Leadership Requirements in the 21st Century: the Perceptions of Canadian Public Sector Leaders

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Andrews University
School of Education

LEADERSHIP REQUIREMENTS IN THE 21ST CENTURY:
THE PERCEPTIONS OF CANADIAN
PUBLIC SECTOR LEADERS

A Dissertation
Presented in Partial Fulfilment
of the Requirements for the Degree
Doctor of Philosophy

by
M. Ruth Dantzer
July 2000
LEADERSHIP REQUIREMENTS IN THE 21ST CENTURY: 
THE PERCEPTIONS OF CANADIAN 
PUBLIC SECTOR LEADERS 

A dissertation 
presented in partial fulfillment 
of the requirements for the degree 
Doctor of Philosophy 

by 
Margaret Ruth Dantzer 

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Date Approved: 1-7-00 

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ABSTRACT

LEADERSHIP REQUIREMENTS IN THE 21ST CENTURY:
THE PERCEPTIONS OF CANADIAN
PUBLIC SECTOR LEADERS

by

M. Ruth Dantzer

Chair: Shirley Freed
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: LEADERSHIP REQUIREMENTS IN THE 21ST CENTURY: THE PERCEPTIONS OF CANADIAN PUBLIC SECTOR LEADERS

Name of researcher: M. Ruth Dantzer

Name and degree of faculty chair: Shirley Freed, Ph.D.

Date completed: July 2000

Problem

Since 1995, with the realization that by 2005 more than 61% of executives in the senior ranks of the Canadian Public Service would be eligible for retirement (La Releve, 1998), the need to recruit and develop competent leaders has become a matter of urgent attention.

Method

Public sector leaders were surveyed by mail-in questionnaires as to their ratings of a set of leadership competencies. Analogue research for private sector leaders, conducted by a colleague, was incorporated for some analysis. A stratified sample of the
Results

Public sector leaders perceived a shift in importance for the following competencies: cosmopolitan/world view, vision, teamwork, ability to learn, teaching skills, negotiation, interpersonal skills, ethics, entrepreneurial skills, problem solving, initiative, and stamina from 20 years ago to the 21st century; however, they rated business/technical and organizational as decreasing in importance.

Public sector leaders identified globalization, technology, diversity, and downsizing as important influences on the required leadership competencies for the 21st century.

Public sector leaders rated problem solving, ability to learn, initiative, teaching, ethics, and organizational skills lower than the general population. Public sector leaders rated cosmopolitan/world view as more important than did the general population.

When public and private sector leaders’ data were combined, public sector leaders rated significantly larger shifts in importance for vision, entrepreneurial skills, and negotiating.

Public and private sector leaders ranked the top five competencies of vision, communication, teamwork, cosmopolitan/world view and ability to learn similarly. The general public identified the ability to learn as the top-ranked competency.
Conclusions

The results of this study inform leadership training and development opportunities for current public sector managers as they plan for the future. This study suggests that public sector leaders perceive significant changes are needed in future leadership competencies.

In considering the top five ranked future leadership competencies for the public sector leaders—vision, communication, teamwork, cosmopolitan/world view, and ability to learn—a compelling story can be told about future leadership and the emphasis on future and relational clusters of competencies for leaders.
DEDICATION

This work is dedicated with love to my parents,
Vince and Mary,
leaders who taught me all about leadership
through their example.
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CHAPTER 1

THE PROBLEM

Background of the Problem

In considering leadership into the 21st century, there is increasing acknowledgment that the traditional concept of leadership and the competencies which leaders will require to be effective will be different from what they are today (Abramson, 1996; Byham, 1999; Dess & Picken, 2000; Diaz, 1999; Donnelly & Kezbom, 1994; Hennessey & Thomas, 1998; Jacobs & Rao, 1995; Kotter, 1990, 1996; Nadler & Tushman, 1999; Nanus, 1992; Rifkin, 1995). Many authors, business writers, and students of leadership point to the increasingly complex nature of the issues and environment with which leaders of the future will have to contend to be effective (Applegate & Elam, 1992; Arredondo, 1996; Brooks, 1995; Farazmand, 1999; Gannon, 2000; Gresser, 1995; Jackson & Associates, 1992; Jamieson & O’Mara, 1991; Koffler, 1998; Lorine, 1991; Ostroff, 1995; Peters, 1997).

Leadership in the 21st century will be influenced by external drivers such as globalization (Farazmand, 1999; Pettigrew, 1999), technology (Brown & Brudney, 1998; Rifkin, 1995), downsizing (Abbasi & Hollman, 1998; Bartosh, 1995), and diversity (Arredondo, 1996; Jamieson & O’Mara, 1991; Jackson & Associates, 1992).
Organizations need a sense of how these external drivers will change the requirements for leadership. This knowledge will enable organizations to design developmental programs that will enhance the skill sets that are relevant for future leadership. Without a sense of how these external drivers are affecting the requirements for leadership competencies, there is the potential for organizations to develop training programs that promote skill sets in their leadership cadre which are best suited to another era and not relevant for the future environment (Diaz, 1999; Sherman, 1997; Watson Wyatt, 1998).

The increasingly complex nature of the issues both in the public and private sector may be traced to the external drivers, specifically globalization, technology, diversity, and downsizing, which have had an immense effect on management in the recent past and will continue to influence management and leadership into the 21st century (Diaz, 1999). Therefore, conceptually it will be important to understand the perceived impact of the individual external drivers as well as their combined influence.

The effects of globalization are widely recognized by many leading authors (Farazmand, 1999; Kotter, 1998b; Porter, 1998; Reich, 1992; Senge, 1997a; Shoch, 2000). In general, the notion of globalization refers to the conceptual breaking down of traditional barriers with the attendant increase in access to transnational ideas and models. Pettigrew (1999) notes that globalization truly became a reality in the mid-1980s when the major stock exchanges in the world became linked and it became possible to trade stocks and bonds around the clock. With globalization comes the threat of more hazards and more opportunities (Kotter, 1998b). One such hazard was the economic impact of the so-called Asian flu, in which one country's economic crisis was felt around the world.
A second external driver which is likely to influence the job of leadership into the 21st century is technology, specifically the increased access to information both in terms of quantity, but as importantly in terms of decreased costs to access (Attwell & Rule, 1984; Celeste, 1996; Koffler, 1998; Rifkin, 1995; Twiss, 1992). While access to increased technology is not a new factor in leadership, the speed at which technology is evolving to provide more access and development opportunities is unparalleled (Rifkin, 1995).

The 1980s' trend toward downsizing was initially a cost-saving measure but increasingly became an opportunity to enhance partnership and cooperative models with a clear goal of improving efficiency (Abbasi & Hollman, 1998; Bartosh, 1995; McGoon, 1994; Noer, 1993). As an external driver, downsizing in many companies had the effect of accelerating the demand for different leadership skills (Lorine, 1991).

Finally, authors have reported on the growing need for diversity including age, gender, and cultural perspectives as an external driver which will affect the way in which leadership is viewed (Jackson et al., 1991; Jackson & Associates, 1992; Johnston & Packer, 1987; Thomas, 1990). According to Bennis (1998), the world in which an individual leader, however gifted, however tireless, can save the enterprise single-handedly no longer exists.

It is difficult to isolate the effects of the individual external drivers on leadership. Instead, it may be more appropriate to think of globalization as being made possible because of the increased access to technology, or the fact that downsizing acted as a catalyst for increased acceptance of technological advances. It is the interaction

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between the external drivers and the manner in which they move together, the synergy that is created, and the speed at which the change is occurring which will mark the 21st century.

