.8.

Figure 4. 8 CLEO and JSE Results for Participant 4



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

As shown in Figure 4.9 (HBDI Profile for Participant 4), Participant 4 has a Preference Code of 1122. This is the most common profile and the most common profile for males (The Ned Herrmann Group, 2000b). Essentially, this means that A Quadrant and B Quadrant were the two most dominant quadrants, or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 4 is left-brain dominant. The thinking style most preferred was B Quadrant (90). The second most preferred style of thinking was A Quadrant (86). The least preferred quadrants were D Quadrant (63) and C Quadrant (57).

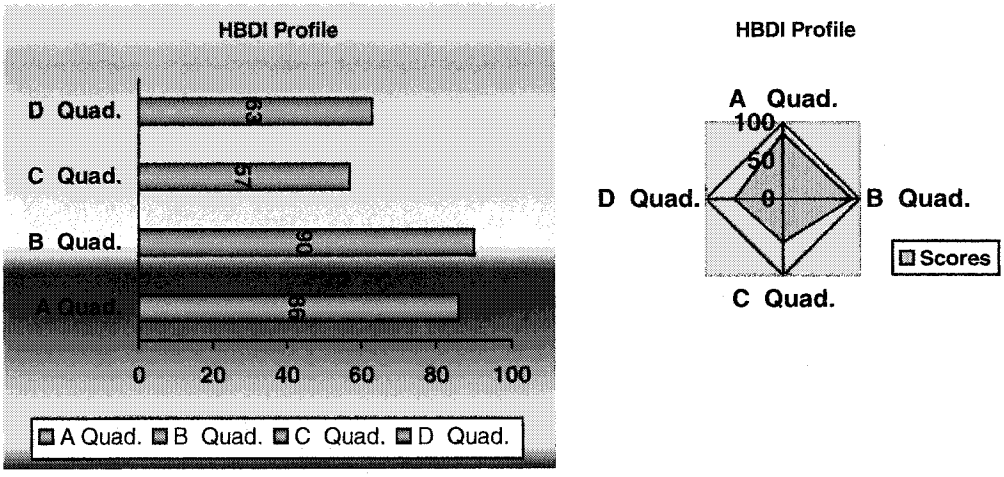
According to The Ned Herrmann Group (2000b), Participant 4:

> Is characterized by a logical, analytical, technical orientation and is effective in rational problem solving from the Upper Left A quadrant, Lower Left B quadrant...the interpersonal, emotional, and spiritual modes of Lower Right C and

> the holistic, creative, and synthesizing modes of Upper Right D would be at the secondary level, yet functioning. (p. 9)

In B Quadrant, descriptors of Conservative, Controlled and Detailed were chosen by Participant 4 to best describe her/his thinking style. In A Quadrant, descriptors of Factual, Rational, Logical and Analytical were chosen with Rational being the "Key" descriptor for this individual. In D Quadrant, a descriptor of Intuitive was chosen. Finally, in C Quadrant, a descriptor of Intuitive was chosen.

Figure 4. 9 HBDI Profile for Participant 4



Interview

Participant 4 is a member who has completed high school and currently has over 13 years of service. Participant 4 has written the JSE four times and while s/he has exceeded the minimum passing score each time, it was only on the final writing, with a score of 37, that s/he made a promotion board and was successful.

Participant 4's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possesses leadership qualities.

Participant 4 provided a copy of her/his PRP with supervisory comments to illustrate how supervisors have rated her/his leadership abilities. In 1998, a supervisor commented that Participant 4 "made many sound management decisions which demonstrated maturity and leadership beyond [her/his] years of service." More recently, in 2003, a supervisor commented: "Immediately, [s/he] displayed leadership qualities resulting in [her/his] being selected as 2 i/c of a unit of twelve RCMP members and municipal officers."

In discussing the promotion process, Participant 4 agreed with written assessments, but was not comfortable with the JSE style of examination.

When discussing the JSE, Participant 4 found it difficult to assess her/his results because there was a lack of meaningful feedback, and therefore, s/he was unsure of the areas to improve upon. Participant 4 felt the answers to the simulations were convoluted and it was difficult to identify the answer that the RCMP felt was best. Participant 4 did not feel the JSE has negatively impacted her/his career since s/he was able to obtain a promotion at 12 years of service. When Participant 4 received a score of 37, s/he felt the reason for this higher result was because of the increase of experience s/he had from the previous writings of the JSE; conversely, when s/he scored lower on the JSE (i.e., 28 and 29), s/he felt that this was due to her/his lack of understanding of the process (i.e., given her/his lack of experience).

Summary

Generally, the JSE results were inconsistent or at best mixed with the CLEO assessed competency ratings. The lower JSE scores were more consistent with the CLEO assessment than the higher JSE score. Whether or not the level of experience was a factor in the JSE results, in 2002, s/he made it to a promotion board and was successful. Participant 4 is clearly a left-brain dominant thinker as was evidenced by the HDBI profile. With the level of inconsistency between the JSE and CLEO assessments, it would appear that despite the unconfirmed leadership abilities, Participant 4 attained a mark on the JSE that advanced her/him to the next level in the promotion process and was successful. This may provide another example of the JSE failing to adequately assess an individual as a leader, as it would appear, according to the CLEO instrument, that this individual may not have been ready for success in the promotional process.

Participant 5

Participant 5 is currently posted to a uniform position at a large urban detachment. Participant 5 has extensive plainclothes and uniform experience at large urban detachments.

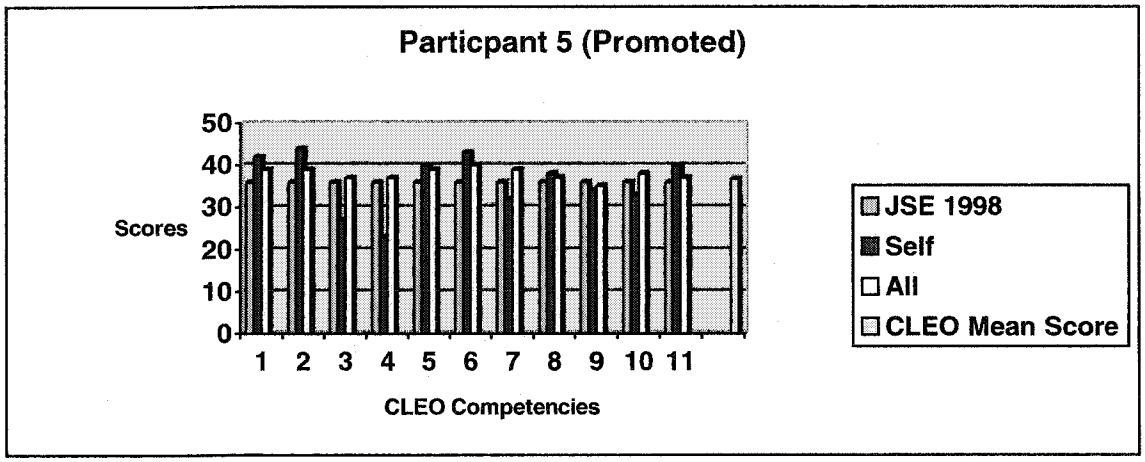
CLEO & JSE Results

Participant 5 has written the JSE, at the constable to corporal level, once. Although a minimum score was attained, it could be considered above average[26] (i.e., 36). As shown in Figure 4.10 (CLEO and JSE Results for Participant 5), the JSE score was lower than the CLEO assessment ("All") in six competencies (i.e., Character (39); Ethics (39); Team Building Skills

[26] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, was 32.9.

(39); Communication (40); Research and Inquiry (36); and, Organization and Organizational Change (38)), however, the difference still reflects an above average rating. In the remaining five competencies (i.e., Style (37); Creativity (35); Teaching and Learning (37); Systems Theory, Thinking and Planning (35); and, Leadership (37)), the JSE scores and the CLEO assessment ("All") were consistent with each other. It can, therefore, be stated that overall, the above average JSE score (36) was consistent with the CLEO instrument overall mean score assessment (36.7).

Figure 4. 10 CLEO and JSE Results for Participant 5



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization. and Organizatinal Change 11- Leadership

HBDI Results

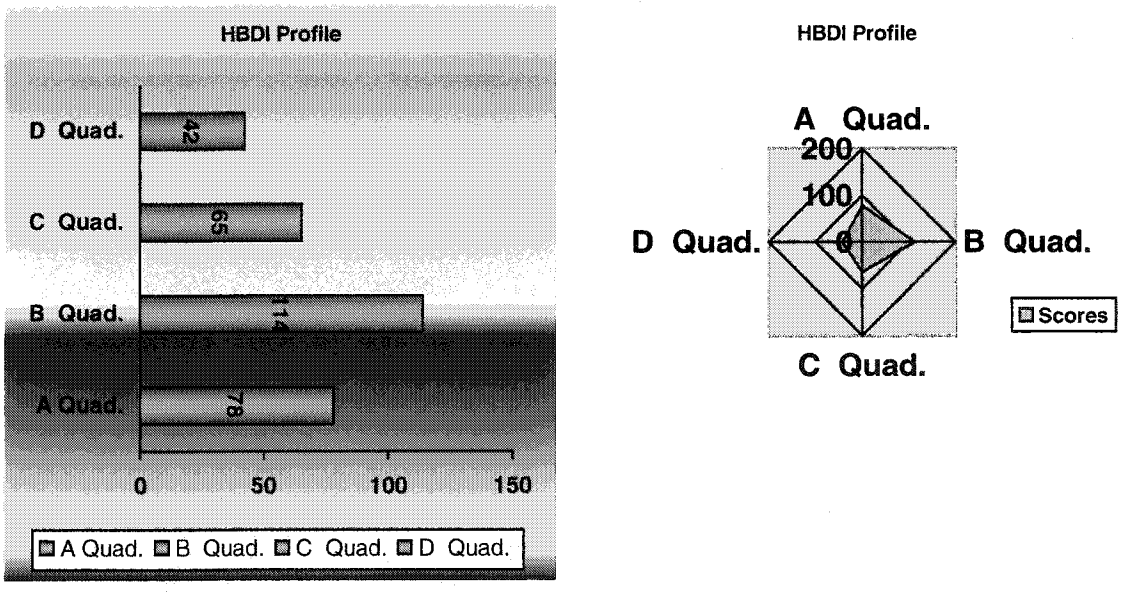
As shown in Figure 4.11 (HBDI Profile for Participant 5), Participant 5 has a Preference Code of 1122. This is the most common profile, and the most common profile for males (The Ned Herrmann Group, 2000b). Essentially this means that A Quadrant and B Quadrant were the two most dominant quadrants, or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 5 is left-brain dominant.

The thinking style most preferred was B Quadrant (114). The second most preferred style of thinking was A Quadrant (78). The least preferred quadrants were C Quadrant (65) and D Quadrant (42).

> According to The Ned Herrmann Group (2000b), Participant 5:
>
> Is characterized by a logical, analytical, technical orientation and is effective in rational problem solving from the Upper Left A quadrant, Lower Left B quadrant...the interpersonal, emotional, and spiritual modes of Lower Right C and the holistic, creative, and synthesizing modes of Upper Right D would be at the secondary level, yet functioning. (p. 9)

In B Quadrant, descriptors of Conservative, Sequential, Detailed and Speaker were chosen by Participant 5 to best describe her/his thinking style. In A Quadrant, descriptors of Factual, Critical, Rational, and Logical were chosen with Logical being the "Key" descriptor for this individual. In C Quadrant, a descriptor of Verbal was chosen. Finally, in D Quadrant, there were no descriptors chosen.

Figure 4. 11 HBDI Profile for Participant 5



Interview

Participant 5 is a member who has a post secondary degree and one year completed toward a graduate degree. Participant 5 currently has over 18 years of service. S/he has written the JSE, at the constable to corporal level, once. S/he received a score of 36 and was successful in making it to a promotion board and was promoted.

Participant 5's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Participant 5 provided recent supervisory comments to illustrate how supervisors have rated her/his leadership abilities. In 2002, a supervisor commented: "Cpl. … is a competent, confident and clearly superior NCO. [S/he] inspires and challenges others, sets exceptionally high standards for …self, leads by example and is very knowledgeable about the Criminal Code, Federal and Provincial Statutes. [S/he] is well respected by supervisors, peers and subordinates. [S/he] has a cooperative, diplomatic leadership style and sets challenging and realistic goals." Also, in 2002, a supervisor commented: "Cpl. … provides excellent advice to a watch that is very junior and is constantly developing the members for [the] future."

In discussing the promotion process, Participant 5 felt that there was room for improvement. In particular, Participant 5 was of the opinion that the promotion process was not accurate in assessing people. Participant 5 questioned, "Are exam questions indicative of a leader?" Participant 5 explained that "the exams are scored based on 48 questions, yet a question

or two can either get you promoted or not. It would seem that an examination should have more of a spread. Realistically, one needs over 40 to get a promotion." Participant 5 observed that if one doesn't score in the 40s on the JSE, then one either sits and waits to write again or begins to apply for positions that one is not really interested, or, perhaps, not suited for. Participant 5 would like to see candidates sit before a panel and finds it difficult to understand how important decisions [such as the leadership of the RCMP] can be decided without personal "presence." Participant 5 was very firm in her/his position that an interview process should be included in the promotion process and best summed this up by saying, "how can you promote into a leadership role without talking to them [candidates]?" (as the remainder of the NCO promotion process is entirely based on written submissions (e.g., PRP)).

When discussing the JSE, Participant 5 believed that the questions were good, but wonders about the logic of a process when a question or two in either direction can either raise you up (or not) to a level that you are making all the promotion boards. By way of example, Participant 5 competed in the corporal to sergeant JSE[27] and received a 37 and then bumped it up to a 42 on the next JSE. S/he did not do anything different; it was just a better result. Participant 5 liked the questions and believed they represented "real life" scenarios, but many of the answers were so close to each other that any of the choices could easily work. Participant 5 believed that asking the questions was good, but there should be an opportunity for a personal response, and one doesn't have to be a good leader to write a good exam.

Summary

Generally, the JSE result was consistent with the CLEO assessed competency ratings for Participant 5. Therefore, it appears that Participant 5 is a leader as assessed by the JSE score and the CLEO competencies. Participant 5 is clearly a left-brain dominant thinker as was evidenced by her/his HDBI profile. The fact that Participant 5 is a left-brain thinker may have contributed to the JSE score, yet in essence, a score of 36 is not a competitive score for a promotion of interest to this participant.

Participant 6

Participant 6 is currently posted to a plainclothes unit at a large urban detachment. Participant 6 has extensive uniform and plainclothes experience.

CLEO & JSE Results

Participant 6 wrote the JSE three times. Although a minimum score was attained each time, the scores can be considered average.[28] The most recent score, and the highest attained, was a 33. The other two scores were equal to or below 33, but a record of specific scores for the other two JSEs could not be located by Participant 6 (or Staffing and Personnel), but, as expressed by Participant 6, 33 was the best and most recent score, and therefore, 33 was taken as the comparative JSE score.

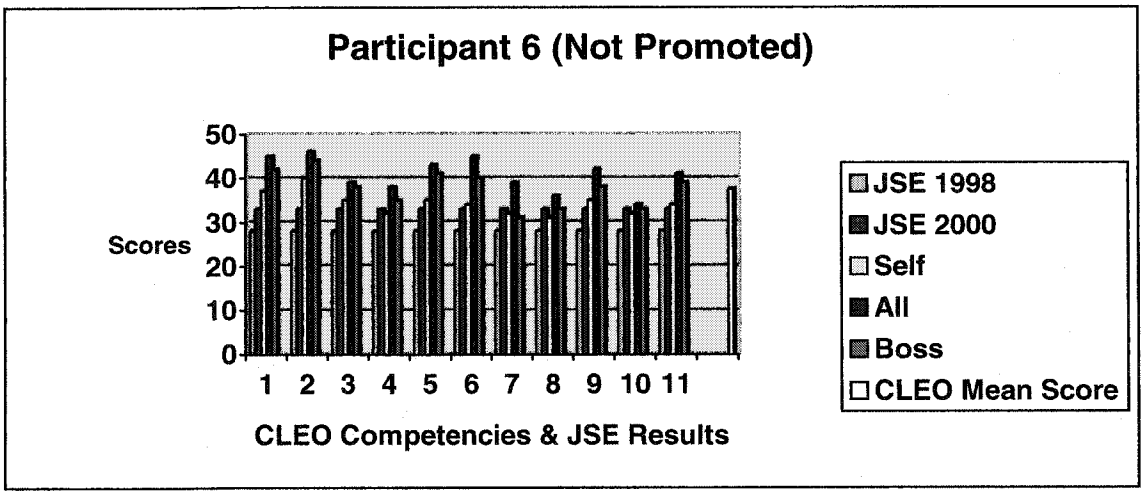
As shown in Figure 4.12 (CLEO and JSE Results for Participant 6), the JSE scores were

---

[27] Recall that this study has concentrated on the initial rank (i.e. constable to corporal).
[28] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9.

clearly not consistent with the CLEO instrument since "All" and "Boss" rated Participant 6 high and above average with overall mean scores of 40.7 and 37.6 respectively. The average JSE score was consistent with the CLEO instrument "Self" assessment that rated her/himself as average with an overall mean score of 34.2. The only competency that was consistent in terms of JSE result and CLEO competencies was Organization and Organizational Change with an overall mean score of 33. In the CLEO assessed competencies, the highest CLEO ratings were from "All" (40.7), closely followed by "Boss" (37.6), "Self" (34.2), and then JSE result (33). The CLEO overall mean score was 37.5. Participant 6 was clearly recognized as an informal leader in the RCMP, although she/he may not recognize her/his leadership abilities as acknowledged by others, and has not been successful in writing the JSE.

Figure 4. 12 CLEO and JSE Results for Participant 6



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

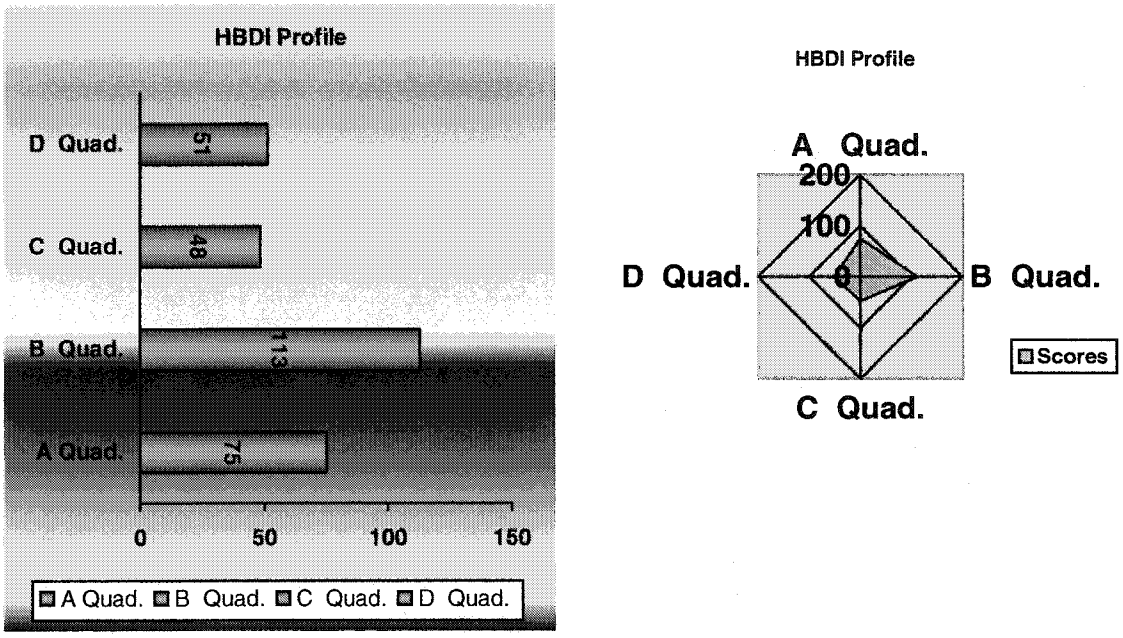
As shown in Figure 4.13 (HBDI Profile for Participant 6), Participant 6 has a Preference Code of 1122. This is the most common profile and the most common profile for males (The

Ned Herrmann Group, 2000b). Essentially this means that A Quadrant and B Quadrant were the two most dominant quadrants, or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 6 is left-brain dominant. The thinking style most preferred was B Quadrant (113). The second most preferred style of thinking was A Quadrant (75). The least preferred quadrants were D Quadrant (51) and C Quadrant (48).

> According to The Ned Herrmann Group (2000b), Participant 6:
>
> Is characterized by a logical, analytical, technical orientation and is effective in rational problem solving from the Upper Left A quadrant, Lower Left B quadrant...the interpersonal, emotional, and spiritual modes of Lower Right C and the holistic, creative, and synthesizing modes of Upper Right D would be at the secondary level, yet functioning. (p. 9)

In B Quadrant, descriptors of Conservative, Detailed and Speaker were chosen by Participant 6 to best describe her/his thinking style. In A Quadrant, descriptors of Critical and Analytical were chosen. In D Quadrant, descriptors of Holistic and Simultaneous was chosen. Finally, in C Quadrant, a descriptor of Verbal was chosen with Verbal being the "Key" descriptor for this individual.

Figure 4. 13 HBDI Profile for Participant 6



Interview

Participant 6 is a member who has completed high school and one year of university. Participant 6 currently has over 30 years of service. S/he has written the JSE three times and while s/he has exceeded the minimum passing scores, s/he has failed to proceed to a promotion board.

Participant 6's understanding of leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Participant 6 provided recent supervisory comments to illustrate how supervisors have

rated her/his leadership abilities. In 2001, a supervisor commented: "Cst. … is the senior constable on the Watch and always performs in an official acting supervisory role when an NCO is away. Even when Cst. … is not in an acting role [s/he] is often called upon to provide supervisory assistance with the junior members. Cst. … can be counted on to perform these duties in an exemplary fashion." In 2002, supervisory comments were obtained from three different supervisors, and were as follows: " Cst. …'s performance in an acting position has been exemplary. [S/he] possesses the knowledge and skills and desire to complete this duty with little to no effort…Cst. … is a promotable member and is capable and deserving of a promotion to the rank of Corporal"; " Cst. … sets an example for [her/his] peers and supervisors"; and, "Cst. … consistently, provides leadership through [her/his] experience, excellent interpersonal skills. [S/he] is one of the 'go to' members on Detachment."

In discussing the promotion process, Participant 6 felt that the current promotion process was inadequate and detrimental to the RCMP. Specifically, Participant 6 believed that there is an emphasis on administrative matters rather than everyday police work and this was leading to a "non-functioning" organization. Even more specifically, Participant 6 commented that in the General Duty (i.e., uniform) field, an individual could be promoted within this system and be a good administrator but a very poor road supervisor. Participant 6 has observed that there seems to be a large gap in expertise, where members on the Watch are either very "senior" or very "junior", and the block of "middle" members have left and been promoted.

When discussing the JSE, Participant 6 believed that the JSE was derived from scientific studies, was education-based, and that it appeared to emphasize administrative abilities rather

than police work and experience. Participant 6 commented that the JSE is a valuable advancement tool (only) for those who are proficient in writing examinations. When actually writing the JSE, Participant 6 stated that s/he was good for the first 10 questions and then after that s/he lost interest in the test. Participant 6 found it difficult to focus and was frustrated that the JSE has little to do with the realties of police work.

Summary

Regarding Participant 6, the JSE results were clearly not consistent with the CLEO assessed competency ratings with the exception of "Self". Different from Participant 1, who was scored highest by her/his supervisors, Participant 6 was consistently scored highest in all 11 competencies by her/his peers and direct reports. In other words, those with whom s/he works consider Participant 6 to be a leader. It appears that the JSE failed to adequately assess Participant 6, and unfortunately, Participant 6 has withdrawn from the promotion process due to her/his inability to attain a competitive score on the JSE.

Participant 7

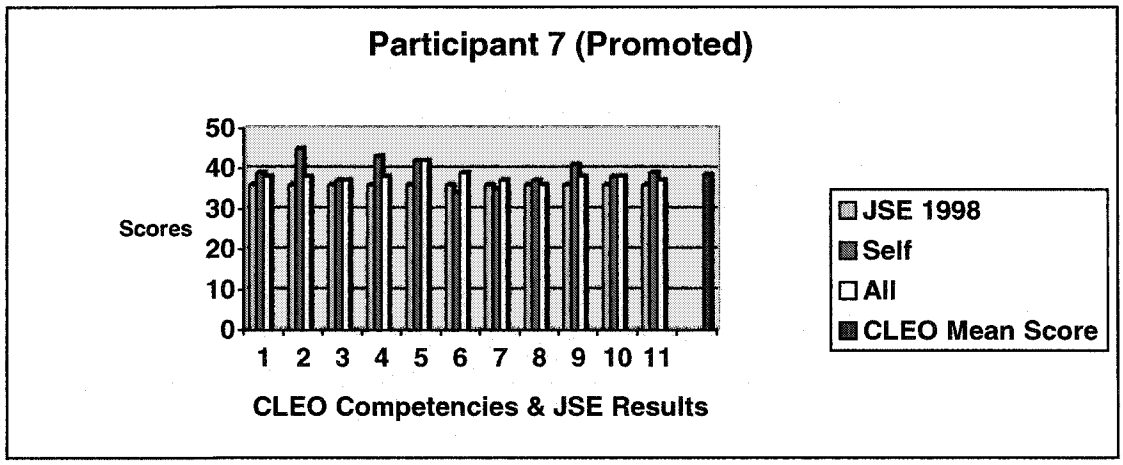
Participant 7 is currently posted to a plainclothes unit at a large urban detachment. Participant 7 has extensive plainclothes and uniform experience.

CLEO & JSE Results

Participant 7 wrote the JSE once. Although a minimum score was attained, the score can

be considered above average[29] (i.e., 36). As shown in Figure 4.14 (CLEO and JSE Results for Participant 7), the JSE score was clearly consistent with the CLEO instrument since "Self" and "All"[30] rated Participant 7 above average, with overall mean scores of 39 and 38, respectively, in all competencies with one exception. The only competency that is inconsistent in terms of JSE result (36) and CLEO competencies (overall mean score of 38.5) was Team Building Skills. For the Team Building Skills competency, Participant 7 and peers, and direct reports, rated this individual higher (42) than the JSE scores. In four competencies (i.e., Ethics (45); Creativity (43); Systems Theory, Thinking and Planning (41); and, Leadership (39)), Participant 7 rated her/himself higher than her/his peers and direct reports and higher than the JSE scores.

Figure 4. 14 CLEO and JSE Results for Participant 7



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

[29] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9.

[30] Participant 7 did not request assessors in the "Boss" category to complete CLEO assessments, hence the omission of "Boss" in Figure 4.14.

HBDI Results

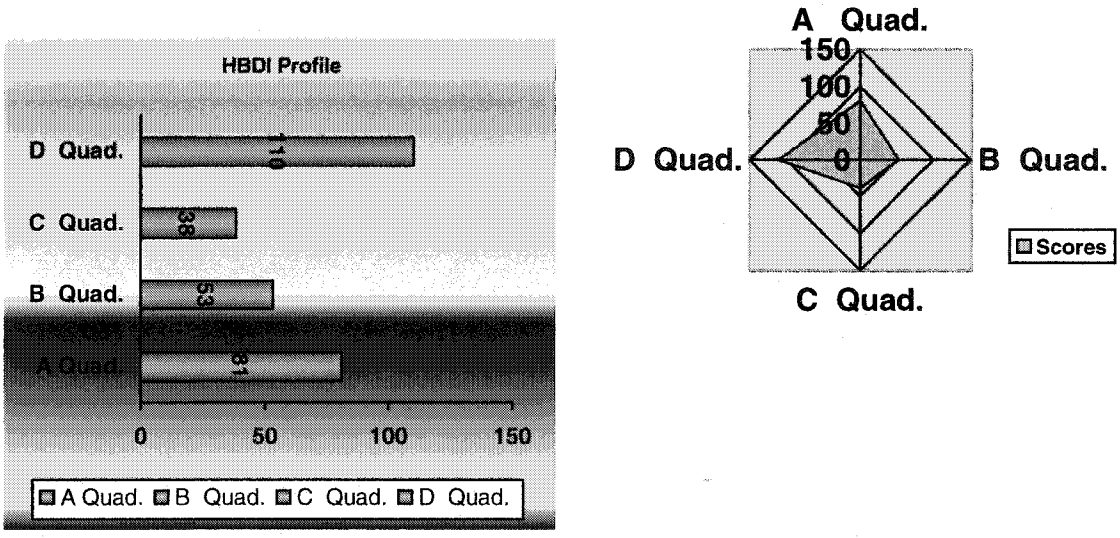
As shown in Figure 4.15 (HBDI Profile for Participant 7), Participant 7 has a Preference Code of 1221. This is the second most common profile among males (The Ned Herrmann Group, 2000b). Essentially, this means that A Quadrant and D Quadrant are the two most dominant quadrants (i.e., double dominant profile), or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 7 is neither left-brain nor right-brain dominant. The thinking style most preferred was D Quadrant (110). The second most preferred style of thinking was A Quadrant (81). The least preferred quadrants were B Quadrant (53) and C Quadrant (38).

According to The Ned Herrmann Group (2000b), Participant 7:

> Would exhibit strong preferences for logical, analytical and quantitative modes of thinking in the Upper Left A quadrant; in contrast they would also have a preference for the integrative, synthesizing, creative, and holistic aspects of the Upper Right D. Individuals with this profile frequently exhibit the ability to switch back and forth between the two cerebral quadrants, as the situation demands...It [profile] is also typical [occupation] of senior executives in operating and strategic positions in technical organizations. (p. 13)

In D Quadrant, descriptors of Intuitive, Holistic, Synthesizer and Simultaneous, with Holistic being the "Key" descriptor were chosen by Participant 7 to best describe her/his thinking style. In A Quadrant, descriptors of Factual, Rational and Logical were chosen. In B Quadrant, a descriptor of Controlled was chosen. Finally, in C Quadrant, a descriptor of Intuitive was chosen.

Figure 4. 15 HBDI Profile for Participant 7



Interview

Participant 7 is a member who has a college diploma and currently has over 28 years of service. S/he has written the JSE once (constable to corporal), received a score of 36, made a promotion board, and was successful in being promoted.

Participant 7's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Participant 7 provided recent supervisory comments to illustrate how supervisors have rated her/his leadership abilities. In 1998, a supervisor commented: "[Her/his] integrative leadership style and congenial personality has been appreciated by [her/his] subordinates and supervisors which has obviously lead to [her/his] popularity on the section…It is my opinion the

Cst. …'s attitude and exemplary performance has contributed to the strong esprit de corps of our section." In 2001, a supervisor commented "Cpl. … has an 'easy going' personality, is very approachable by his peers and supervisors. [S/he] is a definite asset to … and is deserving of promotion given the opportunity." Finally, in 2002, a supervisor commented "Cpl. … continues to provide excellent guidance and leadership to his unit."

In discussing the promotion process, Participant 7 did not like the current process. Under this promotion process, Participant 7 believed individuals were structuring their work to make themselves look good rather than structuring the work for the organization. Participant 7 believed that individuals should not be commenting on their value to the organization, in a process where self-reporting (i.e., PRP) is the basis for advancement.

When discussing the JSE, Participant 7 didn't believe that the JSE tests everyday decision-making skills and was not a proper assessment of what happens. Further, Participant 7 believed that some people, including her/himself, were reading into the questions, not what they would do, but what they should do, thus over-thinking the response. Participant 7 felt many people have the desired skills, but are not getting the right results on the JSE. Finally, Participant 7 was of the opinion that the JSE was becoming too politically correct rather than addressing the kind of decisions that have to be made in operational police work.

Summary

Regarding Participant 7, the JSE results were clearly consistent with the CLEO assessed competency ratings in all competencies. Participant 7 is both a right- and left-brain thinker as

was evidenced by the HDBI profile. It is interesting to note that while Participant 7 has been successful at attaining the rank of corporal, s/he has not been successful in obtaining a competitive score on the JSE from corporal to sergeant (i.e., s/he has written the sergeant JSE three times and obtained scores of 34, 29 and 37). Participant 7's thinking style may be contributing to her/his lack of success in the JSE, but for the purposes of this study (i.e., Corporal JSE), Participant 7's JSE score and CLEO assessment were consistent with each other in that Participant 7 was a leader using both methods of assessment.

Participant 8

Participant 8 is currently posted to a plainclothes federal section. Participant 8 has extensive uniform and plainclothes experience.

CLEO & JSE Results

Participant 8 wrote the JSE four times. Although a minimum score was attained each time, the scores can generally be considered average[31] (i.e., 33, 34, 34, and 36). As shown in Figure 4.16[32] (CLEO and JSE Results for Participant 8), there were some consistencies and variances between the JSE scores and the CLEO assessment, yet the CLEO overall mean score (38.1) assessed Participant 8 as above average.[33] For example, the CLEO mean scores ("Self and "All") in four competencies (i.e., Style (36.5); Creativity (36.5); Organization and Organizational

---

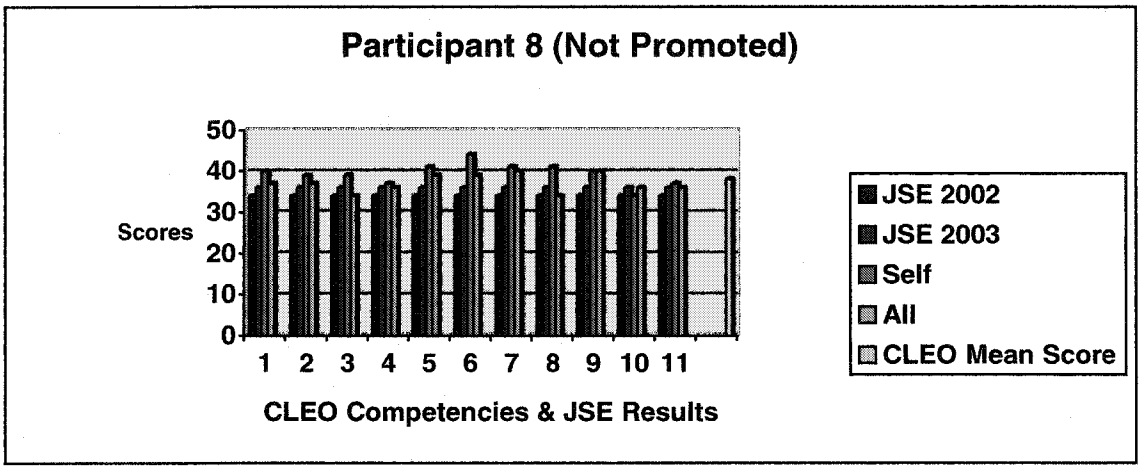
[31] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9.