While none of these individual themes is new, taken together, globalization, technology, diversity, and downsizing will have a dramatic impact on the leadership competencies required for future leaders. As recently as August 1999, the Organization for Economic Coordination and Development (OECD) stated:

Many observers have written about the likely shape of organizations in the future and how they will be flatter or less layered than is now the norm. This delayering of public sector organizations will create the need for more leadership skills throughout the organization. The rapid advance of the Internet and electronic commerce will only accelerate this trend as they break down the barriers to information flow between and within governments. Consequently, leadership development will have to become a priority of public sector senior executives. It can no longer be an optional activity of top executives ... In both the public and private sectors there is widespread recognition that leadership is a key ingredient in the recipe for creating effective, responsive, and value creating organizations. (p. 97)

The OECD also said: "Cultural and linguistic diversity is important in the development of global electronic commerce" (p. 97). In addition to the OECD, other authors have noted the importance of these trends and the view that, given these trends, leadership in the future will require additional competencies such as collaboration, team building, visioning, and entrepreneurship (Bennis, 1998; Kotter, 1998b; Nanus, 1992; Peters, 1997; Renesch, 1992; Schrage, 1995; Senge, 1997b; Sexton, 1994; Wall & Wall, 1995; Zoglio, 1993). While the perceptions of academics and business writers inform theories regarding leadership competencies, a more direct source of information may be the perception of actual leaders. Because leaders actually experience the impact of the
external drivers on their organizations, they could be in the best position to define their vision and goals for the future and the process required to achieve them.

It is important to understand how these forces are shaping leadership in both the public and private sectors, in order to ensure that the selection and development of leaders is consistent with the competencies that organizations will demand to remain competitive in the coming decades (Diaz, 1999; Hesselbein, Goldsmith, Beckhard, & Schubert, 1998; and Renesch, 1992). Edward Lawler of the leadership program at the University of Southern California's business school captures this issue, noting that "IBM invested the most money of any organization in developing executive talent, but they taught people about a world that doesn't exist any more. They shrank their gene pool down to people who were very good at managing for the 1970s--so when the 1990s arrived, IBM had lots of people who were very good at the wrong time" (cited in Sherman, 1997, p. 90). Unlike IBM in the 1970s, leaders are seeking to understand the external pressures as they shape the work of their organizations (Farazmand, 1999; Hamel & Prahalad, 1994; Jacobs & Rao, 1995).

**Statement of the Problem**

In a rapidly changing environment, requirements for leadership also change rapidly. Yet, how are the new requirements discovered, articulated, and developed? An important factor for accurate prediction is not only knowing which external drivers will affect an organization but understanding how requirements change over time. This requires historical information: What were the requirements in the past and how have
they changed over time? Is it possible to track changes to discover emerging requirements for leaders?

The competency literature includes many studies of current leadership competencies, as well as both the hypotheses of researchers and surveys of leaders inquiring about their views on future leadership competencies (Coates & Jarratt, 1992; Corporate Leadership Council, 1999; Dess & Picken, 2000; Diaz, 1999; Dror, 1997; Duncan & Harlacher, 1991; Kotter, 1990, 1996; Kouzes & Posner, 1995; McLagan, 1997; Miles, 1999; Quinn, 1990; Sandwith, 1993; Scholtes, 1999; Slivinski & Miles, 1997a; Walsh-Minor, 1997). However, the literature is lacking any surveys of leaders inquiring about their perceptions about how leadership competencies will shift from the present to the future. These perceptions are important as they will play a key role in determining organizations’ recruitment and selection criteria and their training and development efforts. In turn, these human resource processes will be influential for future organizational performance.

The Canadian Context

Since 1995, with the realization that by 2005 more than 61% of executives in the senior ranks of the Canadian Public Service would be eligible for retirement (La Releve, 1998), the need to recruit and develop competent leaders has become a matter of urgent attention. It is important to note that, in Canada, the federal public service is a professional cadre which is promoted on the basis of merit through competitive processes. These professionals do not change with the election of new political leaders.
As a professional non-partisan public service, the Canadian Public Service is expected to provide unbiased advice to the government on all matters related to the priorities of the government. The executive ranks of Canadian Public Service are structured as follows:

1. The Clerk of the Privy Council is the head of the Public Service. The Clerk is appointed by the Prime Minister of Canada by an Order in Council.

2. Deputy Ministers are appointed by the Prime Minister by Orders in Council. There are two levels of Deputy Ministers including an Associate Deputy Minister and a Deputy Minister (who normally is a deputy head in that he or she is in charge of a government department such as Finance, Industry, or Agriculture). While all departments have a deputy head, not all departments have an Associate Deputy Minister. The decision as to which department is allocated an Associate Deputy Minister is the Prime Minister’s on the advice of the Clerk of the Privy Council in his/her capacity as head of the Public Service. In the Canadian system by tradition this rank is permanent regardless of which political party is governing.

3. Assistant Deputy Minister is the top non-appointed rank of the federal public service. In the Canadian system this rank is permanent regardless of which political party is governing. It is the top executive category within the public service.

In 1998, in acknowledging the urgent need to develop and train leaders to meet the expected leadership shortage, the Clerk of the Privy Council as head of the Canadian Public Service expressed the vision for public sector leadership (Bourgon, 1998), which spoke to a renewed leadership cadre. The Public Service Commission (the agency legislatively responsible for recruitment and promotion based on merit for the
federal public service), through a process of research and validation, identified competencies to be used as the basis for selection to the senior executive ranks of the federal public service (Treasury Board of Canada Secretariat & the Public Service Commission, 1999).

This research was undertaken under the auspices of the Canadian Centre for Management Development as the entity responsible in Canada for the training of managers at all levels of the Canadian federal public service. It is expected that this research will inform the debate regarding the training required to prepare the federal public service for the future. Because of increased partnership and co-operation between the public and private sector, this research also examined the perception of private sector organizations. In this regard, human resource management models are becoming increasingly similar for both the public and private sector as may be evidenced by common employment equity and diversity considerations.

In examining the perceptions of current Canadian leaders with respect to the required competencies for leaders in the future, the researcher initially examined how an understanding of leadership has evolved from a static trait-based approach (Stogdill, 1974) to a more fluid competency model (Boyatzis, 1982; McClelland, 1973; Spencer & Spencer, 1993).

The 15 leadership competencies which were used for this research are taken from various sources. The Canadian federal public service has developed a leadership competency profile comprised of 14 competencies (Public Service Commission, 1997). In order to keep the number of competencies to a reasonable number, researchers...
consulted with the developers of the Leadership competency profile to determine which if any of the competencies could be removed. The developers suggested that personality and self-confidence could be removed from the list because (1) they are reflected to some degree in several of the other competencies and (2) they are considered to be personal, internal characteristics that relate more to an individual's ease in a leadership role as opposed to competencies that would be assessed or developed in any formal corporate program. In total, 12 of the 15 leadership competencies rated in the current study were taken from the Canadian public service profile. Business/technical knowledge was added to be reflective of the private sector (Diaz, 1999; Donnelly & Kezbom, 1994) and because of feedback by scientific groups within the federal public service that the existing generic competencies did not measure specific areas of knowledge. Teaching was added to be reflective of the literature in which authors are citing the need to develop learning organizations (Senge, 1990b, 1994, 1997b; Smith, 1997; Tichy, 1997), with coaching and mentoring values and competencies (Hargreaves & Fullan, 2000; Keys, 1994; Morris & Tarpley, 2000). Finally, cosmopolitan/world view came from the business literature (Gannon, 2000; Larson & Mingie, 1992; Piturro, 1999), which indicates the need for leaders to have a global awareness to be able to succeed in a globalized economy.

The researcher did verify that the Canadian public service's 14 leadership competencies were basically consistent with other organizations, both public and private (Appendix 1). The set of competencies used for this research was compared to those identified by the United Kingdom and the American federal public service, New Zealand, and Australia and found to be generally consistent. In addition, similarities in leadership
requirements were identified for large private sector companies such as the Scotia Bank of Canada, Sun Life Insurance, General Motors, and Canadian National (Miles, 1999).

Recognizing that leadership requirements constantly change as a result of environmental drivers, the researcher sought to understand the current environmental drivers that are impacting the way that current leaders may be considering future leadership competencies. The literature review provides for a synopsis of the academic perspective on the effects of globalization, technology, downsizing, and diversity. If a case can be made that the environmental drivers are significant, one could expect that the leadership competencies required to operate effectively in this new environment should also evolve. Current leaders both in the public and the private sector who are closest to these environmental changes may be best positioned to predict how the environment will modify the required leadership competencies into the 21st century.