[32] For ease of comparison, Figure 4.16 contains only the JSE results for the years where there was significant change in the scores. Therefore, 2000 (33) and 2001 (34) were not included.

[33] Participant 8 did not request assessors in the "Boss" category complete the CLEO assessments, hence the omission of "Boss" in Figure 4.16.

Change (35); and Leadership (36.5)) were consistent with the last JSE score (36), but clearly inconsistent with the earlier JSE scores. While the CLEO mean scores ("Self" and "All) in the remaining seven competencies (i.e., Communication (41.5); Team Building Skills (40), Character (38.5); Ethics (38); Research and Inquiry (40.5); Teaching and Learning (37.5); and Systems Theory, Thinking and Planning (40)), were inconsistent with all of the JSE scores by rating Participant 8 high or above average.

Figure 4. 16 CLEO and JSE Results for Participant 8



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

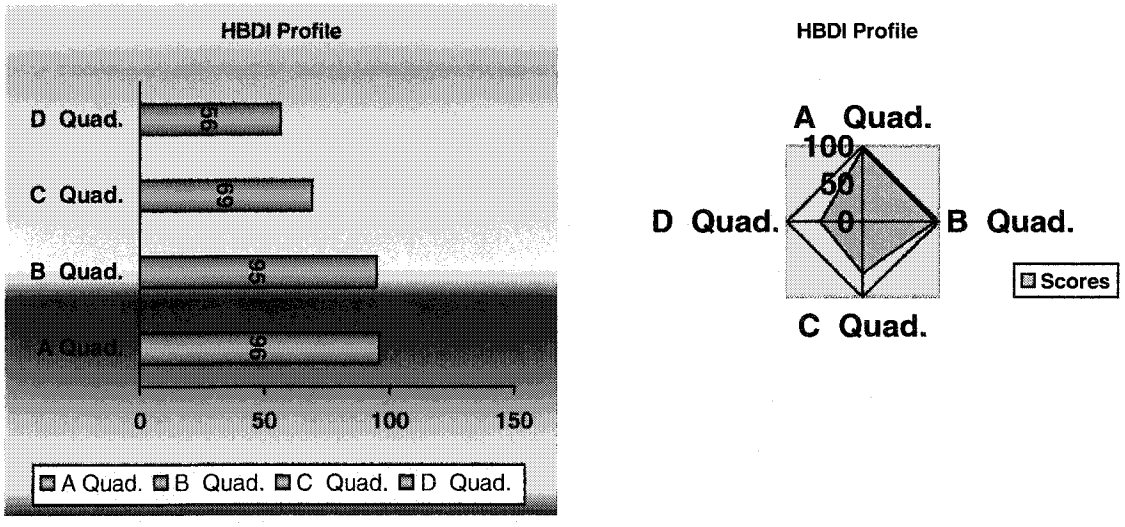
As shown in Figure 4.17 (HBDI Profile for Participant 8), Participant 8 has a Preference Code of 1112. Essentially, this means that A Quadrant, B Quadrant and C Quadrant were the three most dominant quadrants (i.e., triple dominant profile), or, in other words, this individual prefers to use these three quadrants more than the remaining quadrant. Hence, Participant 8 is left-brain dominant. The thinking style most preferred was A Quadrant (96). The second most

preferred style of thinking was B Quadrant (95). The third most preferred style of thinking was C Quadrant (69). The least preferred was D Quadrant (56).

> According to The Ned Herrmann Group (2000b), for Participant 8:
>
> the multi-dominant nature of their thinking process...allows the individuals to move through their three dominant modes somewhat seamlessly, looking at all of the perspectives before making a decision...On the other hand, this multiplicity of preference can slow sown the decisions making process due to the need to really check out all the bases. (p. 19)

In A Quadrant, descriptors of Critical, Rational, Logical and Analytical, with Critical being the "Key" descriptor, were chosen by Participant 8 to best describe her/his thinking style. In B Quadrant, descriptors of Speaker and Reader were chosen. In C Quadrant, descriptors of Emotional, Intuitive, Verbal and Reader were chosen. Finally, in D Quadrant, a descriptor of Intuitive was chosen.

Figure 4. 17 HBDI Profile for Participant 8



Interview

Participant 8 is a member who has a post secondary degree and currently has over 12 years of service. S/he has written the JSE four times, and although a minimum passing score was obtained on each occasion, Participant 8 has failed to make it to a promotion board.

Participant 8's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

In discussing the promotion process, Participant 8 felt that the current promotion process was "great when you get to Part B [i.e., the promotion board selection process using the PRP etc.], however, Part A [i.e., JSE] is the difficult part...any public servant could score well on the JSE but police officers are not...what good is that to a Major Crime Section?" Participant 8 also believed that the eligibility to write the JSE at seven years was too junior.

When discussing the JSE, Participant 8 felt that the JSE was "a terrible measurement tool to show leadership in police work." S/he found the questions vague, unrealistic, and without any police substance. In other words, s/he felt that the answers to some of the JSE questions were not police (i.e., operational) answers. Participant 8 was frustrated with the lack of feedback. Participant 8 felt the hardest part of the JSE was "having to sit through those brutal questions when you know that the proper answer is not on the page" and then, "waiting for results with no idea how you did and then not getting any feedback." The JSE has most likely affected participant 8's career, but s/he has stated that s/he has not applied for many positions because of her/his low score.

Summary

Regarding Participant 8, it would appear that, generally, the JSE results were consistent with the CLEO assessed competency ratings. In other words, the JSE appeared validated in seven of the 11 competencies. Participant 8 is a left-brain thinker as was evidenced by her/his HDBI profile.

Participant 9

Participant 9 is currently posted to a uniform position at a large urban detachment. Participant 9 has extensive uniform and administrative experience.

CLEO & JSE Results

Participant 9 wrote the JSE four times. Although a minimum score was attained each time, the scores can be considered above average[34] (i.e., 36, 37, 37, and 37). As shown in Figure 4.18[35] (CLEO and JSE Results for Participant 9), the JSE results were clearly not consistent with the CLEO instrument. In fact, in all 11 competencies assessed using the CLEO instrument, "Self", "All", and "Boss" rated Participant 9 very high, with overall mean scores of 40.5, 42.8 and 42 respectively, while the JSE scores are more reflective of an above average evaluation.

Participant 9 was the only participant where the 360-degree assessment method was relatively the same (high) with all three different levels of assessment. Participant 9 was rated as

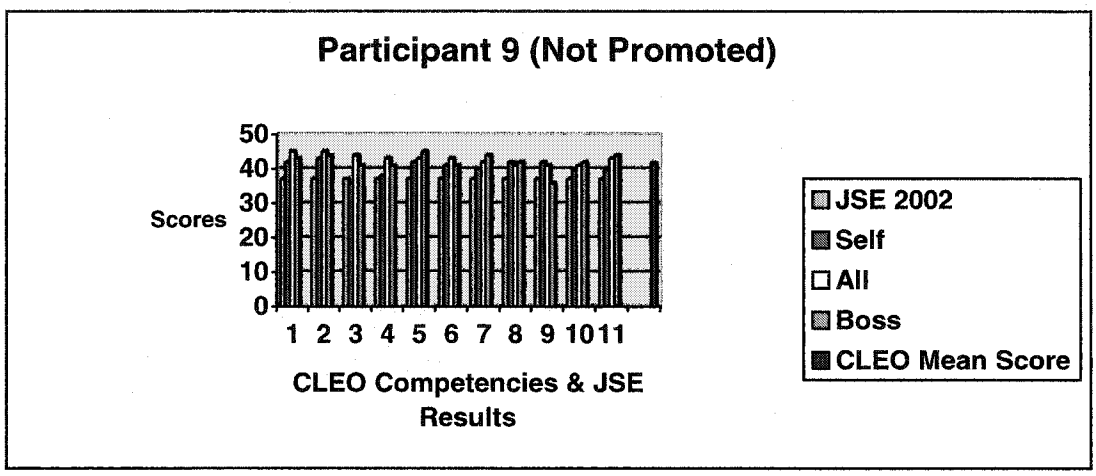
---

[34] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9.

[35] For ease of comparison, Figure 4.18 contains only the JSE results for the years where there was a significant change in the score. Therefore, 1998 (36), 2000 (37) and 2001 (37) were not included.

a leader with her/his "Boss", a leader with her/his "All", and self-rated her/himself as a leader. This degree of consistency with the CLEO instrument (with an overall mean score of 41.7) most dramatically illustrated the lack of consistency between the CLEO instrument and the JSE scores.

Figure 4. 18 CLEO and JSE Results for Participant 9



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

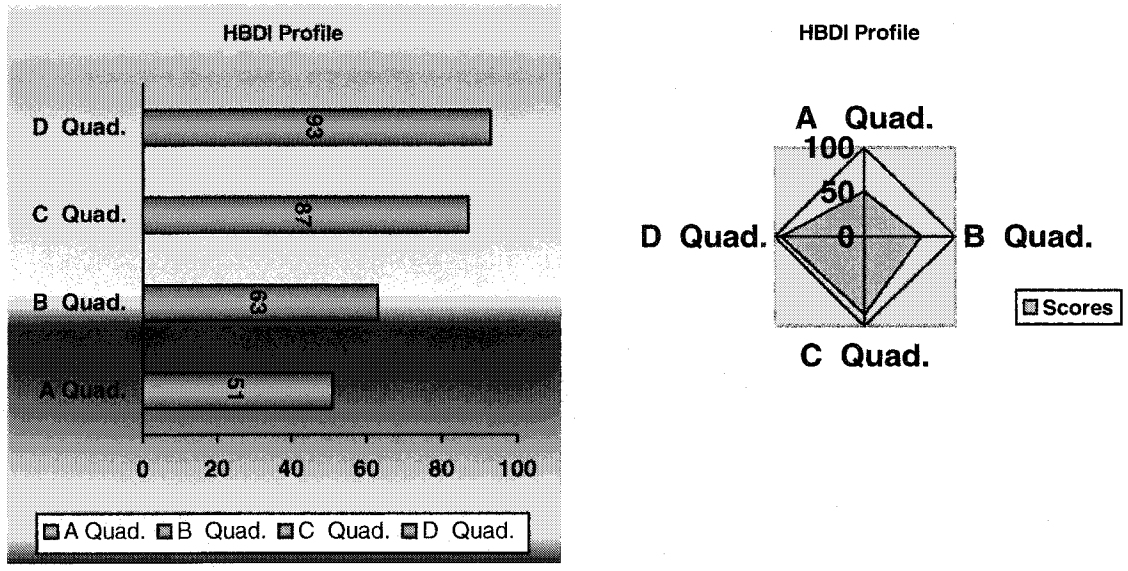
As shown in Figure 4.19 (HBDI Profile for Participant 9), Participant 9 has a Preference Code of 2211. This profile is the most common among females (The Ned Herrmann Group, 2000b). Essentially, this means that C Quadrant and D Quadrant were the two most dominant quadrants, or, in other words, this individual prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 9 is right-brain dominant. The thinking style most preferred was D Quadrant (93). The second most preferred style of thinking was C Quadrant (87). The third most preferred style of thinking was B Quadrant (63). The least preferred was A Quadrant (51).

According to The Ned Herrmann Group (2000b), Participant 9:

> characteristics would include the ability to be creative, holistic, and synthesizing in the Upper Right D quadrant and interpersonal, emotional, and spiritual in the Lower Right C quadrant. The left mode ... clearly secondary to the preferred right modes of thinking... This profile could also support entrepreneurial behavior, since it feature to imaginative, innovating and 'risk' oriented behavior of the right mode quadrants C and D without the control or preference of the structured, logical and conservative modes of the left quadrants A and B. (p. 11)

In D Quadrant, descriptors of Intuitive, Holistic, Synthesizer and Simultaneous, with Simultaneous being the "Key" descriptor, were chosen by Participant 9 to best describe her/his thinking style. In C Quadrant, descriptors of Intuitive, Verbal and Reader were chosen. In B Quadrant, descriptors of Speaker and Reader were chosen. Finally, in A Quadrant, descriptors of Critical and Rational were chosen.

Figure 4. 19 HBDI Profile for Participant 9



Interview

Participant 9 is a member who has a post secondary degree and currently has over 13

years of service. S/he has written the JSE four times, and has begun to reach some promotion boards.

Participant 9's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Participant 9 provided recent supervisory comments to illustrate how supervisors have rated her/his leadership abilities. In 2002, a supervisor commented: "Cst. …'s ability to organize and direct was so evident in this situation and was commented on by all concerned…Cst. … is very personable and has the ability to get along with municipal and Force members with little to no effort." In 2003, a supervisor commented: "I have had total and absolute confidence in [her/his] leadership abilities during my absences …" Also in 2003, a supervisor commented: "Cst. … continues to exceed all expectations…I depend upon [her/his] knowledge, research and communication skills to ensure the 'grey areas' of operational policy are clearly articulated to the front line. Often, I call upon … with an 'urgent' task that [s/he] takes in stride and resolves in [her/his] usual capable, professional manner."

In discussing the promotion process, Participant 9 had mixed feelings about the process. S/he had no problem writing an examination or submitting a PRP, but didn't like the system and didn't feel that the best people are being identified. In particular, s/he was of the opinion that this process can be manipulated (i.e., through job description advertisements/requirements the pool of candidates can be significantly increased or decreased until the pool has the desired candidate).

Participant 9 felt that in such situations the actual JSE score became irrelevant because so few individuals could qualify for a particular position (i.e., given the detailed job requirements). Participant 9 believed that one could, therefore, have a minimum passing score and be one of the few who actually make it to the promotion board.

When discussing the JSE, Participant 9 didn't mind the JSE, but found it difficult not to read into the questions. Participant 9 felt confident that s/he could handle each of the scenarios on the JSE in real life, but it was difficult to pick just one best answer (i.e., what the RCMP wants). Additionally, Participant 9 was frustrated regarding the lack of feedback on the JSE. When writing the JSE, a similar question would arise, and s/he recalled answering the question previously, but was unsure if the previous answer was correct or not. The JSE has affected Participant 9's career in her/his opinion, as a higher mark would equal more opportunity and a greater selection of jobs of interest.

Summary

Regarding Participant 9, the JSE results were not consistent with the CLEO assessed competency ratings. There was a high rate of congruency between the raters for the CLEO assessments, indicating that all levels of assessors with whom Participant 9 worked on a daily basis, confirmed her/his leadership skills and abilities, more so than in any other participant in this study. With such a high rate of agreement, Participant 9 clearly established her/himself as a leader in the RCMP. In addition to the assessors' agreement about Participant 9's leadership abilities, there was another unique finding concerning Participant 9. This participant was the only right-brain thinker (as evidenced by his HDBI profile) of the sample group.

Participant 10

Participant 10 is currently posted to a uniform position at an urban detachment. Participant 10 has extensive uniform experience.

CLEO & JSE Results

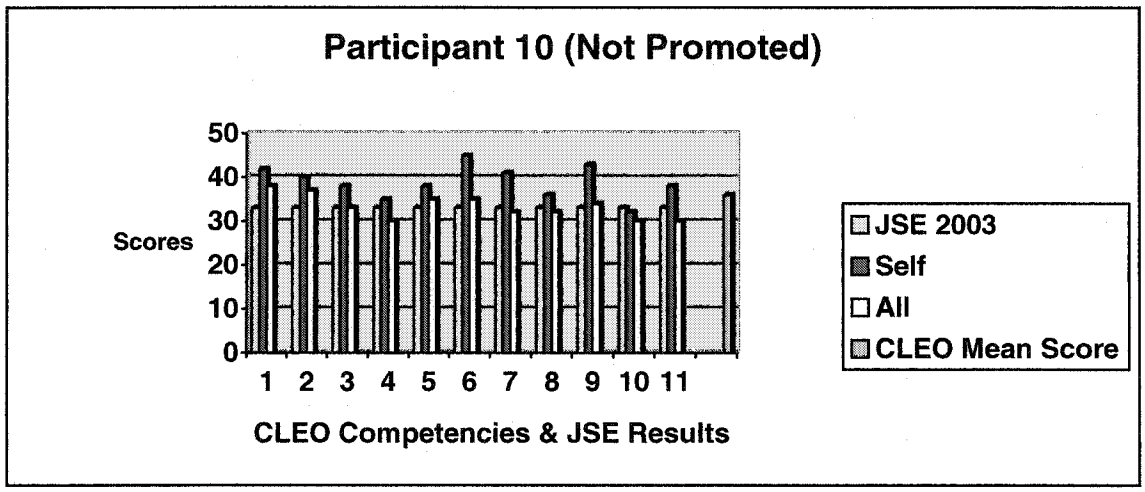
Participant 10 wrote the JSE seven times. Although a minimum score was attained each time, the scores can be considered average.[36] The most recent score, and believed by Participant 10 to be the overall average, was a 33. Participant 10 could not locate a record of specific scores for the other JSEs. Therefore, 33 was taken as the comparative JSE score.

Generally, as shown in Figure 4.20[37] (CLEO and JSE Results for Participant 10), the average JSE result was consistent with the CLEO assessment provided by peers and direct reports (i.e., "All"). Using the CLEO instrument, "All" rated Participant 10 as average with an overall mean score of 33.2. Participant 10 rated her/himself as above average or high in eight of the eleven competencies, well exceeding the JSE average (i.e., 33) and CLEO "All" assessments. The CLEO assessment "All" rated Participant 10 higher in four competencies (i.e., Communication (35); Character (38); Ethics (37); and Team Building Skills (35)) than the JSE average score (but these assessments were lower than the self assessment). The JSE results were consistent with the CLEO assessment "All" in four of the eleven competencies (i.e., Style (33); Research and Inquiry (32); Teaching and Learning (32); and Systems Theory, Thinking and

[36] The mean JSE score for Cycle 3 was 33.4, while in the 2000 writing, it was 32.9.

Planning (34)). While in three competencies (i.e., Creativity (30), Organization and Organizational Change (30); and Leadership (30)) "All" rated participant 10 lower than the JSE score. While there were some discrepancies between the JSE scores and the CLEO assessments, the variances were very minor. The overall CLEO mean score was 36, yet it must be noted that this figure could be inflated due to the high self assessment and the fact that there were no assessments from "Boss". Therefore, the mean score for "All" appears to support that there is some consistency between the JSE scores and the CLEO assessment.

Figure 4. 20 CLEO and JSE Results for Participant 10



CLEO Competencies

1 – Character 2- Ethics 3- Style 4- Creativity 5- Team Building 6- Communication 7- Research 8- Teaching 9- Systems Theory 10- Organization and Organizational Change 11- Leadership

HBDI Results

As shown in Figure 4.21 (HBDI Profile for Participant 10), Participant 10 has a Preference Code of 2112. Essentially, this means that B Quadrant and C Quadrant were the two most dominant quadrants (i.e., double dominant profile), or, in other words, this individual

[37] Participant 10 did not request assessors in the "Boss" category complete the CLEO assessment, hence the omission of "Boss" in Figure 4.20.

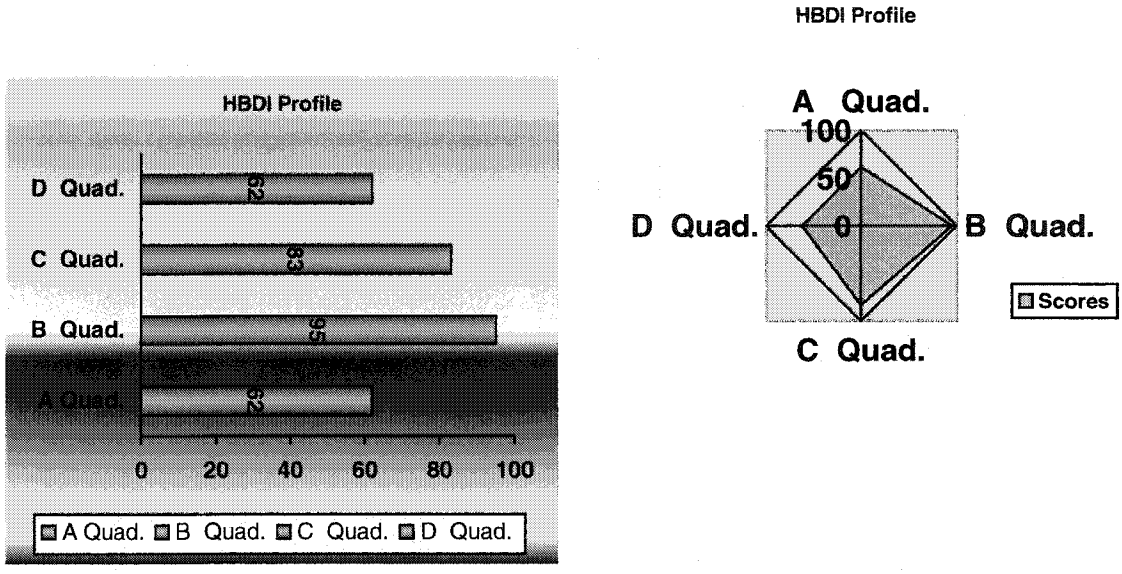
prefers to use these two quadrants more than the remaining two quadrants. Hence, Participant 10 is left-brain dominant. The thinking style most preferred was B Quadrant (95). The second most preferred style of thinking was C Quadrant (83). The least preferred styles of thinking were A Quadrant (62) and D Quadrant (62).

According to The Ned Herrmann Group (2000b), Participant 10:

> Is characterized by very strong preference in conservative thinking and controlled behavior with a desire for organization and structure as well as detail and accuracy...The primary in C quadrant would equally show itself by interpersonal skills and sensitivity to feelings...The two lower primaries could represent an important duality for the person to resolve within themselves. The opposing qualities of control and structure, contrasting with the emotional and interpersonal 'feeling' can cause internal conflict. (p. 15)

In B Quadrant, descriptors of Conservative, Controlled, Dominant and Reader were chosen by Participant 10 to best describe her/his thinking style. In C Quadrant, descriptors of Emotional, Musical, Verbal and Reader were chosen. In A Quadrant, a descriptor of Critical was chosen and Critical was also Participant 10's "Key" descriptor. Finally, in D Quadrant, no descriptors were chosen.

Figure 4. 21 HBDI Profile for Participant 10



Interview

Participant 10 is a member who completed three years of university and currently has over 22 years of service. S/he has written the JSE seven times, and although a minimum passing score was obtained, Participant 10 has failed to make it to a promotion board.

Participant 10's understanding about leadership was consistent with the definitions and concepts relied upon by the RCMP and in the literature. When discussing leadership qualities, this individual believed that s/he possessed leadership qualities.

Participant 10 provided recent supervisory comments to illustrate how supervisors have rated her/his leadership abilities. In 2003, a supervisor commented: "Cst. …'s actions demonstrated leadership in a very tense situation as well as courage and patience." Also in 2003,

another supervisor commented: "Cst. … is credited for taking charge and resolving a very dangerous situation. Cst. … displayed strong leadership and professionalism."

In discussing the promotion process, Participant 10 felt that the current process was looking for a specific kind of individual or an individual who can craft the answers. Participant 10 felt that the process was not relevant to how one performs in real day-to-day activities.

When discussing the JSE, Participant 10 stated that s/he usually didn't have a problem writing multiple-choice exams, yet was having difficulty with the JSE. Participant 10 had difficulty in not reading into the question and not relying on past experience. The failure of Participant 10 to succeed on the JSE has, in her/his view, "destroyed" her/his career in terms of advancement in the organization.

Summary

Regarding Participant 10, the JSE results were consistent with the CLEO assessed competency ratings. Participant 10 is a left-brain and right-brain thinker as was evidenced by the HDBI profile. Given the level of consistency between the JSE scores and the CLEO assessment, it would appear that the JSE was valid for Participant 10.

Study Conclusion

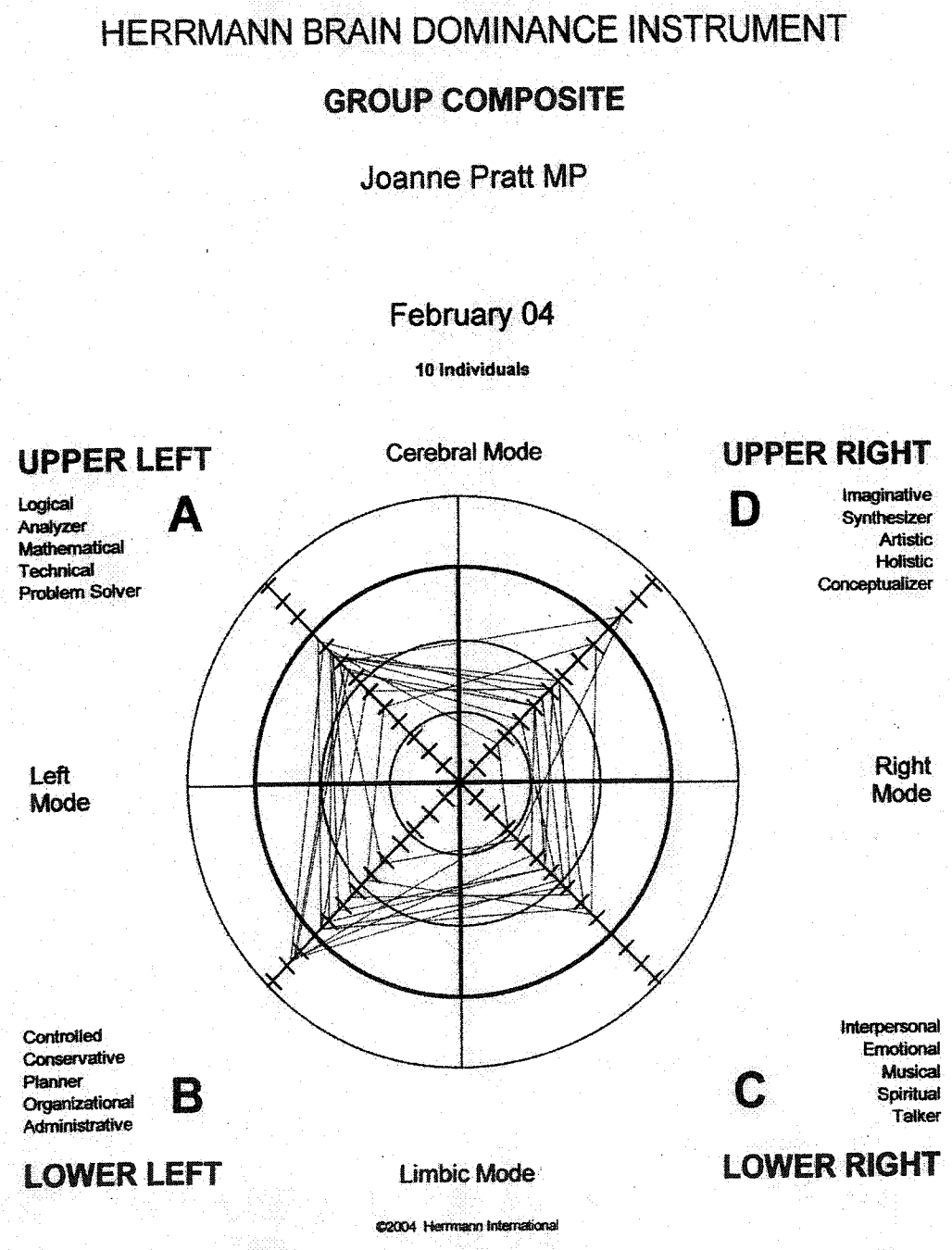
Given the limited size of the sample used for this study, no definitive conclusions can be reached. As noted, however, this study was exploratory in nature and was not designed to be

conclusive. Rather, the objective was to probe the issue of validity regarding the use of the JSE, and to determine if further research is warranted. Based on a closer examination of the findings, and ultimate conclusions, this study should generate further interest and spark additional research.

HBDI Conclusions

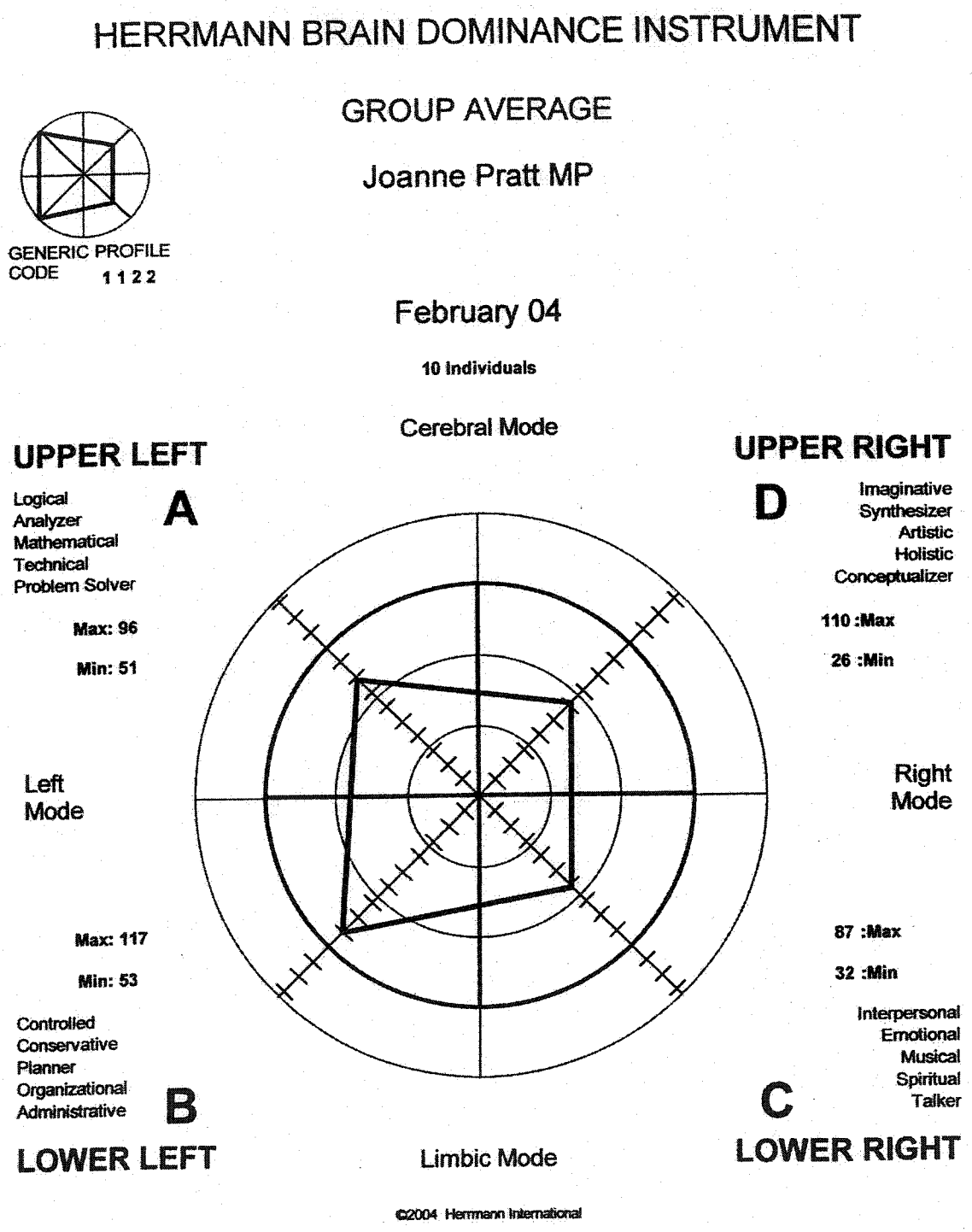
This study began with the hypothesis that the thinking styles of individuals may have systemic affect on JSE results. Thus, all study participants were administered an HBDI instrument in order to obtain a profile for each participant. For purposes of comparison, Figure 4.22 (Group Composite) contains a composite of the participants' HBDI profiles and Figure 4.23 (Group Average) contains the groups' average.

Figure 4. 22 Group Composite[38]



[38] Copyright 2004 by Herrmann International. Reprinted with permission.

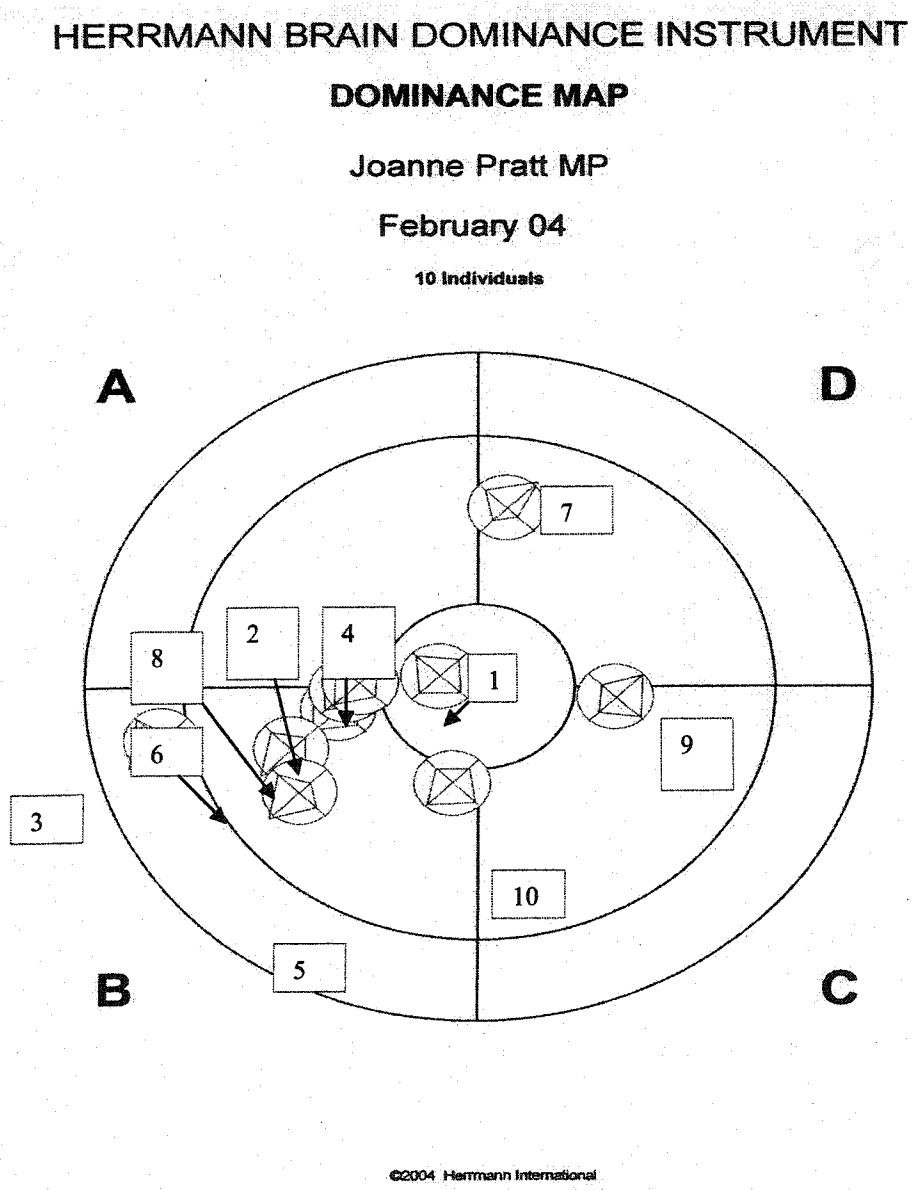
Figure 4. 23 Group Average[39]



[39] Copyright 2004 by Herrmann International. Reprinted with permission.