Leadership competencies which are important in today's context are reported in Diaz's Venezuela study (Diaz, 1999) and in the Watson Wyatt Executive Report (Watson Wyatt, 1998). The Leadership Competencies Profile for Assistant Deputy Ministers and Senior Executives identifies current requirements for the Canadian Public Service (Appendix 2). This study focused on leaders' perceptions of past and future leadership competencies rather than perceptions of the competencies required for the present. This allowed the researcher to understand how current external drivers are affecting the design and application of future leadership competencies. Leaders' experience of current external drivers allows them to make predictions of what future competencies will be, and how best to design development courses to develop these skills.
Purpose of the Study

Surveys to identify competencies have been done in particular sectors (e.g., Diaz, 1999; Donnelly & Kezbom, 1994; Duncan & Harlacher, 1991). Surveys to identify skills and competencies for specific job functions are undertaken by firms such as Hay McBer, KPMG, and Saville and Holdsworth. To date, no survey has been undertaken that would attempt to determine if current Canadian leaders have a consensus of views with respect to the shift in leadership competencies required to be effective in the 21st century. By examining the perception of current leaders, who are most apt to have experienced the effects of external drivers on how they lead, it may be possible to predict future shifts in the required leadership competencies for the 21st century. This information, while based on perceptions, will provide the baseline data important for charting the direction for the leadership training required to ensure effectiveness in the coming years.

In addition, this study explored the similarities or the differences between the perceptions of leaders and the perceptions of the general public with respect to the required leadership competencies for the future. This issue is significant. By comparing the perceptions of the required leadership competencies for the 21st century from both the organizational and the individual perspective, it may be possible to determine whether the perceptions of leaders were a function of their organizational perspective or the general impact of the external drivers. Of interest to the researcher is whether the external drivers have affected the perceptions of individuals outside the leadership cadre. Has the acknowledgment of the required skills for leaders into the future moved beyond the
organizational perspective that current leaders would be expected to have to an individual recognition as denoted by the general public proxy? The research focuses on the future perceptions because the planning and development of appropriate leadership training will be future orientated. The perceptions of the general public with respect to the future leadership competencies is of interest as a practical matter to the extent that, in both the public and the private sector, the support of the general public, either as taxpayers or as shareholders, is necessary to invest in training and development expenditures. Thus to the extent that there is a shared understanding of the training challenge, there is a greater chance that development programs will proceed.

Finally, this study evaluates the differences in the perceptions of public sector and private sector leaders with respect to the required leadership competencies for the 21st century. Recognizing that the two sectors have traditionally had differing strategic objectives, and/or organizational values, it examines whether these sectors differ fundamentally with respect to the general direction that leadership competencies must move. As partnerships and strategic alliances between the various levels of the public sector (Canadian Provincial Federal Councils), between public and private sector (e.g., Interchange Canada Program), and between international governments and companies (United Nations, World Bank, Organization for Economic Co-operation and Development) become more commonplace, the need to explore the differences with respect to perceptions of future leadership competencies becomes critical.
Research Questions

This research project responds to the following four research questions:

Question 1. Has there been a shift in public sector leaders’ perception as to the leadership competencies required in the past as compared to the leadership competencies required for the 21st century?

It was hypothesized that the ratings of leadership competencies required will differ from the past as compared to the future.

The analysis for this research question was based on an assessment of the difference in perception that leaders express with respect to past and future leadership competencies. The following two questions guided the data analysis regarding this hypothesis:

Question 1a. What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders 20 years ago?

Question 1b. What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders in the 21st century?

Question 2. If there is a shift in perceptions, are the external environmental drivers—globalization, technology, downsizing, and diversity—related to that shift?

It was hypothesized that leaders will rate the external drivers as influencing leadership competency requirements.

Question 3. Is there a divergence or convergence of views between leaders in the public sector and the general public as to the required leadership competencies in the 21st century?
It was hypothesized that leaders’ ratings of leadership competencies required for the 21st century will differ when compared to the general public’s ratings of leadership competencies required for the 21st century.

In addition, consensus between groups was tested to determine:

**Question 4a.** Is there a consensus of views between leaders in the public sector and those in the private sector as to the size of the shift between 20 years ago and in the 21st century?

It was hypothesized that the public sector’s size of shift between past and present required leadership competencies will differ from that of the private sector’s.

**Question 4b.** Is there a consensus of views between public and private sector leaders and the general population on which, if any, of the leadership competencies are the most important?

It was hypothesized that each group will perceive some leadership competencies as more important than others.

It was hypothesized that leaders in both sectors will differ from the general population.

**Collaborative Study**

This paper forms part of a collaborative research project focusing on the shift in perceptions of public sector leaders toward the required leadership competencies for the 21st century. At the same time, a colleague (Watson, 2000) is researching the shift in perceptions of private sector leaders toward the required leadership competencies for the
21st century. In addition to analyzing the shift in perceptions in their respective target populations, each research project then compares its target population results with the perceptions of a sample of the general population. After fully exploring the results of their respective populations, the researchers combined their results and therefore a third area of research was added to each respective research project, that of comparing the research associated with the public sector population with the private sector population.

It must be noted that in chapter 4, where the two researchers combine their individual data for the purpose of comparison between the public sector and the private sector (research question 3), the analysis is reported in both theses.

**Methodology**

To facilitate the management of the research, this study was delineated into four phases:

1. Identifying the methodology and the survey pools (public sector leaders, general public)
2. Developing the survey instrument and identifying the competencies
3. Administering the survey to the specific populations
4. Analyzing the results:
   a. Public sector (defined as the public sector leaders' survey)
   b. Comparing the results obtained from the public sector leaders' survey with results obtained from the general public population, identifying any similarities, and reviewing any differences
c. Comparison of public sector leaders’ results with results from the private sector leaders’ survey and general public survey results. The four phases of the research are explained and detailed in chapter 3 of this research.

Limitations/Delimitations

Limitations

This research was limited by the following conditions:

1. The normal risk associated with mailed survey questionnaires, which includes: heavy demand on the respondents’ time, dropout rate of the participants, and the validity of the responses.

2. The sample for the public sector leaders’ population was not stratified by age or by gender.

3. The sample for the private sector leaders’ population was not stratified by age or by gender.

4. Data collection methodology differed for groups: the leader responses were collected by mail-in survey, whereas the general population responses were collected through telephone survey.

5. With respect to the telephone survey, inter rater reliability of the surveyors evaluated was not adjusted.

6. The data used for this research is based on individuals’ perceptions of future requirements.
Delimitations

The research was delimited by the following conditions:

1. Data were gathered from July 1999 to November 1999.

2. The telephone survey used for the sample of the general population could accommodate 11 leadership competencies.

3. The mail survey was limited to senior executives. In the public sector this included only those executives above the Assistant Deputy Minister level at both the federal and provincial level, mayors and senior administers at the municipal level, and elected officials at the federal and provincial levels.

4. The mail survey was limited to senior executives. In the private sector this included Chief Executive Officers.

5. The descriptions for the leadership competencies are largely taken from the descriptions used by the Canadian Public Service Commission (specifically for 12 of the 15 competencies used in the survey).

6. The terms globalization, technology, diversity, and downsizing were not operationally defined for the purpose of the survey, therefore leaders could interpret the terms in their own context.

Definitions

For the purpose of this research the following operational definitions were employed:
**External Driver:** Denotes one of the four external environmental forces which are said to be characterizing the 21st century including globalization, technology, downsizing, and diversity.

**Leadership Competencies:** Twelve of the 15 leadership competencies assessed in this research were taken directly from the competencies developed by the Canadian Federal Public Service (Public Service Commission, 1997) and are paraphrased as follows:

*Ability to Learn* (Behavioral Flexibility): People with the ability to adjust behavior to the demands of a changing work environment in order to remain productive through periods of transition, ambiguity, or uncertainty. They adapt the expression of their competencies to different situations and respond quickly to emerging opportunities and risks. They work effectively with a broad range of situations, people, and groups. This competency enables ADMs to adapt to the characteristics of particular situations, to acquire new and more effective behaviors, and to discard others, as contexts and roles change. It allows them to learn from the behavioral styles of others to expand their own repertoire. The essence of this competency is the ability to continuously develop new ways of interacting that are more effective in certain situations in order to accomplish one’s objectives (Public Service Commission, 1997).

*Business Technical Knowledge:* Added to be reflective of the private sector (Diaz, 1999; Donnelly & Kezbom, 1994).

*Communications Skills:* People who communicate in a compelling and articulate manner that instills commitment. They adapt communication to ensure that...
different audiences understand key messages. They use a variety of communications vehicles to foster open communication within their own organization and across the Public Service. They appreciate the importance of being a good listener, provide opportunities for others to have input, listen for underlying nuances and messages, and convey an understanding of key points being communicated (Public Service Commission, 1997).

**Cosmopolitan World View**: From the business literature (Gannon, 2000; Larson & Mingie, 1992; Piturro, 1999) which indicates the need for leaders to have a global awareness to be able to succeed in a globalized economy.

**Entrepreneurial (Creativity)**: People who respond to challenges with innovative solutions and policies. They demonstrate a willingness to question conventional means of serving the public. They use intuition, non-linear thinking, fresh perspectives, and information from non-traditional fields to generate new and imaginative ways to succeed. They will often address several objectives simultaneously, solving multiple problems at once. To prepare for future challenges, they enhance their creativity by continuous learning. They build a continuous learning environment in their organizations by supporting a culture where the cutting edge is highly valued (Public Service Commission, 1997).

**Ethics**: People with ethics treat people fairly and with dignity, and are willing to admit their mistakes, even in the face of adverse consequences. They honor their commitments and consistently strive to act in the public interest by ensuring that the public trust is not violated. Their principles act as an internal compass to guide their
behavior, allowing them to consistently uphold the personal, social, and ethical norms of the Public Service. They protect fairness, avoid conflicts of interest, and maintain political and interpersonal neutrality. They pursue proper goals and are resilient in the face of distracting external pressures. They are known for doing the right thing for the right reasons and ensure that their actions are aligned with their principles (Public Service Commission, 1997).

*Initiative* (Action Management): People with the ability to anticipate the short- and long-term consequences of their strategies. They have courage to propose courses of action that others may hesitate to suggest. They have the ability to make things happen and get things done and are known for their ability to accomplish objectives (Public Service Commission, 1997).

*Interpersonal*: People who interact effectively with public and private sector individuals, superiors, peers, and subordinates in order to advance the work of the Public Service. Their interactions are based on respect and an appreciation that people with varying backgrounds and viewpoints enrich the organizational environment. They have the ability to deal with difficult and complex interpersonal situations. Interpersonal skills are not social graces; they are a means of achieving important management objectives (Public Service Commission, 1997).

*Negotiation* (Partnering): People who work to create the policies that support integrated service delivery and eliminate red tape and bureaucracy in the interest of the public good. They develop a community of shared interests with diverse levels of government, vested interest groups, and the non-profit and private sectors. They use their
diversity of experience and knowledge to make the best decisions. They share common goals, solve common problems, and work hand in hand for the common good, not only of each partner but of the Canadian public. An essential feature of this community is that it functions on the basis of shared power and responsibility. This allows members to avoid waste, inefficiency, and duplication of effort while retaining the identity of their own organization (Public Service Commission, 1997).

Organizational: People who understand the inner workings of the government, the Public Service, and their own organizations in terms of structure, processes, and key players. They actively develop this awareness in order to effectively position themselves to achieve strategic objectives. This requires acute sensitivity to the relationships between key players in the organization, in addition to both acknowledged and private agendas. They actively seek out opportunities to keep their organizational awareness comprehensive and current. Their organizational awareness comes from a range of sources from intuitive perception to factual data (Public Service Commission, 1997).

Problem Solving (Cognitive Capacity): People who understand and respond strategically to the complexities inherent in service to the public. They have the ability to perceive both parallel and divergent issues within various responsibilities and to interpret key messages and trends. They create order out of chaos and develop long- and short-term strategies that will prevent as well as solve problems (Public Service Commission, 1997).

Stamina: People must sustain high energy levels to greet the ongoing challenge of protecting the public interest. Their ability to resist stress and remain
energized in the face of difficult demands and prolonged exposure to stressors often has an uplifting effect on others (Public Service Commission, 1997).

**Teaching:** Added to be reflective of the literature in which authors are citing the need to develop learning organizations (Senge, 1990b, 1994, 1997b; Smith, 1997; Tichy, 1997), with coaching and mentoring values and competencies (Hargreaves & Fullan, 2000; Keys, 1994; Morris & Tarpley, 2000).

**Teamwork:** People who contribute actively and fully to team projects by working with other Assistant Deputy Ministers (ADM) and colleagues collaboratively as opposed to competitively, which includes working towards consensual solutions that enhance the output of the team. ADMs recognize that a diversity of experience and knowledge can only enhance the quality of the team’s work (Public Service Commission, 1997).

**Vision:** People who champion the vision of the Public Service. They have the ability to describe the future of service to the public in compelling terms, promoting enthusiasm and commitment from others. The leader’s commitment to the vision sends a message to others that change is a positive endeavor, thus creating an atmosphere that breeds new ideas. They foresee potential roadblocks to success and take action to avoid them (Public Service Commission, 1997).

**Contribution of the Research**

The value of establishing a reliable research database for this information is significant, especially as trainers seek to train or hire leaders for the future. The Canadian
Public Service has undergone a major downsizing in the last 5 years, and the number of executives required to replace existing executives who are expected to retire in the next 10 years has made training of future leaders a critical preoccupation.

In addition, there are exchanges between the public and private sectors to provide their executives with training or recruitment opportunities or to further expertise in a specific area. Therefore, the variation in perceived leadership competencies between public and private sector leaders will be important in determining appropriate training opportunities.

**Funding/Sponsors**

The Canadian Centre for Management Development (CCMD) and Ekos Research Associates have both agreed to sponsor the research costs (expected to be $40,000 Canadian) because of the research gap that exists. CCMD is responsible for training all managers and executives in the Canadian public service. Ekos Research, a private sector firm, is involved with public and private sector policy development.
CHAPTER 2

LITERATURE REVIEW

Introduction

This century is characterized by the development of a global economy, the pace and nature of technological change, downsizing, and increasing cultural diversity (Abbasi & Hollman, 1998; Betcherman, McMullen, & Davidman, 1998; Foot & Stoffman, 1996; Hamel & Prahalad, 1994; Jackson & Associates, 1992).

This chapter reviews the key nature of leadership in a changing world by discussing two major topics: leadership models and 21st-century forces. Our very understanding of leadership qualities has evolved from static trait-based approaches to more fluid competency-based identification as the demands of leadership have changed. This chapter describes and explains this evolution of our understanding of leadership and discusses possible future developments.

There has always been change. There have always been leaders. Leadership is and always has been an essential element of any organized activity. Wars, politics, and religion all required leadership. This thesis argues that changes in the external environment influence the form of leadership that is required to deal with the new challenges presented. While there have always been leaders, it was the age of the
The industrial revolution that introduced the science and role of leadership in the making or breaking of an organization. The industrial revolution marked the beginning of modern business, as the demands of managing that dramatic change in the economy gave birth to organizational/management science as we know it (Bass & Stogdill, 1990). Over time this revolution also introduced new demands on governments to regulate the manner in which these businesses operated and specifically how they utilized human resources. This heralded the institutionalization of mechanisms to manage the economy, such as central banks, labor laws, and health and safety regulations. Thus inherent and ongoing tension between government and business emerged in this era. Since the industrial revolution, environmental factors, including a dramatic increase in the numbers of educated people, technological breakthroughs, the development and implementation of efficient means of transportation and communication, have accelerated both the speed and impact of this change. As a result, the importance of leadership has escalated. In the 21st century, the prevalence and pace of change will be so acute that it will necessitate a redefinition of leadership. This chapter discusses models of leadership and key environmental factors influencing leaders.