Figure 4.24 (Dominance Map) most graphically illustrates the dominant profiles for each participant and compares each profile to the group.

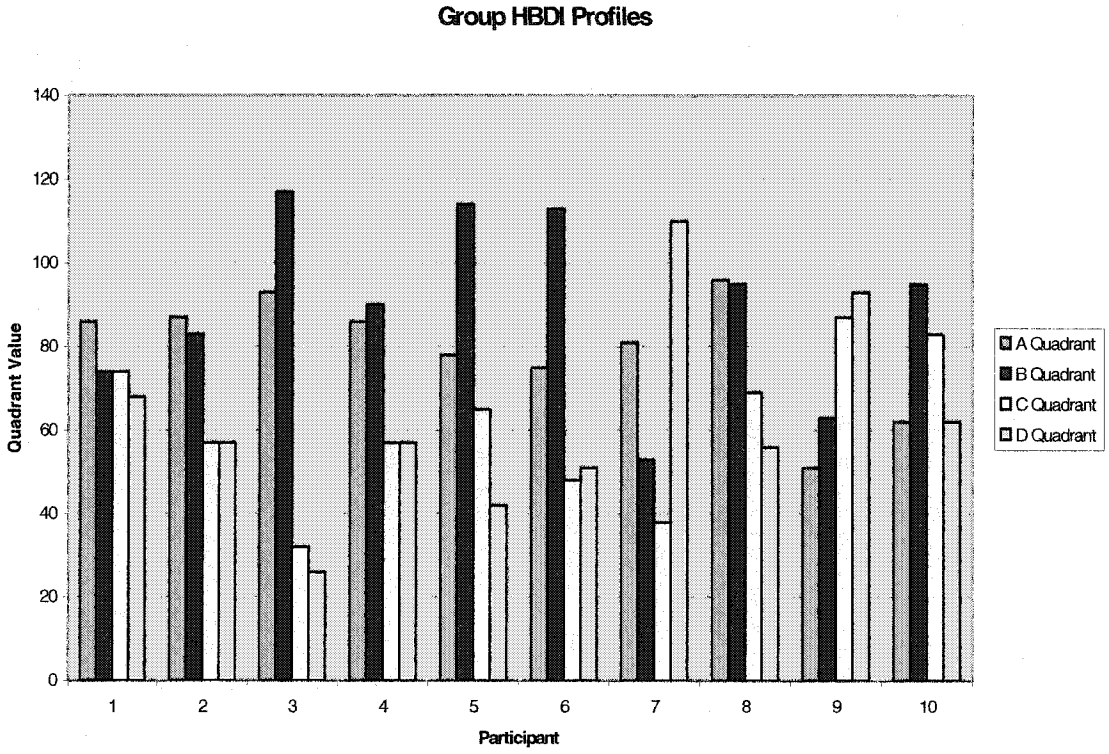
Figure 4. 24 Dominance Map[40]



[40] Copyright 2004 by Herrmann International. Reprinted with permission.

Finally, Figure 4.25 (Group HBDI Profiles) graphically compares the group HBDI profiles.

Figure 4. 25 Group HBDI Profiles



From the 10 HBDI profiles, the following was noted:

1. Six were clearly left-brain dominant;
2. One was comfortable using all brain quadrants (but slightly prefers left brain functions);
3. Two were mixed (i.e., left- and right-brain quadrants are dominant); and
4. One was clearly right-brain dominant.

Left-brain Dominant – Preference Codes 1122, 1133, and 1113

There were an equal number of left-brain dominant participants who were successful in the promotion process and those that were not (i.e., 3). Participants 3, 4, and 5 were promoted to

corporal with JSE scores of 37, 37, and 36, respectively. Participants 3, 4, and 5 all have B Quadrant as their most preferred thinking style, followed by A Quadrant (by quite a significant margin). As will be discussed further below, however, it must also be noted that Participant 5 had a significant level of consistency between her/his CLEO assessments and her/his JSE scores, while Participants 3 and 4 did not. There is no conclusion regarding the degree of congruency between Preference Code 1122, the JSE scores, and leadership abilities given the variance in results between Participant 4 and Participant 5. Equally, no conclusion can be drawn regarding Preference Code 1133, as there was only one participant with this preference code (i.e., Participant 3).

Participants 2, 6, and 8 were not promoted and their best JSE scores were 36, 33, and 36, respectively. Participants 6 had B Quadrant as her/his most preferred thinking style, followed by A Quadrant (similar in pattern to the three successful participants). Participants 2 and 8, although left-brain dominant, preferred A Quadrant as their most preferred thinking style, followed by B Quadrant. As will be discussed further below, Participants 2 and 8 had a high degree of consistency between their CLEO assessment and their JSE scores, while Participant 6 did not. Participants 2 and 6 have a Preference Code of 1122. Thus, while Participant 2's results seem to support a level of congruency between Preference Code 1122, JSE results, and leadership ability, and correlate with the conclusions regarding Participant 5 (i.e., the HBDI preference code, the JSE score, and CLEO assessments are all consistent with each other), the two remaining participants with the same preference code (Participant 4 and 6) do not support a theory of congruency for Preference Code 1122.

Perhaps one must look at the degrees of preference within each quadrant for each participant in order to understand if there is a relationship or not. Participant 6's HBDI profile most closely matches Participant 5's profile, yet there was some variance. While the B and A Quadrant scores were very similar, the C and D quadrants were not. Therefore, it may be that although the two most dominant thinking style preferences could be indicators of congruency between Preference Codes, JSE scores, and leadership abilities, one may have to look toward the remaining two quadrants to further explore the degree of congruency.

All Quadrant Dominant – Preference Code 1111

Participant 1 was the only participant who prefers to use all four quadrants of her/his brain. Although this individual prefers, in descending order, A Quadrant, B and C Quadrants, and D Quadrant, all quadrants are very close in score. If one looks at the HBDI profile for Participant 1, one will notice that it is almost a square. This indicates this individual relies upon all brain quadrants. It took three attempts at the JSE before this individual obtained a score of 38 and was eventually successful in obtaining a promotion to corporal. As will be further discussed below, Participant 1 had inconsistent results between the CLEO assessment and the JSE scores. This may suggest that there is a bias or lack of congruency between individual's with Preference Code 1111, JSE results, and leadership abilities.

Mixed Quadrants – Preference Codes 1221 and 2112

Both Participants 7 and 10 prefer one left quadrant and one right quadrant as their thinking style preferences. Participant 7 clearly prefers D Quadrant, followed by A Quadrant, while Participant 10 clearly prefers B Quadrant, followed by C Quadrant.

Participant 7 was successful in the promotion process with a JSE score of 36. Participant 10 has not been successful in the promotion process to date. Both of these participants had consistent results between the CLEO assessments and JSE scores. Therefore, there may be some congruency between Preference Codes 1221 and 2112, JSE results, and leadership abilities.

Right-brain Dominant – Preference Code 2211

Participant 9 was the only participant who is a right-brain thinker. This participant slightly prefers D Quadrant to C Quadrant, but both of these quadrants exceed the preference scoring for B and A Quadrants, by quite a significant margin. Participant 9 has not been successful in the promotion process to date. As will be further discussed below, Participant 9 had inconsistent results between her/his CLEO assessment and JSE results. This may suggest that there is a bias or lack of congruency between individual's with Preference Code 2211, JSE results, and leadership abilities.

CLEO Conclusions

This study also explored whether individuals who were not successful in attaining a competitive score on the JSE actually possess leadership abilities. The study also concentrated on whether participants who were successful on the JSE (i.e., promoted) had confirmed leadership abilities, more so than participants who had not been successful on the JSE. To that end, each participant was asked to complete a CLEO instrument to obtain a 360-degree assessment (i.e., "Self", "All" and "Boss"). From the 10 participants, five CLEO assessments

and JSE scores were consistent (50%), while five CLEO assessments and JSE scores were inconsistent (50%).[41]

Consistent

Of the five participants who had a CLEO assessment consistent with their JSE results, three have not been promoted and two have been promoted. The two who were promoted (i.e., Participants 5 and 7) only had to write the JSE once, which suggested a high degree of consistency between the JSE results and the CLEO assessment. Both Participants 5 and 7 were assessed as possessing leadership skills and abilities that were very similar to the JSE results. In other words, Participant 5 and 7 were leaders and had been accurately assessed.

Of the three who have not been successful (i.e., Participants 2, 8, and 10), the CLEO and JSE results were generally consistent. In other words, the results of the JSE scores were indicative of their leadership abilities. Hence, their lack of success in the promotion process did not appear to be directly related to JSE results. Rather, other underlying factors may have

---

[41] Although one might be tempted to take the scores from the ten candidates and calculate a Pearson correlation coefficient between JSE scores and the overall CLEO scores, this should be avoided for a number of reasons. First, some candidates have not included all their JSE scores (e.g., one candidate submitted seven, while others submitted only one) and so there is a lack of consistency between candidates here. Second, the overall CLEO scores should be viewed cautiously, as there are missing data (e.g., some candidates did not include the scores from all three dimensions, Boss, All, & Self). As well, for some candidates there is an apparent lack of consistency between the "Self" dimension and the other two dimensions, where there is probably little value in obtaining an arithmetic mean. Third, the sample is one of convenience, consisting of only ten candidates that were not selected randomly from the available population. As a result, although a correlation coefficient could be calculated, there would be little confidence that such a coefficient reflected the true correlation between JSE and CLEO scores in the RCMP candidate population. As previously discussed, this study is intended to be descriptive and exploratory, and as such, does not lend itself well to inferential statistics.

contributed to their lack of success (i.e., breadth of experience).

Participant 2 had two CLEO competencies (i.e., Ethics, and Team Building) in which s/he and supervisors rated these competencies slightly higher than the JSE results would indicate, but the nine remaining competencies were consistent. Regarding Participants 8 and 10, there was a pattern of higher self-ratings than the other CLEO assessors and JSE results. More to the point, Participant 8 and 10 viewed themselves as leaders, more so than supported by the CLEO assessment or the JSE results. Although for Participant 8, there were three competencies (i.e., Team Building; Communication; and Systems Theory, Thinking and Planning) where her/his supervisor(s) also agreed with a higher rating.

Despite the slight variances described above, 50% of this sample had CLEO assessments and JSE scores that appeared to support the validity of the JSE as an assessment measure for leadership. Having said that, it is now time to have a closer look at the 50% where there was an inconsistency between CLEO assessments and JSE scores.

Non-consistent

Of the five participants who did not have consistent results between the CLEO assessments and JSE scores, three were eventually promoted and two have not been promoted. The three participants (i.e., Participants 1, 3, and 4[42]) who were successful, each had to write the JSE numerous times. Participant 1 wrote the JSE three times, Participants 3 and 4 each wrote the

[42] Arguably, Participant 4 may not have been ready for promotion based on the results from CLEO.

JSE four times. Yet despite the numerous writings, each participant continued to score relatively average scores and was only successful in being promoted due to circumstance and timing, rather than on merit (or arguably leadership as defined by the RCMP within the JSE).

The CLEO assessment for Participant 1 was quite striking in that "All" and "Boss" rate this individual extremely high, while his/her JSE results were relatively average. It should be noted that Participant 1 was also the only individual in this study with an HBDI Preference Code of 1111 (i.e., all four quadrants of the brain are considered to be dominant). As noted, quadruple dominant individuals are relatively unique (i.e., 3% of the population). Participant 1 is an individual who does not need to develop the less dominant brain quadrants. Rather, Participant 1 is quite comfortable using the brain quadrant that best suits the situation that s/he is facing at the time. With training and development, this is the thinking style preference which most strive to attain. The CLEO assessment clearly demonstrated that Participant 1 has leadership abilities, yet the JSE has limited Participant 1's advancement. The JSE results indicated average to above average scores, yet the scores attained by Participant 1 were not scores that would permit Participant 1 to compete for promotion into positions for which s/he was interested and qualified.

The CLEO assessment for Participant 3 showed that the "Boss" had rated this individual higher in 10 of the 11 competencies, which was inconsistent with her/his JSE results. There was only one competency (i.e., Style) in which "All", "Boss" and the JSE results were similar for Participant 3. The supervisors have clearly identified Participant 3 as possessing excellent leadership abilities, yet the JSE hampered Participant 3's advancement.

The CLEO assessment for Participant 4 shows that the JSE can also incorrectly rate an individual's leadership abilities as too high. For example, for Participant 4 there was a high level of consistency between the JSE score and the CLEO assessment ("All" and "Boss") with the lower JSE scores (i.e., 34). However, when one examines the most recent score of 37, there was only consistency with that score and the CLEO assessment ("All") in four competencies (i.e., Character; Ethics; Team Building Skills; and Leadership). Hence, the remaining seven competencies (i.e. Style; Creativity; Communication; Research and Inquiry; Teaching and Learning; Systems Theory, Thinking and Planning; and Organization and Organizational Change) were inconsistent with the CLEO assessment ("All'), with the JSE score rating this individual higher in these seven competencies. Further, the JSE score of 37 was not consistent with the CLEO assessment (Boss) in all 11 competencies, with the supervisor rating Participant 4 significantly lower. In terms of self-assessment using the CLEO instrument, Participant 4 was also inconsistent with the JSE results and all CLEO competencies by rating her/himself higher in all competencies.

The CLEO assessment for Participant 6 illustrated that in 10 of the 11 competencies (i.e., Character; Ethics; Style; Creativity; Team Building Skills; Communication; Research and Inquiry; Teaching and Learning; Systems Theory, Thinking and Planning; and Leadership), Participant 6 was clearly rated much higher by "All" and "Boss" than the JSE results would indicate. A CLEO assessment of the nature produced in relation to Participant 6 clearly indicated that this member was a leader regardless of formal rank. Despite being a leader, and an asset to the RCMP, Participant 6 has not yet been recognized formally by the organization due to a lack of success on the JSE, and has withdrawn from the promotion process.

The CLEO assessment for Participant 9 was perhaps the most striking example of consistency between CLEO assessors (i.e., "Self", "All" and "Boss") of the 10 participants. All CLEO competencies were assessed extremely high for Participant 9 and originate from three different groups of assessors. What is even more striking was the lack of consistency between the CLEO assessment and her/his JSE results. This individual was clearly a leader and an asset to the organization, yet has not been successful in the NCO promotion process due to the JSE.

Interview Conclusions

Generally, all ten participants expressed concern about the promotional process and, in particular, about the use of the JSE. One would have expected that those participants who were successful in the process (i.e., being promoted) would have been less critical, yet such was not the case. Some of the concerns were applicable to more than one participant, while some concerns were unique to a participant and reflective of her/his experience and frustrations with the NCO promotion process.

The concerns detailed in this section cannot be generalized to the whole population of members (due to the small sample of participants); however, the concerns listed below support a low degree of face validity with the JSE. In the end, the comments derived from these interviews speak to the attitude and environment in which these participants wrote their JSEs. All participants were very appreciative for the opportunity to voice their opinions regarding the promotional process and, in particular, the JSE. Detailed below are points of concern specific to the JSE grouped under common themes that were expressed by the participants:

1. Multiple-choice format is too restrictive in that it does not permit the candidate an opportunity to explain her/his rationale or to answer the question in a manner that would be reflective of how s/he would "actually" address the situation if confronted in reality. In other words, a forced-choice answer, the best of the options, may not be how the situation would be addressed in reality.
2. It was difficult for many of the participants not to read into the question. Many were drawing on their experience and job knowledge, which may have caused them to second-guess themselves out of the right answers.
3. The JSE is not representative of an individual's ability to lead. Failure to see how the JSE is helping to identify leaders. One doesn't have to be a good leader to do well on the JSE.
4. The length of the examination (i.e., 4 hours) caused fatigue with some members.
5. The JSE is not police specific. One doesn't have to be a police officer to do well on the exam.
6. An individual can have poor "people skills" but excel on the JSE.
7. The JSE consists of 48 questions, failure to answer one or two questions can mean a chance for promotion or not.
8. There is no meaningful feedback provided to the candidates once the JSE has been written and scored.
9. There appears to be an emphasis on administrative abilities rather then police work and experience.

Interestingly, during a recent (2004) NCO Leadership Conference in British Columbia ("E" Division), 53 NCOs (at the Corporal and Sergeant levels) unanimously agreed that there is a problem with the level of leadership ability of front line supervisors. There was also unanimous agreement that the JSE needs to be re-examined (RCMP, 2004c).

The condensed thematic comments above tend to give credence to many of the issues raised in the literature review chapter of this study. For example, the JSE format was not a preferred method of assessment for most participants. Many participants would prefer to write out their answers and explain their choices, while others would prefer to be interviewed. As

noted, Scouller (1996) concluded that an individual's preferred method of assessment (i.e., multiple-choice or short answer) can affect examination results (positive and negative).