**Leadership Models**

While there is consistency in the understanding of the actions of leadership, the diversity in what makes a leader successful in these actions is reflected in the numerous models described in the research literature (Boyatzis, 1982; Fiedler, 1987; Ghiselli, 1963; Likert, 1961; McClelland, 1973; McGregor, 1960; Stogdill, 1974;
Leaders are generally understood to identify a vision, design strategies, and mobilize work to achieve it (Hitt & Keats, 1992; Jacques & Clement, 1991; Richards & Engel, 1994). Leaders also monitor changes in the internal and external environment to adjust and re-frame the vision and/or the means to achieve it. Researchers' models differ in explanations of the variables that underlie an individual's ability to carry out these actions. These differences reflect not only which facets of the individual are of interest in explaining success, but may also reflect changes in the nature of organizations. For example, traditional, stable command and control-based organizations may be best described in terms of the stable traits associated with their leaders. Organizations where strategies must adapt quickly to changes such as geopolitical events may require shifts in ability sets that are just as fast, and an emphasis on adaptability and creativity in their leaders. As previously noted, for the majority of organizations, external factors have been changing rapidly over the past decades and are bound to change even faster in the future. The goal of many human resource managers today is not only to respond to external factors quickly, but to take advantage of cues in the environment to predict what will be required and pro-actively plan for the future (Diaz, 1999).

An important factor in accurate prediction is not only knowing probabilities for future requirements, but in understanding how requirements change over time. This necessitates a baseline, an appreciation of what was required in the past and how those requirements were reflected in models for successful leadership. These earlier models for leadership will be considered in terms of the competencies that were the focus for success.
Leadership models can generally be characterized into four groupings:

1. **Traitist theories**: also known as the "great man" theory. Traitist theories, which centered on identifying the personal characteristics of leaders, were appropriate for the post-war world in which they were developed. Organizations were viewed as relatively enduring, unchanging, and predictable. Change was perceived to be linear.

2. **Behavioral theories**: an emphasis on how the manager/leader should act. Behavioral theorists began viewing leadership as an interaction between leaders and followers. The introduction by behavioralists of this concept of relationship was a valuable addition to leadership models. However, behavioralists had difficulty predicting the link between leadership behavior and outcomes.

3. **Situational theories**: an emphasis on behavioral flexibility and situational adaptability. As the complexity of organizations grew in the 1960s, situational theories were developed to reflect the need for different skills in different situations. The situational leadership model was beginning to reflect that the assumptions about constancy were no longer valid.

4. **Competency models**: an attempt to define underlying variables that predict job performance. Competencies are the most recent approach to human resource management. The approach grew from a need to better predict job performance.

**Traitist Theories**

Early studies on leadership centered largely on the personal characteristics of the leader. The researcher most closely associated with this theory is Ralph Stogdill
(1974), whose work spans more than 30 years, beginning after the Second World War. Stogdill looked at managers from various functional backgrounds including transportation, insurance, communications, finance, and manufacturing and concluded that traits related to intelligence, education, responsibility, independence, and socioeconomic status were important traits for effective leadership. Further studies demonstrated that some traits were more important than others in determining leadership. E.E. Ghiselli (1963) in particular noted that supervisory ability, the need for occupational achievement, intelligence, decisiveness, self-assurance, and initiative were particularly important as leadership traits.

And while these early studies of traits advanced our knowledge of leaders, the general dissatisfaction among some researchers, with the traitist's underlying assumption that leaders are born and not made, encouraged further study which attempted to fill in the role of behavior and the environment in defining leadership.

**Behavioral Theories**

At the core of the behavioral theories is the query as to which leadership behaviors are important to be effective. Kurt Lewin and his associates' research emphasized three behavioral styles of leadership including directive, democratic, and participatory (Lewin, 1939). Further research popularized the importance of the beliefs that a manager has about his or her subordinates in determining their leadership style (McGregor, 1960). In the Theory X and Theory Y model, the Theory X manager commands and tells people what to do because he/she believes their subordinates are lazy and need to be told what to do. The Theory Y manager uses a democratic approach
believing that subordinates want more responsibility and are concerned about the well-being of the organization.

Behavioral researchers identified two general behavioral configurations which could be delineated as task versus socio-emotional (Bales & Slater, 1955) or production versus employee orientated (Kahn & Katz, 1953).

Rensis Likert (1961) further delineated the behavior research by identifying a continuum of leadership styles from task orientation to employee orientation which included four distinct systems, including the exploitative-authoritative person, the benevolent-authoritative person, the consultative-democratic person, and finally the participative-democratic person.

The managerial grid concept (Figure 1), which was advanced by Blake and Mouton (1985), has become one of the more popular behavioral theories. Styles of leadership are plotted on a grid, with the axis depicting the manager’s concern for people and concern for production. While there are up to 81 possible positions on the grid, five leadership styles are overtly delineated:

1. (1:9) Country Club Management: Manager uses a permissive approach and is ready to sacrifice production to keep a happy family.

2. (1:1) Impoverished Management: Manager has little concern for people or for production.

3. (9:9) Team Management: Most effective style of management; leader expresses concern for people and production, and is an advocate of participative managerial approach.
4. (9:1) Task Management: Leader is autocratic; has total concern for production, and little for people.

5. (5:5) Middle Road Management: Leader has balanced concern for production and people; is known as a compromiser.
While studies confirmed two reliable dimensions of leader behavior, people versus production, it proved more difficult to confirm any predictable link between leader behaviors and organizational outcomes. It is in this context that researchers began to suggest that leadership analysis should move beyond the study of the leader to include the situational factors.

**Situational Theories**

Recognizing that no single leadership trait or style was effective in all environments, situational theorists Robert Tannenbaum and Warren H. Schmidt (1973) were two early researchers who identified three characteristics that affect leadership style including the manager, the subordinates, and the situation (Tannenbaum, Kallejian & Weschler, 1954). Further work by these researchers identified a leadership continuum in which the leader is influenced by his or her background knowledge, values, and experience.

The first comprehensive situational model, developed in 1960, was known as the Contingency Theory (Wren, 1994). Fred Fiedler’s (1987) model integrated situational parameters into the leadership equation by developing a scale of situational control which was based on the following three features:

1. leader-member relations, i.e., degree of trust and support for leader
2. task structure, degree to which goals are specified
3. position power, leader’s formal authority to reward and punish.

Fiedler believed that the most important situational dimension was the degree of predictability and control that the leader had.
To do his research, Fiedler developed the Least Preferred Co-worker (LPC) questionnaire and scale that allowed him to measure basic motivational factors that made a leader act in a certain way. The Contingency Model and the LPC scale have been the subject of much debate, though in the final analysis there is some basis for accepting that the predictions of the theory are strongly supported by data from both organizational and laboratory studies (Strube & Garcia, 1981).

The Normative Decision Theory as presented by Vroom and Yetton (1973) is in many respects similar to Fiedler's model, especially with respect to its predictive qualities: Participatory decisions will have better results when there is little clarity or support; on the other hand autocratic decisions will be more efficient when there is strong leader support and a specific task. A striking difference between the situational models is their assumptions with respect to the leader. The Normative Decision Theory sees the leader as adaptable to fit particular situations, whereas the Contingency Model assumes leadership style is based on learned personality traits which are difficult to modify.

What has remained consistent is that the models of leadership evolve with the environment. Competencies have become the pre-eminent approach to understanding the makeup of modern leadership.

**Competencies**

Launched in 1973 in a paper by McClelland, the competency movement seeks to identify through research methods “competency” variables, variables that predict job performance. A job competency is an underlying characteristic of a person which results
in effective or superior performance in a job. “A job competency is an underlying characteristic of a person in that it may be a motive, trait, skill, aspect of one’s self-image or social role, or a body of knowledge which he or she uses” (Boyatzis, 1982, p. 21).

As described by McClelland, “The competency method emphasizes criterion validity: what actually causes superior performance in a job, not what factors most reliably describe all of the characteristics of a person, in the hope that some of them will relate to job performance” (David C. McClelland, cited in Spencer & Spencer, 1993, p. 7).

Over the past decade, Spencer and Spencer’s Competence at Work has been the seminal text for competency-based human resources management. The work reflects years of competency activities including data collected by the Hay McBer company. This is important because the originator of the competency movement, David McClelland, was a founding member of that firm and designed the firm’s approach to competency profiling and data acquisition. Currently, there are a number of models for profiling, but all are founded on this basic approach.

Spencer and Spencer (1993) describe a fully integrated competency-based human resource management system. In this system:

recruiters recruit and select for competencies required by jobs. Training and development is focused on those competencies that lead to superior performance in jobs. Succession planning is done by comparing employees’ competencies with the competency requirements of future jobs. Compensation includes competency-based pay elements to encourage employees to develop needed competencies. The performance appraisal system assesses employees’ competencies at least yearly and inputs these data to the data base to be sure that the system has up-to-date assessments of individuals’ competencies. (Spencer & Spencer, 1993, p. 23)
In practice, the primary functions to which management competencies have been applied in organizations are training and development. Management competencies have also been integrated into the performance appraisal system. Application of management competencies to compensation has been very limited (Walsh-Minor, 1997).

The model for generating competency profiles consists of four parts (Slivinski & Miles, 1997a): the identification of external drivers and influences; the identification of the objectives and values of the organization; the identification of the work required to achieve objectives and values; and, the identification of the competencies required to accomplish the work.

Based on this approach, we can assume that external drivers such as globalization, technology, downsizing, and diversity impact on both the public and private sectors. However, there are differences in the values and objectives of organizations in the public sector compared to those in the private sector. Public sector organizations are more values-based since their activity and their functions are related to the public good. They operate within a legislative framework and are responsive to citizens of the state. Public sector organizations are moving towards being more results-based and skills-based, while still attempting to retain their values-based focus (Boyatzis, 1982).

Alternatively, private sector organizations have as their objective to make a profit. As a result, they value specific business knowledge competencies relevant to the company’s business lines. They are moving towards defining values such as embracing diversity in their workforce and promoting family/work balance. Both sectors are striving towards becoming learning organizations and instilling leadership at all levels. It is
evident that public and private sector competencies requirements are converging as the public sector adopts private sector business models and the private sector becomes more citizen-focused to remain competitive. Appendix 3 provides examples of competency profiles of several public sector organizations: the public service organizations of the United States, the United Kingdom, Australia, New Zealand, and of several private sector organizations.

In summary, there are several reasons why the competencies required for work may differ between the public and private sectors. First, the objectives of the public and private sector may differ. While the primary focus of the public sector is the common good, for the private sector it is profitability. In addition, the environments of the public and private sector are different. Organizations in the private sector have ready access to timely performance indicators, such as profits, revenues, and market share. The nature of work, the structure of jobs, and the measures of performance used in the public sector do not allow for as clear and quick feedback on performance. Furthermore, there are differences in time horizon, institutional response time, and policy-directed objectives (Boyatzis, 1982).

While there are important differences between the two sectors, there are also important similarities, which may result in similar competencies being required to accomplish the work in the two sectors. Both are exposed to the same external drivers, in particular globalization, rapid technological change, downsizing, and increasing cultural diversity. Neither sector is divorced from society as a whole, nor from each other, as there are significant interactions between the two sectors. For example, the public sector
through its power to tax, regulate, and disperse public funds has a significant effect upon the private sector's pursuit of its objectives. In turn, actions of the private sector may assist or hinder significantly the public sector's success in achieving its objectives. Increasingly, the public and private sector are collaborating in service delivery, through contracting out and other partnership arrangements. As another example, changes in private sector management techniques have influenced public sector management practices.

21st-Century Forces

To be able to define the leadership competencies required for the 21st century, it is important to understand the unique and unprecedented nature of the changes taking place today. The 21st century is defined by interconnectedness. A new global picture of reality is emerging that, as Terry Mollner (cited in Renesch, 1992) indicates, is a new system formed beyond capitalism and socialism. Basic to this "third way" is a shift from a Material Age world view to a Relationship Age world view. In the former, the universe is a collection of separate parts where there is competition, based on self-interest. In the latter, the universe is comprised of connected parts that cooperate in the interest of the whole. Globalization, technology, downsizing, and cultural diversity are key interrelated components that are contributing to this new world order. Understanding this environment is the first step in identifying the competencies required for future success.

Globalization

For centuries, the economies of countries were largely self-sufficient and trade was limited to areas where transportation made access possible. The emergence of
communications technology and efficient transportation brought with it interdependence and the emergence of a borderless economy. Events that occur far from one's country have an immediate impact at home. For example, the recent Asian economic crisis affected the economies of the world. Corporate competition and cooperation are now global in scope. Lee Iacocca (McFarland, Senn, & Childress, 1994) marks the end of the Cold War as the event that is moving us to one world. Symbolically, globalization came to being in the mid-1980s (McFarland et al., 1994; Pettigrew, 1999) the day the three major stock exchanges were linked electronically, enabling stock and commodities markets to trade 24 hours a day, 7 days a week.

It is clear that this interconnectedness has changed the nature of corporate competition, increased the complexity of issues, accelerated the pace of change, and contributed to the de-layering of organizations. This set of impacts has resulted in a world where leaders have to learn to cope with continual uncertainty.

Furthermore, the nature and magnitude of globalization have altered the relationship between business and the state. Prior to globalization, the state's vertical power was critical for the determination of military and economic choices. International relations were determined between nation states. For example, treaties were commonly negotiated on a bilateral basis between nation states, consistent with the understanding that each nation state controlled choices within its border in a manner that could honor the obligations of the agreement. This simple formula is clearly altered by the rise of global competition, mergers, and the increased presence of transnational strategic alliances (Pettigrew, 1999).
With globalization, the strength of the market is derived from its horizontal interdependence. This merging of economic spaces is occurring at the same time as there is a dismantling of the vertical power of the state (Farazmand, 1999; McFarland et al., 1994; Pettigrew, 1999). This imbalance is creating “a major change in the configuration of public-private spheres in favor of the globalizing corporate sector” (Farazmand, 1999, p. 11). State efforts have been redoubled to find means to become more horizontal to maintain influence. This has created a concerted attempt to shift towards the professionalization of public administration (Farazmand, 1999), but at the same time has resulted in state efforts to create supranational organizations such as the World Trade Organization.

The total impact of globalization is still to be determined. What is indisputable, however, is that it is causing a transformation and realignment of activity and relationship in and between every organization—public or private.

Technology

“New technologies are compressing time and distance, diffusing knowledge, transforming old industries, and creating new ones at a pace that is hard to grasp” (Opstal, 1998/99, p. 2). Jeremy Rifkin (1995) warns that this “Third Industrial Revolution”, while creating a new knowledge economy, will displace many jobs and mark the end of work. Computers have revolutionized the nature of work. In 1920, 85% of the cost of manufacturing an automobile went to workers and investors. By 1990, they were receiving less than 60% (Reich, 1992). The knowledge workers, the engineers, financial
analysts, designers, are the new elite. But the dawn of computers over the last 30 years has also demanded much of managers and decision makers. This is evidenced by the results of a recent survey of 365 public and private sector Information Technology (IT) executive managers, which indicated that one third of all IT projects were canceled before completion. The Standish Group estimates that American companies and agencies spent $81 billion on canceled IT projects (Brown & Brudney, 1998). “Current senior IS [Information System] executives who have not broadened their own knowledge, skills, and experiences in business operations, strategy, and management should gain these valuable perspectives” (Applegate & Elam, 1992, p. 13).