A further example relates to the comments about strategic- or higher-order thinking. Strategic- or higher-order thinking involves evaluation and synthesis, both of which cannot be tested using forced- or multiple-choice testing methods. The key to using the MCE to test higher order thinking is to supplement it with an essay (Tanner, 2003, p. 35) or with a greater variety of concurrent assessment instruments (e.g. short answers, in-basket exercise, interviews, etc.) or approaches (Haladyna, Downing & Rodriguez, 2002, p. 310). The JSE format, therefore, may help to explain the comments from those participants who stated that they tend to "over think" or to read more into the scenarios than the designated choices offer.

However, beyond format and structure, thinking styles are also a factor in how individuals approach and complete tests (i.e., impulsive versus reflectives or left- versus right-brain dominant) and can influence the end result. These were only a few examples, yet, it is apparent that the majority of the concerns raised by participants in the interviews were discussed and reflected in the literature review portion of this study.

While many of the participants' comments or concerns were supported by literature, there were a couple of additional concerns that have been highlighted by the interviews. First, it appears that although each of the participants has a general understanding about leadership and leader abilities, there was some discrepancy regarding the skills required. More to the point, some of the participants were concerned about the apparent emphasis on administrative details in

the JSE rather than job knowledge. It is a goal of this study that the literature review will be of some benefit to the RCMP to help explain the attributes of leader and the concept of leadership. Specifically, Yukl's (2002) typology of technical, interpersonal, and conceptual skills may be of assistance in this regard. As previously discussed, it appears that the JSE is failing to address the conceptual skills of members (i.e., higher-order and/or strategic thinking). Arguably, the latter stages of the promotion process may address the conceptual skills of members (i.e., PRP), yet the JSE appears to be filtering out some of the very strategic and wholistic thinkers that are critically needed for leadership in the RCMP.

The second area of concern arising from the interviews are the comments regarding the rationale for the JSE. It is clearly evident by participant comments that the most basic and practical purpose for the JSE is misunderstood by those who are most affected by JSE results. Many of the participants in this study are under the impression that the JSE is directed at testing and identifying "police" leaders, yet the JSE is designed to assess a member's ability to apply the principles of management and supervision to the problems presented. The principles of management and supervision are not unique to the policing field, but the situations are relevant to the police environment. There is a degree of frustration with the more senior members that were interviewed, in that although an individual can be successful on the JSE (management and supervision), there can be quite a discrepancy between the degree of managerial "know how" and operational competence or application (i.e., "doing it").

Overall Conclusions

Based on the findings of this study, there are sufficient grounds to be concerned that the JSE may not be a valid instrument to identify potential leaders in the RCMP. This study suggests that the JSE may be biased toward individuals with certain thinking styles, may not be identifying individuals with confirmed leadership abilities, and may be promoting some individuals who do not yet possess desired leadership qualities. Having said that, this study is limited in size, scope, and method of selecting participants (i.e., sample of convenience), yet with these ten participants, 50% had notable inconsistencies between their CLEO assessments and JSE scores.

Study Recommendations

Based on the conclusions of this exploratory study, one must question the RCMP's total reliance on the JSE as an initial screening mechanism in the promotional process. Serious consideration must be given to the tentative conclusion that the JSE may be biased against individuals with certain thinking styles. Further, this bias appears to eliminate confirmed leaders within the RCMP from NCO promotional opportunities. Finally, the JSE may not be valid in that it is barring "leaders" from being promoted and/or conversely promoting individuals who are not yet considered to be leaders.

Recommendation One

The validity measures relied upon by the RCMP for the JSE, thus far, require further exploration and examination. The literature review portion of this study has highlighted many

concerns regarding validity and the use of the JSE. More specifically, the RCMP should consider addressing the following points.[43]

1. Conducting Some Form of Criterion or Predictive Validity Measures

In practical terms, this is the most easily measured validity and is imperative for the JSE. The generalization of job simulation exercises should be further tested to determine if there are unique qualities relative to a policing environment that have not been addressed based on studies using similar competencies. In other words, does being a leader in a telecommunications field have the same meaning in a policing environment? Therefore, the RCMP's reliance on generalized findings from limited studies in other fields about the validity of the JSE should be re-examined.

2. Construct Validity

This form of validity is very difficult for any testing mechanism, but it needs exploration. As noted, McDaniel and Nguygen (2001) have cautioned that "although situational judgment test have been used of many decades, our knowledge base is relatively small...we know that these tests generally correlate with general cognitive ability and other factors but know little concerning how to build the tests to assess the constructs we wish to measure" (p. 110). Again this speaks to the acceptance of generalized findings when it is not clear from the RCMP technical reports that there is congruence between the competencies (beyond the obvious).

---

[43] It is imperative, that within a discussion of validity, reliability is also addressed.

3. Face & Content Validity

It appears that there is quite a significant discrepancy in how the RCMP, as an organization, and how the membership, in general, view the JSE. In the Cycle 3 Technical Report, face validity was discussed, as were some significant results from a survey completed by members as they completed writing the JSE (RCMP, 2000). However, in the most recent technical report (NCO Promotion Process 2000), face validity is not discussed to the same degree, nor has there been any reference to how the JSE is presently perceived by the members (RCMP, 2004e). Although the sample size for this study is limited, all ten participants have little confidence in the JSE in predicting future performance (which was similar to the unanimous comments in 2004 of 53 NCOs for "E" Division about the promotion process, and the JSE in particular). Therefore, further efforts must be undertaken to ameliorate the apparent gap between organizational and membership perspectives about the JSE.

Recommendation Two

Given the findings of this study, further research must be conducted, on a much larger scale, in order to determine if the JSE is systemically biased based on thinking styles of members.

Recommendation Three

Finally, consideration should be given to exploring alternative or concurrent methods of measurement for promotion (i.e., 360-degree assessments, interviews, assessment centers, etc.), rather than solely relying on the JSE to initially screen members for promotion. Given the size of the RCMP, cost will most definitely be a significant factor in this discussion, but is a mechanism

truly efficient, if, in the end, leaders within the organization are not identified, advanced and nurtured? What is the cost of having an exclusionary promotion process? What is the ultimate cost of contributing to a leadership gap? Given the limited objective and direct research that supports the validity of the JSE, and given that the degree of validity (especially in terms of predictive validity) is unknown, it is organizationally and ethically imperative that the RCMP discontinue its reliance on the JSE as the *sole* predictor of leadership in the first stage of the promotional process. As previous stated in Chapter Two, while a MCE may be able to provide extensive coverage with problems that require higher-level thought, the key to using a MCE to test higher-order thinking is to supplement it with an essay (Tanner, 2003, p.35) or with a greater variety of concurrent assessment instruments (e.g. short answer, in-basket, interviews, etc.) or approaches (Haladyna, Downing & Rodriguez, 2002, p. 310).

The implications of not further examining the use of the JSE will be further discussed in Chapter 5.

CHAPTER FIVE – RESEARCH IMPLICATIONS

What do the findings of this study mean for the Royal Canadian Mounted Police (RCMP)? This exploratory study can, and hopefully will, have a positive impact on this large and complex organization, particularly in relation to the non-commissioned officer (NCO) promotion process. The purpose of this chapter will be to discuss in greater detail the three recommendations (i.e., Validity, Thinking Styles, and Alternative Assessment Methods) identified in Chapter Four. As one proceeds through these recommendations and the related discussion, it will become evident that the recommendations are intertwined and should not be considered in isolation from each other.

The primary purpose of this chapter is to provide a starting point at which the RCMP can begin to consider further, and perhaps implement, the recommendations. As one considers the following discussion, care must be taken to understand that these are only recommendations, and perhaps this study will spur additional avenues of research and exploration. This chapter will conclude with a brief discussion regarding some of the potential organizational implications should the RCMP not address the validity and bias issues raised regarding the Job Simulation Exercise (JSE).

Validity Measures

The first recommendation stated, generically, that various types of validity measures need to be explored further in order to properly assess the reliability and validity of the JSE. Each

form of validity (i.e., criterion, construct, and content) is discussed in further detail below.

Criterion Validity

Encouragingly, the RCMP (2004d) has, as previously noted, accepted that "criterion validity is evaluated by correlating ratings or ranking on the assessment instrument (predictor) with a measure of job performance (criterion) such as supervisor ratings (Performance appraisals), peer rating or production output" (p. 12). If this process of assessing criterion validity is accepted, then it is safe to assume that the JSE is the assessment instrument (i.e., predictor). Therefore, what has yet to be confirmed is the second part of the criterion validity formula (i.e., measure of job performance).

Unfortunately, however, the RCMP (2004d) observed that "the relation between test performance and *existing* [emphasis added] information on current employees' job performance can be examined (concurrent validity), or between test results and information on job performance to be gathered in the future (predictive validity)" (p. 12). In other words, it would appear that the RCMP is considering the need to address criterion analysis by comparing Performance Evaluation and Review Reports (PERRs) (i.e., employee assessments) with JSE scores. The problem with this methodology is that the report on job performance (i.e., PERR) originates from only one source (i.e., the direct supervisor) and does not include peer, direct reports, or detailed input from the individual being assessed. The PERR does provide an opportunity for an employee's response to the comments of the direct supervisor, and also an opportunity for the intermediate supervisor and line officer to comment briefly; however, the manner of assessment is limited (i.e., it is not a 360 degree form of assessment). Hence, further

consideration should be given to conducting a criterion validity study to correlate the JSE results utilizing an instrument such as the Competencies for Leading Effectively in Organizations (CLEO).

For the purposes of this study, the instrument used to correlate JSE results to individual job performance (i.e., leadership abilities) was the CLEO. One attractive feature of the CLEO is that it can measure an individual's job performance by completing a 360-degree assessment of the individual (i.e., self, peers, direct reports, and supervisors). The second attractive feature of the CLEO, and one that has been identified as lacking in the current NCO promotion process (in particular the JSE) is that it also provides an individual with valuable and timely feedback. The CLEO type method of assessment, therefore, is not only an appropriate instrument to measure the validity of the JSE, but it is also an appropriate instrument for self-development/improvement by providing detailed and relevant feedback to the individual (and potentially the RCMP). The CLEO, or perhaps a similar 360-assessment instrument, could provide the RCMP with a more accurate form of assessment to identify and develop individuals for promotion.

Construct Validity

The second form of validity that needs to be further researched by the RCMP is construct validity. As a refresher, Babbie (2001) explains that "construct validity is based on the logical relationship among [theoretical] variables" (p. 143) or put another way, "the extent to which the test may be said to measure a theoretical construct or trait" (Anastasi & Urbina, 1997, as cited in Rubio, Berg-Weger, Tebb, Lee & Rauch, 2003, p. 95). The RCMP (2004d) concluded that "validity evidence is enhanced by the fact that the NCO simulations were designed to measure

managerial abilities that are commonly assessed through situational judgment tests in other managerial settings" (p. 13). In other words, the RCMP is relying upon generalized findings to measure RCMP competencies that appear to be common to managerial settings in general. The JSE is used to measure these general competencies.

When conducting research for this study, it became apparent early in the search for relevant literature that research into personnel assessment instruments, and in particular, "low fidelity simulations" (i.e., JSE testing) is relatively unexplored.[44] There are some studies, some of which the RCMP have relied upon (i.e., Motowildo, Dunnette & Carter, 1989, 1990), but as previously noted and repeated here for emphasis, McDaniel and Nguygen (2001) found that "although situational judgment tests have been used for many decades, our knowledge base is relatively small...we know that these tests generally correlate with general cognitive ability and other factors but know little concerning how to build the tests to assess the constructs we wish to measure" (p. 110). Extreme care must be taken when extrapolating and adapting findings from one context into another context. Although it is acknowledged that there can be some form of appropriate generalization in research studies, one can see from the literature review regarding leadership that consensus pertaining to labels, definitions, and meaning can be somewhat elusive.

Therefore, prior to accepting and relying upon generalized findings, the RCMP must be quite certain that the theoretical construct or trait being assessed is the same regardless of the managerial setting. For example, are the core competencies of the RCMP reflective of all

[44] On the other hand, there is a great deal of research (going back to World War I) into "high fidelity simulations", otherwise known as "assessment centers."

managerial abilities? Or, are the core competencies a culmination of RCMP ideals of managerial behavior? Or, are there varying degrees of managerial abilities in an RCMP setting and a telecommunications setting? For example, the RCMP, and policing in general, face a wide range of settings (i.e., operational and administrative); therefore, are the competencies comparable regardless of setting? Are the leadership skills (i.e., technical, interpersonal, and conceptual) required by police personnel the same as those required in a telecommunications setting? Given the limited number of studies in this field, and the lack of consensus regarding definitions, it may not be prudent for the RCMP to generalize validity solely on the basis of limited studies from the telecommunications setting. Moreover, the JSE is a uniquely constructed instrument that requires its own validation. Therefore, reliance upon generalized findings regarding low fidelity simulation testing instruments to validate the JSE should be further explored. In particular, the JSE needs to be further examined to determine if there are unique qualities relative to a policing environment that have not been addressed based on studies using similar competencies.

While this recommendation may seem onerous, it presents a unique and exciting opportunity for the RCMP to conduct some original and compelling research regarding assessment methods within a policing context. The RCMP have an opportunity to add to the research literature, and as a learning organization, the RCMP needs to seize this opportunity, enter into the research fray, and validate the NCO promotion process based on solid and credible findings.

The literature review in Chapter Two relating to leadership is but a brief glimpse into the vast writings pertaining to leaders and leadership. When one is asked to define a leader, some

rather subjective and relative responses are often provided. As noted previously, and repeated here for emphasis, leaders can be developed, while leadership "is far more elusive and dependent upon the attributions of followers, the leader's behaviour, and the particular environment" (Drodge & Murphy, 2002, p. ii). The leadership environment is constantly changing, while the leader can remain consistent in terms of traits held and exhibited (Drodge & Murphy, 2002, p. 37). Therefore, there needs to be consensus on what qualities of a leader the RCMP is seeking to promote and/or develop. While the RCMP core competencies have provided some parameters, the methods of assessment (i.e., PERR and Performance Report for Promotion) are currently inadequate.

For the future of the RCMP, it is imperative that the organization makes an effort to understand the leadership construct it is attempting to measure (i.e., beyond merely relying upon the Stephen Covey style (Covey, 1990)), and provide more extensive and timely leadership development for members. This will require consideration of a number of questions. For example, is the RCMP satisfied with the current process to identify leaders? Should the RCMP consider an officer development program similar to the Canadian Armed Forces? In other words, should members be identified earlier in their career for leadership positions? Are there similar leadership learning programs in other large police departments, or perhaps, the Canadian Armed Forces? Is there merit in joint leadership training with other public and private organizations? The point here is not that the RCMP has been unsuccessful in leadership development, but rather, the issue of leaders and leadership is ever evolving and the RCMP must remain vigilant in order to address such issues.

In addition to discussing the future of leadership in the RCMP, the RCMP can also take a proactive role in developing leadership knowledge. For example, with the population of the RCMP and ongoing recruiting and training initiatives, perhaps a longitudinal study, similar to the West Point study discussed in Chapter Two (Bartone, Snook & Tremble, 2002), may prove helpful in developing and/or identifying future leaders. There are many unexplored and interesting areas of research that could prove helpful to determine the extent of leadership training and/or development the RCMP may wish to engage. But given the scope of the RCMP as described in Chapter One, the RCMP would be remiss in not engaging in critical assessment and developing strategies to ensure it remains an employer of choice.

Face & Content Validity

As discussed in Chapter Four, there appears to be quite a significant discrepancy in how the RCMP, as an organization, and how the membership, in general, view the JSE. This finding led to the recommendation that further efforts be undertaken by the RCMP to ameliorate the apparent gap between the organizational and individual perspectives about the JSE.

As noted, the RCMP (2004d) concluded that "the extent to which the test stimulus resembles the job content, referred to as face validity, is less important than the content validity. A content valid test involves tasks or processes that are representative of the job in question, regardless of the stimulus material used" (p. 12). However, for an organization to flourish, any process (especially one that affects each and every member, such as the JSE) must be seen as legitimate by a majority of participants. The NCO promotion process must be, and be seen to be, valid and fair, or it will not be accepted. Therefore, face validity must remain an important and

integral factor in having the JSE accepted as an instrument forming part of the promotion process.

An important consideration for any organization is that the promotion process relied upon by the organization can accomplish what is needed. In this case, the RCMP has relied upon the JSE to "filter" or rate the membership. At the heart of this study, however, is the RCMP's sole reliance on an instrument of questionable validity. If the organization truly believes that the JSE is valid, then the RCMP should be able to close the credibility gap by addressing many of the issues raised by this study. If, however, these issues have not been addressed, the RCMP could conduct the necessary research and explain the results (and potentially demonstrate validity based on a larger sample). Or, in the alternative, the RCMP can further widen the credibility gap by continuing to utilize an instrument in the NCO promotion process that may not be valid or has not been satisfactorily proven valid.

Thinking Styles

The second recommendation in this study called for further research, on a much larger scale, to determine if the JSE is systemically biased based on an individual's thinking style (i.e., left- or right-brain dominance; introverts versus extroverts; field dependent versus field independent; impulsive versus reflective, etc.) Essentially, this would entail two things. First, it would require identifying a representative sample size that would allow for findings regarding the JSE to be generalized to the RCMP population. Second, it would also require that multiple studies be undertaken.

An additional bonus to a more detailed study about thinking styles and the JSE would be the rich bio-data that would be gathered. In conjunction with determining the effect, if any, of thinking styles on JSE results, this data could spark research into the other variables identified in the RCMP technical reports (i.e., gender, age, years of service, etc.) that also appeared to influence some JSE results.