John Scull notes that in this age the strategic resources are no longer coal, oil, and wheat, but “the ideas and knowledge that comes out of our minds” (cited in McFarland et al., 1994, p. 43). Information is the germ of ideas and the Internet provides access to information to a rapidly increasing population. The growth is phenomenal—the number of individuals online increased from 26 million in 1995 to 205 million in 1999, and is projected to increase to 350 million by 2005 (Nua Internet Survey, 1999a). The Internet is more than information, it is also the new market place. Online retail sales are estimated to be $US66.0 billion in 1999 and projected to increase to $US1,234 billion by 2002 (CyberAtlas, 2000a). The next wave of access to the Internet is wireless portal users. With this technology, it will be possible to “deliver time-sensitive, localized and customized content to a variety of devices ... in a mobile environment” (CyberAtlas, 2000b). The number of wireless subscribers is estimated to be 300,000 in 2000 and projected to increase to 24.8 million in 2006 (CyberAtlas, 2000a). Clearly this explosion
in technology and information fuels the new global economy. The speed of access to information and the diffusion of access to millions of people presents challenges to leaders. Hoarding information is no longer power. Sharing information and using it to add value is the challenge of today. Under these circumstances, the talent is the arena of competition.

Long-term competitive success requires access to the best and the brightest globally. Without people to create, apply and exploit new ideas, there is no innovation process. Capital and information and even manufacturing may move across borders, but the talent pool needed to facilitate innovation does not transfer as readily. (Opstal, 1998/99, p. 6)

But even with a talent pool and access to information, there is a continuing debate as to the outputs from technology. Attwell and Rule (1984) noted that people remain so willing to speak and write as though the overall effects of computing technologies were a foregone conclusion. But there is a gap between technology and improved productivity. Drucker (1995), Keen (1981, 1986), and Brown and Brudney (1998) indicate that there is a need to understand the gap between investments in technology and performance. And modern leaders will have to rise to this challenge.

Downsizing

The layoffs of the 1980s have changed not only the shape of organizations, but the social contract between employers and employees. “The average American 32 year-old has already worked for nine different jobs. Workers today fantasize not about landing a ‘dream job’ but about having a ‘portfolio career’—‘one dream job after another’” (Wooldridge, 2000, p. 82). According to McGoon (1994), in the future, employees who
stay current with their skills, who contribute measurable value to their organizations year after year, and who develop new skills will be rewarded—unlike the past where loyalty was rewarded.

Organizations restructure or re-engineer to increase efficiency, reduce payroll costs, shed redundancy after a merger or takeover, or contract out functions to stay focused on competencies. Some feel that the major challenge for business is to continue to improve business position with fewer employee dislocations (Abbasi & Hollman, 1998; Pfeffer, 2000, as cited in Wooldridge, 2000). Others are of the view that the "company man" days rewarded longevity rather than value added (Kanter, 2000; McGoon, 1994).

Kanter states that in this environment companies must earn loyalty. "Building long-term commitment depends on four things: the nature of the work itself, the opportunity to grow, the chance to speak up and be listened to, and the feeling of making a difference" (Kanter, 2000, p. 82). There is no doubt that in the first waves of downsizing, there was "a loss of cumulative skills and experience of those who endure the wrenching human drama of losing their job" (Abbasi & Hollman, 1998, p. 4).

The outcries and conflict that characterized the layoffs of the 1980s and early 1990s are muted. Labor unions, instead of protesting, are more likely to help laid-off workers make the transition to other jobs. Executives are more likely to blame global forces rather than the need for larger profit margins in their decisions to downsize (Uchitelle, 1998b).
While reorganization may have occurred for the most part for reasons of profit or cost reduction, it also created flatter organizations or horizontal organizations (Jacobs & Rao, 1995; Ostroff, 1995). Post-downsizing, the need to manage differently became apparent. Imperial Oil after three downsizings began to focus on helping the organization rationalize the work to the core. Imperial is rethinking the "old traditional supervisory model". The manager of executive development says, "we are starting to learn some things about what is really crucial in a leadership context". Hierarchical reporting will give way to teams, representing a mix of disciplines. With fewer resources, the amount of time managers can devote to their staff decreases their need for more autonomy for staff (Lorine, 1991). Post-downsizing, managing a flat organization requires a complete overhaul of the culture of the former pyramid structure.

Companies have to organize workers into self-managing teams, senior managers must relinquish control, and lower-level managers must take responsibility for wider issues (Abramson, 1996). All these managerial changes may seem obvious but they demand a new set of leadership competencies to succeed.

**Diversity**

Technological advancements in transportation, communications, and information have contributed to the creation of a global economy that is complex. This new world is still emerging and, as a result, the rate and nature of change it presents are redefining leadership and work and the structure of organization. As was noted above, the pyramid organization is giving way to the horizontal organization. Talent is more
valued than seniority. "Today's workforce has also changed significantly from six perspectives: age, gender, culture, education, disabilities, and values" (Jamieson & O'Mara, 1991, p. 6).

Workforce diversity will be a key driver in understanding the leadership competencies that will be required in the 21st century. By briefly reviewing some key components of diversity such as age, gender, and culture, the scope and importance of diversity for tomorrow's leader can be established. The U.S. Bureau of the Census predicts that the age distribution of the workforce will change in the next 20 years. The prime-age labor force will shrink while the workforce over the age of 55 will begin to increase. For example, in 1990 one in nine Americans were over age 65. By 2020, one in six Americans will be over 65. This increase is being created by three phenomena: the Baby Boom, the Baby Bust, and advances in health care (Jamieson & O'Mara, 1991).

The Baby Boom (1947-1966) cohort will exert a strong influence on public policy and workforce demographic shifts. Canada had the strongest baby boom in the industrialized world.

"The largest single-year age group in the mid 1990s is those born in 1961" (Foot & Stoffman, 1996, p. 18). The Baby Bust (1967-1979), a decline in birth rate, is attributable to two main factors: the introduction of the birth control pill in 1961 and the increase in the participation of women in the labor market (Foot & Stoffman, 1996). Foot adds another cohort that he named the baby-boom echo (1980-1995). These are the children of the boomers. This cohort and the other two demographic shifts combine to create a workforce where increasingly younger persons will manage older persons.
Career development for baby boomers will become increasingly lateral; competition to attract and retain entry-level workers will be fierce (Jamieson & O'Mara, 1991).

In addition to the birth patterns of the population, shifts in the gender dimension of the population can be seen through increasing participation of women in the labor force. This has been the most dramatic change in the workforce mix. U.S. data indicate that while their share of the population has not changed significantly, their workforce participation numbers have almost doubled since 1970 (Deavers, Lyons, & Hattiangadi, 1999). Participation of married women with children has risen from 28% in 1960 to over 70% in 1998. As women form a greater proportion of the workforce, and to ensure that their talents and contribution to the productivity of the organized are maximized, it will be important to meet three challenges of gender diversity in the workforce (Jackson & Associates, 1992; Johnston & Packer, 1987; Schwartz, 1989):

1. ensuring that women's talent and competencies are fully utilized
2. removing the artificial barriers of male-dominated organizations
3. adjusting to the fact that women shoulder a disproportionate share of the responsibility for family care, and ensuring that the leave policies, work flexibility, and artificial promotion restraints are reformed.