Moreover, perhaps when members understand their individual thinking processes better, the RCMP can approach training, learning, and development processes with these preferences in mind. In other words, once individuals understand their personal thinking style profile, efforts can be directed toward understanding the preferences of other members, thus creating a more cohesive and understanding work environment. The Herrmann Brain Dominance Instrument (HBDI) was the instrument of choice for this study and should be considered for future studies as well. There is, however, a variety of reputable thinking style assessments and instruments and care will be required in selecting an appropriate instrument for large-scale studies.

Quite frankly, the area of thinking styles has not been adequately explored by the RCMP, and could have a significant impact on how the RCMP develops as a learning organization. The RCMP is comprised of over 20,000 individuals, and yet there is a lot that remains unexplored in terms of human relations and understanding. An interesting place to demonstrate the positive impact of a learning organization is to better understand the people who make up the organization. Hence, determining the thinking styles of individuals is an excellent place to begin and can assist in developing future methods of assessment, not to mention making learning more meaningful and efficacious for both employees and the organization.

Alternative Assessment Methods

The final recommendation was to consider exploring alternative or concurrent methods of measurement for NCO promotions (i.e., 360-degree assessments, structured interview, assessment centers, etc.). Should validity testing and future research raise further questions about the JSE as a sole and/or initial filtering mechanism, other forms of assessment will become necessary. Essentially, the results of any future research could provide the RCMP with an opportunity to embrace the challenge of developing a large scale, valid and fair method of assessment.

One example may be the consideration of assessment centers ("high fidelity simulations"), which is considered to be a very effective selection process, albeit at an increased cost given the size of the organization (Tinsley, 2000). But perhaps some cost could be eliminated by only having assessment centers assess members for senior NCO promotions (i.e., Sergeant and Staff Sergeant), while junior NCO promotions may be subjected to more knowledge (multi-formatted) based examinations. RCMP personnel, as part of the learning philosophy, could also become evaluators in the assessment center process (a time commitment that would not be dissimilar to bringing three members together as promotion board for the better part of a day to review the PRPs of short-listed candidates for one position). This is only one idea, but given the findings of this study the RCMP will need to consider how potential leaders can be better assessed.

Organizational Implications

What are the effects of maintaining the current process without re-considering the validity of the JSE as a measurement tool? Simply stated, if the RCMP is to consider itself a learning organization, then it is imperative that the RCMP begin to critically examine internal processes. The JSE is one such process, and given the effect it has on all regular members at some point in their careers, it is essential that it be examined in order to maintain the core values (i.e., Accountability; Respect; Professionalism; Honesty; Compassion; and, Integrity) the RCMP espouses. A critical and evaluative approach to the JSE will ensure it is meeting the expectations of members, the organization, and most importantly, the public that is ultimately being served by the RCMP.

As identified in this study through interviews, there appears to be a credibility gap with the JSE and the sample participants (albeit a limited sample), but this credibility gap must be explored further. After all, three elements of the RCMP's vision statement (RCMP, 2004b) relevant to this issue are: "to be a progressive, proactive and innovative organization"; "ensure a healthy work environment that encourages team building, open communication and mutual respect"; and, "demonstrate leadership in the pursuit of excellence." Further, within the core values of the RCMP, there is a supporting value pertaining to the RCMP's commitment to employees. Specifically, this commitment (RCMP, 2004e) states:

> In the spirit of shared leadership and recognizing all employees as our greatest asset, we commit to:
>
> 1. Open, honest and bi-lateral communication;
> 2. Demonstrating leadership through accountability and responsibility at all levels;

3. Treating all employees with equal respect and consideration;

4. Ensuring the safety of our employees by developing and enforcing minimum resourcing standards;

5. Training that is timely, specific to the needs and relevant to the job requirements;

6. Effective and efficient management of human resources through consultation, teamwork and empowerment at all levels;

7. Ensuring a safe and harassment-free work environment;

8. Encouraging and recognizing innovation and creativity;

9. Fair and equitable systems to deal with;

    Recognition for good performers
    Compensation and entitlements
    Financial hardship caused by employees' worksite
    Consistently poor performers
    Discipline and discharge

10. Promoting health, safety and well-being;

11. Ensuring adequate human, financial and material resources;

12. Enhancing job security through aggressive marketing of our services.

It would be difficult to explain a commitment to the values described above without addressing the issues regarding the JSE identified in this study.

Although somewhat critical of the validity of the JSE, this study has identified an area for further research. Whether future research confirms this study's tentative conclusion that the JSE may not be a sufficiently valid instrument, or in the alternative, affirms the validity of the JSE, the efforts undertaken by the RCMP to provide an informed research answer to this question will fulfill it's organizational commitments to employees, and perhaps, will close the credibility gap that appears to exist with respect to the JSE.

If future research is not undertaken in relation to the JSE, there could be several long-term negative effects on the RCMP. For example, it would appear that identified leaders (i.e., Participants 6 and 9) are not getting promoted into to leadership positions while less qualified candidates (i.e., Participant 4) are being promoted. This situation has resulted in experienced, competent and respected leaders in the RCMP losing confidence in the organization and in turn has resulted in some individuals "opting out" of future promotional processes. A further repercussion in not formally recognizing and advancing identified leaders is that the organization has lost the ability to benefit from these valuable and unrecognized assets.

For those individuals who continue to participate in what may be an invalid or biased process, they do so at a potentially immeasurable cost to the organization in terms of morale and effectiveness. As noted, many of the participants who were interviewed stated that due to relatively low JSE scores, they were forced to consider positions that they were not really interested in, or were not the most qualified for. If this practice continues, the RCMP will be comprised of unsatisfied individuals, which in turn, may lead to a deterioration of the core values and commitment to the organization. More specifically, members who will be subjected to supervision by individuals who were promoted to personally undesirable positions may not receive the same level of supervision, expertise and drive as they would from a leader who is excited and interested in their position.

Described above are possible negative impacts on the organization; however, it must be noted that it is difficult to precisely measure what the end result may actually be for the

organization. There could be other more serious consequences than those described above, but one thing can be safely assumed, and that is the apparent lack of credibility of the JSE will degrade relations within the organization.

Perhaps the (unsolicited) words of a spouse of one of the participants in this study provide the most demonstrative description of the effect on the RCMP if it does not commit to future research regarding the JSE:

> As the wife of a member of the RCMP, I think it is unfortunate that a study of this nature has not been initiated by Headquarters. I would hope that having done such a project that the results of your labour would be of interest to the people choosing criteria and developing a promotional program, as well as the professor of your course.
>
> I would like to make a comment on the effect the current promotional system has on the family of an RCMP member.
>
> 1. The most obvious disadvantage in not moving up the promotional ladder, *and the least important* [emphasis original], is the financial aspect. Not only has it had a significant affect on a daily basis, it will be a deciding factor in the type of retirement we will be able to strive for.
>
> 2. The emotional issues that are the result of diminished self-esteem are by far the most difficult situations to deal with. They are much more subtle, and often go unnoticed and therefore are usually not addressed. Every facet of your life is affected.
>
>   a. The way you deal with your children. Your status as a role model (it is difficult to encourage those around you to fight for something they believe in and want to do, if you yourself feel helpless to resolve your own problem).
>
>   b. Your relationship with your spouse. Having shared the hopes and dreams of a successful career, a feeling of failure can put wedges between you and those who matter the most.
>
>   c. As a wife, I no longer feel secure in the fact that the members working with my husband are competent and that if necessary, they will make the decision in a dangerous situation. Many of the leaders have far less experience and I question their judgment. I find myself anxiously waiting

> retirement, hoping that there will not be an incident before it happens. Being closely connected to someone in the police field for … years has sharpened my instincts as well. I know that …does not have the confidence in some of the members ranked above him, and it makes the daily routine, a lot more worrisome.

Sometimes, it takes a personal testimony to graphically put a human face on an issue of administrative process.

CHAPTER SIX – LESSONS LEARNED

As with most studies, trial and error can help guide future research. This final chapter is presented with the hope that my trials and tribulations will provide some useful information to future researchers. Generally, my lessons were learned in three specific areas: the methodology regarding sample participants; communication with the consultants; and finally, my personal commitments while conducting this study. This chapter will briefly discuss each of these three areas and offer some advice to help guide future research endeavours.

Participants

As explained in Chapter Three, the sample group was selected on the basis of the author's personal knowledge, recommendations by supervisors, and solicitations for volunteers, and as such, it was a sample of convenience. For the purpose of a exploratory study into the validity of the JSE, and the limited sample needed, this seemed to be an appropriate method to identify participants. However, a majority of my sample (i.e., nine of ten) was posted to two detachments in the Lower Mainland of British Columbia. When conducting an analysis of the data, I now realize that limiting the environment from where the samples are taken may have an impact on the overall results. More specifically, both of these detachments are not considered to be the most desirable postings due to the physical location of the detachments and the distances/traffic involved to commute to these detachments on a daily basis. Therefore, none of the participants who were listed as "successful" in this study had exceptional marks on the Job Simulation Exercise (JSE). In fact, all promotions for the participants in this study resulted from rather average JSE scores (i.e., realistically, at least a score of 39 or greater on the JSE is required for a

member to have any real choice in which promotional positions to apply for; whereas the participants in the study sample averaged a JSE score of 36, which greatly restricts any "choice", as even a two to three marks has a significant affect on options). Having said that, at the time of identifying members for the study, each participant's JSE score was unknown to me, and therefore, the average scores could not have been anticipated (which gives some randomness to the sample).

Due to the exploratory nature of this study, the manner of sample selection will not likely have an affect on the overall conclusions. Regardless of the sample size used in this study, a larger, more representative and random sample will be needed for future studies.

The Consultants

During this study, I utilized two "electronic" assessment tools, both of which were arranged through consultants. While the end product ultimately exceeded my original expectations, there were a few concerns that I had to address with both consultants in order to actually obtain the data needed for this study.

HBDI

One of the measurement instruments used was the Herrmann Brain Dominance Instrument (HBDI). The HBDI was administered "on-line" for each participant. I have received nothing but positive feedback regarding the ease of completing the on-line questionnaire. The consultant was very helpful and knowledgeable about the process. The reports I received and distributed to the participants were professional and provided valuable information and feedback.

Once the participants submitted the data, the consultant arranged for a final report for each participant and a consolidated report for the larger study.

The only issue that arose during the HDBI portion of the study, and one that I did not realize until I began to write this thesis, was that there was only a paper copy of the final reports and consolidated report. In other words, although there was a paper copy of the consolidated reported, there was no electronic version that would have permitted easy addition of the data into this paper. In order to enter the consolidated report into this study, the report had to be scanned and then entered. While this provided a consolidated diagram of participant profiles, ultimately, it was still necessary to create individual tables and diagrams for each participant, along with the requisite data entry, which was very time consuming. While this seems like a trivial issue, it is one that future researchers should take into account. Perhaps knowing this in advance of future research, negotiations with The Ned Herrmann Group could facilitate a more comprehensive and manageable data presentation method.

CLEO

The second measurement instrument used was the Competencies for Leading Effectively in Organizations (CLEO). Compared to the ease of administering the HBDI, the CLEO had two significant hurdles that needed to be addressed. The first difficulty was with the inability of the participants and assessors to use RCMP computer systems to access the CLEO website due to "compatibility", "security" and other mystifying technological issues. The second difficulty concerned communication between CLEO personnel and myself. Both of these issues will be briefly discussed below.

Technical Difficulties

The most fundamental issue that arose was technical in nature and caused a great deal of consternation for the participants, assessors, researcher, and CLEO personnel. Due to the security features of RCMP computer systems/networks, firewalls are in place. These firewalls and other security features interfered with the ability of participants and assessors to access the CLEO website from the worksite. This limited access increased time frames and caused extreme frustration. The frustration was compounded significantly with an end-date for data collection that, although initially represented by the consultant as being somewhat flexible, could not be amended (due to other CLEO commitments).

Due to the limited sample size, data was required from all ten participants in order for the study to be considered successful. It would have been disastrous had the HBDI instrument been completed by all ten participants but the CLEO only completed by half leaving little data for purposes of comparison. Therefore, it was imperative that extreme efforts be taken to ensure that all ten participants, and their respective assessors, completed the necessary questionnaires prior to the CLEO end-date.

Most of the participants who had internet access at home were able to complete the on-line questionnaires, yet many assessors did not have the same ease of access. For those who did not have personal internet access, an alternative form of completing the CLEO questionnaire had to be devised. To make matters more difficult, the difficulty in accessing the CLEO website was only realized and communicated with two weeks remaining for the data collection phase of the

CLEO process.

In order to address this potential disaster, the consultant sent out two e-mail messages to the participants. Both of these messages had the 120-question questionnaire embedded. The first e-mail message was addressed to the participants and their identified assessors reminding each of the pending deadline date. It also included instructions regarding how to complete the questions within the e-mail message (i.e., no need to log into the CLEO website) and once completed, instruction were provided to return the e-mail to the CLEO consultant. The second e-mail message was addressed only to the participants that were unable to obtain access to the CLEO website through alternate personal internet access (although, mysteriously and inexplicably, some participants and assessors were able to access the CLEO website through the RCMP computer system). This was because these participants were unable to access the CLEO website, and therefore the CLEO consultant did not know who their respective assessors were. This e-mail message contained the same instructions as above, with a further instruction to forward the e-mail message to those individuals they wanted to assess them. While these measures produced some results, it was necessary to personally follow up with each participant, and in some cases, contact the assessors to ensure compliance with the instructions. At one point, it appeared facsimile machines might be required to get some of the questionnaires completed, but that was ultimately avoided.

Without putting to fine a point on it, this became a painstaking and laborious process requiring numerous phone calls, emails, and inquiries from me with the participants, assessors, and CLEO personnel that should not have been necessary (particularly, as is now known, the

issue of RCMP personnel being unable to access the CLEO website was encountered previously). My advice to future RCMP researchers or other entities with tight electronic security measures would be to discuss identifying the CLEO website as a "trusted site" in terms of security and thereby avoiding firewall and other security issues. If that option is not available or acceptable, then it would be more efficient to have the participants and their respective assessors use only personal internet access or complete the questionnaire using the tried and true form of pencil and paper (which would require the consultant(s) to manually input the data into the computer).

Quite frankly, if further extensive research is contemplated by the Royal Canadian Mounted Police (RCMP) using the CLEO instrument, the access issue must be addressed. If the frustrations experienced during the very small sample for this study were experienced on a larger scale, the research study would not be able to proceed and would most likely collapse (at a minimum response rates would be significantly reduced and the data would be less useful if insufficient assessors were included). Prior to utilizing the CLEO instrument, careful consideration must be given to eliminate the frustrations described above, for the sake of the participants, the researcher, the CLEO consultants, and the study.

Communication

The second fundamental hurdle arose from communication between CLEO consultants and myself. Essentially, when considering the CLEO instrument, contact was made with one consultant. A general conversation about the study and a 60-day completion date was confirmed. In turn, a coordinator was assigned to receive and process the data as it was received. However, due to the difficulties that arose regarding accessing the website as described above, the issue of

communication changed from routine to emergent. In other words, the technical complications eventually identified issues about communication that could be improved upon.

For example, as the technical difficulties were beginning to be realized, confusion arose between the CLEO personnel and myself, due to the generic information being provided by CLEO, regarding which participants and assessors had completed the instrument and who was still outstanding. Although periodic updates were received from the consultant, other than an indication whether the participants had completed the online questionnaire, there was no means to follow-up with any of the assessors. In the end, I had to initiate daily contact with the CLEO consultant to receive updates, and in turn, personally contact each participant, confirm who their assessors were, and contact their respective assessors to ensure that the questionnaires were accessible/received and completed within the now strict time frame. Had these measures not been taken less than half of the sample would have completed the CLEO.

Further, confusion arose regarding the end-date for the CLEO coordinator to receive the data. When the technical difficulties were identified, it was evident that an extension of time was required to allow a less reactive approach to ensuring the data was received. Initially, the indications were that this date could be amended, and in fact the coordinator assured me that an extension could be accommodated. Yet, a short while later, it was identified that a much larger scale project (involving thousands of participants/assessors) was to begin which required a re-configuration of the CLEO computer. Essentially, this meant that an extension was no longer possible (although, due to the technological problems, I was able to negotiate a few extra days at the end to accommodate the final participants'/assessors' submissions).

The final communication example arose at the end of the data gathering stage, when I received individual (binder) reports for each of the participants, but did not receive any data to analyze for the study (which was the very purpose for utilizing the CLEO as had been conveyed during initial consultations). What I now realize is that I should have taken more time at the onset of the study, not only to explain the study to the consultant, but also to confirm in writing what was being provided and solicit suggestions regarding how the data could be analyzed. It was only at the end that CLEO personnel indicated that in order to complete a consolidated report, that certain information was needed prior to receiving data from the participants, since it would require "re-configuring" the computer. At this stage, it meant that the data could not be analyzed to provide a consolidated report, which meant that I would have to analyze the individual reports. While this was not an arduous burden for ten participants, for future large scale research, this would be an overwhelming, if not incapacitating, burden. On the other hand, in having to review and enter the data in a useable form, it did, ultimately, allow me to become more familiar with the data and better understand the implications arising from the CLEO.

My advice to any future researcher is to ensure, from the onset, that all information regarding completion of the CLEO is facilitated by the CLEO consultant, but coordinated by the researcher (i.e., the CLEO personnel coordinate the receipt and processing of the data, yet more detailed and regular reports be forward to the researcher). The researcher will need to track the progress of the participants and the assessors, making personal contact at regular intervals. These measures will be needed to ensure that there is a high rate of completion, and should minimize the level of frustration experienced during this study. It would also be helpful to have a more

detailed written understanding of the services and data being provided by CLEO to ensure research objectives and requirements are understood fully by all parties.

Personal Commitments

In order to complete this study, there were professional, but mostly personal, commitments and sacrifices that were required. I began this study as a requirement for a Master of Arts degree with Royal Roads University, the last requirement of a two-year program, but this study has taken on a new meaning. This study could be the catalyst for change into how the RCMP chooses to assess and promote potential leaders in the organization. This study has also made me realize that the efforts of a few committed individuals can have an impact on a large, and at times, impersonal organization.

My first personal observation is that the commitment to pursue a study of this nature must be firmly grounded on the initial commitment to learn, read, and *think* about the application of theory to things that are going on around you at work. But, without out doubt, the most invigorating aspect of this study was the ability to take a "real life" issue within the RCMP and link it to theory; that is, to evaluate the validity of the JSE. To fuel the commitment to do research, the topic and potential results must be meaningful not only to the researcher, but also to the participants and the organization. Fortunately, I was able to accomplish this when examining the JSE as part of the promotion process. Many may disagree with the findings and recommendations, but at least this study grasped the challenge to explore some intriguing questions.

When I began this study, I was eight months pregnant and gave birth to our second child in November, 2003. Needless to say, I could not have completed this study had it not been for the supportive efforts of my family. As with any major undertaking, it is imperative that a support network be established (i.e., family, friends, colleagues, etc.) and that those to whom you turn for support truly have a meaningful appreciation of the scope and depth of that undertaking.

Initially, I was under the impression that this would be a relatively small and easily managed project. But as I progressed, I began to understand that in order for this study to have meaning (i.e., constructive influence on the RCMP and future research endeavors), I would have to put many personal commitments on hold. This is probably not a new revelation to experienced researchers, but it was quite an eye opener for my initiation into social research. Perhaps I underestimated the amount of time, energy and drive that would be needed to complete this study. There were times when it all felt rather overwhelming, and when that was the case, I listened to those who have experience in academic research and learned that a little empathy can go a long way toward motivation.

My advice to those considering undertaking a research adventure is to discuss the project with someone with previous experience in social science research, construct a timeline, discuss the time commitments with your support network, and be realistic. In the end, the personal sacrifices are well worth the effort, particularly for this study, because it is potentially a catalyst for further discussion, research, and possibly, change.

REFERENCES

Allinson, C., Armstrong, S. & Hayes, J. (2001). The effects of cognitive style on leader-member exchange: A study of manager-subordinate dyads. *Journal of Occupational and Organizational Psychology,* 74(2), 201-221.

Anthony, R. & Young, D. (2003). Management Control in Nonprofit Organizations. Seventh Edition. New York: McGraw-Hill Irwin.

Armstrong, S. (2000). The Influence of Individual Cognitive Style on Performance in Management Education. *Educational Psychology*, 20 (3), 323-339.

Au, A. (1997). Cognitive style as a factor influencing performance of business students across various assessment techniques: a preliminary study. *Journal of Managerial Psychology*, 12 (4), 243-250.

Babbie, E. (2001). *The Practice of Social Research 9th Edition*. Belmont: Wadsworth Publishing Company.

Bartone, P., Snook, S. & Tremble, T. (2002). Cognitive and Personality Predictors of Leader Performance in West Point Cadets. *Military Psychology*. 14(4). 321-338.

Bloom, B, Madaus, G., & Hastings, J. (1981). *Evaluation to improve learning.* New York: McGraw-Hill Book Company.

British Columbia (Public Service Employee Relations Commission) v. British Columbia Government and Service Employees' Union (B.C.G.S.E.U.), [1999] 3 S.C.R. 3.

Buffinton, K., Jablokow, K., & Martin, K. (2002). Project team Dynamics and Cognitive Style. *Engineering Management Journal*, 14(3), 25-33.

Bunderson, C. (1980). The Validity of the Herrmann Brain Dominance Instrument. Retrieved March 8, 2004 from http://www.hbdi.com .

Canada Labour Code, R.S.C. 1985, c. L-2 (Part II).

Canadian Charter of Rights and Freedoms, Schedule B of the *Constitution Act, 1982*, R.S.C. 1985, Appendix II, No. 44 enacted by the *Canada Act* (U.K.), c. 11.

Canadian Human Rights Act, R.S.C. 1985, c. H-6.

Cano-Garcia, F. & Hughes, E. (2000). Learning and Thinking Styles: an analysis of their interrelationships and influence on academic achievement. *Educational Psychology*, 20 (4), 413 - 430.

Cantor, J. (1987). Developing multiple-choice test items. *Training and Development Journal*, 41 (5), 85-88.

CLWEST and Royal Roads University. (2002). Competencies For Leading Effectively In Organizations. Victoria: Royal Roads University.

Covey, S. (1990). Seven habits of highly effective people: Restoring the character ethic. Toronto: Simon and Schuster.

Creswell, J. (2003). Research Design. Qualitative, Quantitative and Mixed Methods Approach. Second Edition. Thousand Oaks: Sage Publications.

Dewar, T. (2000). MBTI and Online Learning Styles Project: review of the MBTI. Retrieved September 17, 2002 from http://www.calliopelearning.com/mbti/review.htm .

Drodge, E. & Murphy, S. (2002). "It's the Way You Treat the One": A Case Study of Leadership in the RCMP. Royal Canadian Mounted Police. Ottawa: Human Resource Research & Intelligence Branch.

Dufresne, R., Leonard, W., & Gerace, W. (2002). Making sense of students' answers to multiple-choice questions. *The Physics Teacher,* 40, 174-180.

Ernest & Young. (1998). Financial review of the Royal Canadian Mounted Police. Ottawa: Treasury Board of Canada Secretariat.

Financial Administration Act, R.S.C. 1985, c. F-11.

Ford, N., & Chen, S. (2001). Matching/mismatching revisited: an empirical study of learning and teaching styles. *British Journal of Educational Technology*, 32(1), 5-22.

Friedman, S., & Cook, G. (1995). Is and examinees cognitive style related to the impact of answer changing on multiple-choice test? *Journal of Experimental Education*, 63 (3), 199-214.

Graetz, F. (2002). Strategic thinking versus strategic planning: towards understanding the complementarities. *Management Decisions*, 40(5), 456-462.

Greenawalt, M. (1997). The internal auditor and the critical thinking process: a closer look. *Managerial Auditing Journal*, 12(2), 80-86.

Haladyna, T., Downing, S., & Rodriguez, M. (2002). A Review of Multiple-Choice Item-Writing Guidelines for Classroom Assessment. *Applied Measurement in Education*, 15(3), 309-334.

Hancock, G. (1994). Cognitive complexity and the comparability of multiple-choice and constructed-response test formats. *Journal of Experimental Education*, 62 (2), 143-158.

Heffler, B. (2001). Individual Learning Style and the Learning Style Inventory. *Educational Studies*, 27 (3), 307-316.

Herrmann, N. (1996). The Whole Brain Business Book. New York: McGraw-Hill.

Hoepfl, M. (1994). Developing and Evaluating Multiple Choice Tests. *The Technology Teacher*, April, 25-26.

Houghton, J. & Neck, C. (2002). The revised self-leadership questionnaire. Testing a hierarchical factor structure for self-leadership. Journal of Managerial Psychology, 17(8), 672-691.

Kaplan, R. & Norton, D. (2001). *The Strategy-Focused Organization.* Boston: Harvard Business School Press.

Kent, T., Crotts, J., & Azziz, A. (2001). Four factors of transformational leadership behaviour. *Leadership & Organization Development Journal*, 22 (5), 221-229.

Kottke, J. (2001). Students' Reactions to Written Test Item Rebuttals. *Journal of Instructional Psychology*, 28 (4), 256-259.

Kouzes, J. & Posner, B. (1997). *The Leadership Challenge.* San Francisco: Jossey-Bass.

LePolt, E. (1997) *Ethical Dilemmas in Programme Evaluation and Research Design.* Retrieved June 21, 2003 from http://trochim.human.cornell.edu/tutorial/lapolt/lizhtm.htm .

MacLeod, R. (1976). *The North West Mounted Police and Law Enforcement, 1873-1905.* Toronto: University of Toronto Press.

McDaniel, M. & Nguyen, N. (2001). Situational Judgement Tests: A Review of Practice and Constructs Assessed. *International Journal of Selection and Assessment.* 9(1/2), 103-113.

McElwee, R., Dunning, D., Tan, P., & Hollmann, S. (2002). Evaluating Others: The Role of Who We Are Versus What We Think Traits Mean. *Basic and Applied Social Psychology, 23(2), 123-136.*

McNiff, J. (2001). Action Research : Principles & Practice (Second Edition). Florence, KY, USA: Routledge. Retrieved July 29, 2003 from http://80-site.ebrary.com.ezproxy.royalroads.ca/lib/royalroads/Doc?id=5003307&page=149 .

Nasmyth, G., Schultz, A., & Williams, T. (2003). *Thinking Styles and the Impact on Military Leadership Practices.* Unpublished manuscript, Royal Roads University, Victoria, British Columbia, Canada.

The Ned Herrmann Group. (1989). Herrmann Brain Dominance Instrument, Thinking Styles Assessment. Lake Lure, NC: Herrmann International.

The Ned Herrmann Group. (2000a). Understanding the Herrmann Model. Lake Lure, NC: Herrmann International, 1-7.

The Ned Herrmann Group. (2000b). How Does Your Profile Compare to Others? Lake Lure, NC: Herrmann International, 2-23.

O'Toole, J. (1995). *Leading Change: The Argument for Values-Based Leadership*. New York: Ballentine Books.

Paxton, M. (2000). A Linguistic Perspective on Multiple-Choice Questioning. *Assessment & Evaluation in Higher Education*, 25 (2), 109 -119.

Riding, R., Grimley, M., Dahraei, H., & Banner, G. (2003). Cognitive style, working memory and learning behaviour and attainment in school subjects. *British Journal of Educational Psychology*, 73, 149-169.

Rogers, W. & Harley, D. (1999). An empirical comparison of three- and four-choice items and tests: susceptibility to testwiseness and internal consistency reliability. *Educational and Psychological Measurement*, 59 (2), 234-247.

Royal Canadian Mounted Police Act, R.S.C. 1985, c. R-10.

Royal Canadian Mounted Police (1998). *RCMP Core Competencies*. Ottawa: Human Resources Directorate.

Royal Canadian Mounted Police (2000). *Technical Report: Corporal Job Simulation Exercise, Cycle 3 (1998-2000)*. Ottawa: Research Branch, Human Resources Directorate.

Royal Canadian Mounted Police. (2002). Policing Beyond the Patrol Car. *The Gazette*, 64, (4). Retrieved March 21, 2003 from http://www.rcmp.gc.ca/html/resources_e.htm.

Royal Canadian Mounted Police. (2003a). About the BSC. Retrieved February 26, 2004 from http://infoweb.rcmp-grc.gc.ca/english/centrl/hq/programs/strategic/natcommunications/bsc

Royal Canadian Mounted Police. (2003b). Directional Statement 2003/2004. Retrieved from http://www.rcmp-grc.gc.ca/dpr/dir_stat_2003_04_e.htm .

Royal Canadian Mounted Police. (2003c). Performance Report 2002. Retrieved from http://www.rcmp-grc.gc.ca/dpr/performance02.htm .

Royal Canadian Mounted Police. (2003d). NCO Promotion Simulation Exercises. *Pony Express*, *November*, 1-8 (Insert).

Royal Canadian Mounted Police (2004a). Business Plan 2004 – 2005 "E" Division, British Columbia.

Royal Canadian Mounted Police (2004b). Mission, Vision, Values. Retrieved June 29, 2004 from http://www.rcmp-grc.gc.ca/html/vision_e.htm#VALUES .

Royal Canadian Mounted Police (2004c). NCO Leadership Conference. Pacific Region training Centre. April 16-19, 2004.

Royal Canadian Mounted Police (2004d). Organization of the RCMP. Retrieved February 29, 2004 from http://www.rcmp-grc.gc.ca/html/organi_e.htm .

Royal Canadian Mounted Police (2004e). *Technical Report: NCO Promotion Job Simulation Exercises 2000 - draft*. Ottawa: Research Branch, Human Resources Directorate.

Royal Roads University. (2000). Royal Roads Ethics Policy. Retrieved July 29, 2003 from http://www.royalroads.ca/Channel/research/ethical+reviews/ethics+policy.htm

Rubio, D., Berg-Weger, M., Tebb, S., Lee, E., & Rauch, S. (2003). Objectifying content validity: Conducting a content validity study in social work research. *Social Work Research*. 27 (2), 94-104.

Sadler-Smith, E. (1999). Intuition-analysis cognitive style and learning preferences of business and management students. *Journal of Managerial Psychology*, 14 (1), 26-38.

Scouller, K. (1996). Influence of assessment method on students' learning approaches, perceptions and preferences: The assignment essay versus the short answer examination. Retrieved July 18, 2003 from http://www.herdsa.org.au/confs/1996/scouller.html .

Scouller, K. (2000). The Influence of Assessment on Student Learning. Retrieved July 18, 2003 from http://www.aare.edu.au/00pap/sco00195.htm .

Silver, H., Strong, R. & Perini, M. (1997). Integrating Learning Styles and Multiple Intelligences. *Educational Leadership*. September, 22-27.

Sternberg, R. (1994). Allowing for Thinking Styles. *Educational Leadership*, November, 36-40.

Tanner, D.E. (2003). Multiple-Choice Items: Pariah, Panacea, or Neither of the Above. *American Secondary Education,* 31(2). 27-36.

Tinsley, P. (2000). *Assessing Discrimination in A Police Recruit Assessment Center. Unpublished doctoral thesis*, University of British Columbia, Vancouver, Canada.

Walker, D. & Thompson, J. (2001). A Note on Multiple Choice exam with Respect to Students' Risk Preference and Confidence. *Assessment & Evaluation in Higher Education,* 26 (3), 261 -267.

Walls, H. (2003). Managing to lead. *Industrial Engineer*. May. p. 22.

Waring, D. & Farthing, C. (1999). Impulsive response style affects computer-administered multiple-choice test performance. *Journal of Instructional Psychology,* 26(2), 121-128.

Yukl, G. (2002). *Leadership in Organizations, Custom Edition.* New Jersey: Pearson Custom Publishing.

Zhang, L. (2001). Do Thinking Styles Contribute to Academic Achievement Beyond Self-Rated Abilities? *The Journal of Psychology*, 135_(6), 621-637.

Zhang, L. (2002a). Thinking Styles and Modes of Thinking: Implications for Education and Research. *The Journal of Psychology*, 136,_(3), 245-261.

Zhang, L. (2002b). Thinking Styles: their relationships with modes of thinking and academic performance. *Educational Psychology*, 22 (3), 331-348.

Zwanenberg, N., Wilkinson, L., & Anderson, A. (2000). Felder and Silverman's Index of Learning Styles and Honey and Mumford's Learning Styles Questionnaire: How do they compare and do they predict academic performance? *Educational Psychology*, 20 (3), 365-380.

APPENDIX A

RESEARCH CONSENT FORM

This research project is part of the requirement for a Master of Arts in Leadership and Training.

The student concerned is Joanne Pratt. Ms. Pratt's credentials with Royal Roads University can be established by telephoning either Dr. Gerry Nixon, Dean of, Royal Roads University at (xxx) xxx-xxxx or Ms. Angella Wilson, Coordinator, MALT, (xxx) xxx-xxxx.

This document constitutes an agreement to take part in a research program, the objective of which is to explore whether the RCMP job simulation exercise is a valid instrument to identify potential leaders.

The research will consist of three requirements:

1. A preliminary interview with each research subject. Each interview will follow a set of "grand tour" questions and will permit exploration on a one-to-one basis. The questions will focus on how the members see themselves as leaders, how they have been assessed as leaders by supervisors, how they felt about the JSE, how they prepared for the JSE, how many times they have written the JSE, and their JSE results.

2. Each research subject will be asked to complete a measurement tool for leadership. Specifically, the Competencies for Leading Effectively in Organizations (CLEO) will be administered.

3. Each research subject will be asked to complete a measurement tool for thinking styles. Specifically, the Herrmann Brain Dominance Instrument (HBDI) will be administered.

Information obtained from each of the three requirements will be recorded in hand-written format and, where appropriate summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand.

A copy of the final report will be housed at Royal Roads University and be publicly accessible.

Prospective research subjects are not compelled to take part in this research project. If an individual does elect to take part, she or he is free to withdraw at any time with no prejudice. Similarly if employees or other individuals elect not to take part in this research project, this information will also be maintained in confidence.

By signing this letter, the individual gives free and informed consent to participating in this project.

Name: (Please Print): _____

Signed: _____

Date: _____

APPENDIX B

Overview of Research Project

The lynch pin in the RCMP promotional process is the JSE. The score attained on the JSE determines whether the member is afforded an opportunity to compete in the next step of the promotional process. Thus, the JSE serves as a screening device for the RCMP to identify suitable candidates for advancement into leadership positions within the organization. Leadership positions in the RCMP are defined by rank and can only be attained by successfully participating in the promotion process. The RCMP has relied on the JSE to identify candidates who have been successfully assessed with respect to the requirements of the *next* rank.

This study will focus, therefore, on the validity of the RCMP JSE. More precisely, this study will explore whether: the RCMP JSE is a valid instrument for identifying potential leaders?