Finally, racial and ethnic diversity in the workforce has increased through immigration. In the U.S., immigration has accounted for more than 50% of the increase in the workforce in the 1990s (Deavers et al., 1999). In both the U.S. and Canada, about half of all immigrants originated from northern Europe in the 1950s and 1960s. In the later 1960s and 1970s, immigrants were more likely to be from southern Europe.
including Greece, Spain, and Portugal. Beginning in the 1970s and 1980s, and culminating in the 1990s, southern Asia became the main source of newcomers to both Canada and the U.S. In the late 1990s and into the next century, it is predicted that Latin America will increasingly become Canada’s main source of immigrants. When people with different habits and world views are in the workplace, misunderstandings and conflicts occur. Some writers question whether cultural diversity is anything new. In the U.S., the proportion of the population that is African-American has remained fairly stable while the number of immigrants entering the country is only slightly higher (Richman, 1990). However, there are other factors to take into account other than percentage of cultures in the population. In the U.S., the affirmative action era has increased integration in areas where African-Americans were not traditionally employed (Jackson & Associates, 1992). Also, as was noted above, the source countries of immigrants are much more varied than at the turn of the century. Furthermore, with the creation of more horizontal organizations and team-based management styles, the interaction of different cultures increases. “Diversity describes the make-up of the group. Inclusion describes which individuals are allowed to participate” (Miller, 1998, p. 1). Cox (1995) indicates that diversity in the workplace potentially lowers members’ morale and makes communication more difficult. One empirical study indicates that heterogenous groups experience more turnover than homogenous groups (Jackson et al., 1991). Creating an inclusive organization is therefore important and difficult. “Organizations are beginning to identify diversity as a potential asset and are making inclusion of differences a part of their culture and success. Most organizations however require a fundamental culture change to value difference as an asset” (Miller, 1998, p. 4).
Introduction

Globalization, technology, downsizing, and diversity are creating an increasingly complex environment of rapid change, and driving organizations to become less hierarchical with more emphasis on teamwork.

The leadership competencies required to succeed in this fast-changing, unpredictable environment are constantly being redefined. In fact, both the structural changes in organizations and the complexity of the issues indicate that no one individual, or one trait or behavior or situation, can be sufficient for success in this environment.

The interconnectedness of our global community requires an interdependent view of leadership. This approach is being critically examined by a wide number of academic practitioners (Bennis, 1994, 1995, 1997; Covey, 1992; Hamel & Prahalad, 1994; Kotter, 1995, 1996; Senge; 1994).

In this section, we will discuss several surveys of leaders. The first is a general competency model developed by Spencer and Spencer (1993). The second is a survey by Duncan and Harlacher (1991) designed to determine the competency profile of leaders in an educational setting. Donnelly and Kezbom (1994) investigated critical leadership qualities required for effective project management. Watson Wyatt (1998) provides a competency-based leadership framework that is global in scope. Finally, this section ends with a survey conducted by Diaz (1999), designed to determine the competency profile required for human resource managers in the 21st century. The Diaz
work is particularly relevant since human resource specialists implement the selection and recruitment strategies related to a particular competency profile and are more recently part of the decision-making process for the development of the workforce.

**Spencer and Spencer: A General Model**

Spencer and Spencer (1993) present a series of competencies that they and other researchers see as increasingly important for executives, managers, and employees in organizations in the future. These perspectives are based on external drivers almost identical to those discussed previously.

For executives, these competencies consist of strategic thinking, change leadership, and relationship management. For managers, these consist of flexibility, change implementation, entrepreneurial innovation, interpersonal understanding, empowering, team facilitation, and portability. Spencer and Spencer (1993) provide detailed descriptions of these competencies.

From a comprehensive review of the competency research literature, Slivinski and Miles (1997a) conclude that, although terminologies for competencies differ across profiles and time, the constructs underlying successful performance are generally equivalent. They argue that the focus should be on the understanding rather than the nomenclature (Slivinski & Miles, 1997a).

Accordingly, for the purpose of the survey undertaken by the authors, the competencies identified by Spencer and Spencer (1993) as being increasingly important in the future for executives and managers were redefined to terminology in more common
usage. Work motivation under time pressure, which was identified by Spencer and Spencer (1993) as increasingly important only for employees, was also included. In addition, ethics and base job requirements of organizational (administrative) ability and business/technical knowledge were added.

The definitions for teamwork, visioning, organizational, interpersonal relations, communication skills, stamina, ethics, and values are those used by the Public Service Commission of Canada. This agency is legislatively responsible for promotion, recruitment, and development of public service employees of the Government of Canada in accordance with the principle of merit. Problem solving, ability to learn, entrepreneurial competencies, and negotiation/consultation/engagement are defined by the Public Service Commission as subsets of cognitive capacity, behavioral flexibility, and communications, respectively. Teaching and business/technical knowledge, as well as cosmopolitan/world view, were added to test their continued applicability in the 21\textsuperscript{st}-century environment. Table 1 provides a comparison of the Spencer and Spencer competency model and the profile used in the survey for this thesis.

**Duncan and Harlacher: Competencies for an Educational Setting**

For example, Duncan and Harlacher (1991) conducted a survey to determine a competency profile for an ideal executive leader of an American community college for the 21\textsuperscript{st} century. They surveyed the Chief Executive Officers of 10 institutions. The results of this survey were characterized into five dimensions: (1) institutional vision and revitalization--strategic analysis of the long-term impact of pending decisions; (2) ethical
Table 1. Comparison of Competency Profile

<table>
<thead>
<tr>
<th>Spencer and Spencer Competency</th>
<th>Competency Used in Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic thinking</td>
<td>Problem solving (analytical, decisive, judgment, innovative)</td>
</tr>
<tr>
<td></td>
<td>Ability to learn (integrative, intelligence, change agent)</td>
</tr>
<tr>
<td>Change leadership</td>
<td>Vision (creativity)</td>
</tr>
<tr>
<td></td>
<td>Communications skills</td>
</tr>
<tr>
<td>Relationship management</td>
<td>Interpersonal (relationship, collaborative, serving others)</td>
</tr>
<tr>
<td></td>
<td>Negotiation/consult and engage</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Ability to learn (integrative, intelligence, change agent)</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial (risk taker, experiment)</td>
</tr>
<tr>
<td>Change implementation</td>
<td>Communications skills</td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>Teaching (coaching, mentoring)</td>
</tr>
<tr>
<td>Entrepreneurial innovation</td>
<td>Initiative (motivated)</td>
</tr>
<tr>
<td>Interpersonal understanding</td>
<td>Interpersonal (relationship, collaborative, serving others)</td>
</tr>
<tr>
<td>Team facilitation</td>
<td>Teamwork</td>
</tr>
<tr>
<td>Portability</td>
<td>Cosmopolitan/world view</td>
</tr>
<tr>
<td>Work motivation under time pressure</td>
<td>Stamina/resilience/self-renewal</td>
</tr>
</tbody>
</table>
leadership—integrating personal philosophies into the institutions’ value system; (3) institutional power and transformation—establishing an environment which fosters innovation and creative problem solving; (4) political leadership—maintaining coalitions to advance the cause of the institution; and, (5) institutional conceptualization and survival --the ability to perceive and analyze institutional issues from a global perspective.

**Donnelly and Kezbom: Competencies for Project Leaders**

Another study by Donnelly and Kezbom (1994) investigated those critical leadership qualities most important for effective project management. In this study, a distinction is made between competency and know-how. Competency was defined as "an augmentable quality of leadership that appears to be a personality construct, but is capable of modification via skills awareness and development" (Donnelly & Kezbom, 1994, p. 3). Know-how was defined as strictly learned information, that is "an element of leadership comprising a body of knowledge that is largely learned via education, training and on-the-job experiences" (Donnelly & Kezbom, 1994, p. 3). This study indicated that, in the future, more and more organizations will have matrix structures, with fewer hierarchical structures and largely composed of horizontal teams. There was a marked distinction between those subjects of the study that had matrix or hierarchical experience. Those in hierarchical structures ranked know-how higher than competencies relative to matrix organizations. This study concluded that project leaders “in addition to being astute at managing subordinates must be more analytical, more integrative, more
Watson Wyatt: Global Competencies

Watson Wyatt (1998), a private sector managerial consulting firm, conducted a survey of 11,000 employees in the U.S. and Canada, as well as a survey of 2,000 senior managers from 24 countries around the world to update a 1977 model of a competency-based framework developed by Dalton, Thompson, and Price (1977). They assumed that individuals progressed through competency stages linearly: stage 1: following directions—the apprentice; stage 2: contributing independently—the colleague; stage 3: contributing through others—the mentor; and, stage 4: influencing organizational direction—the sponsor. Watson Wyatt's motivation for updating this study is that in the 20 years since the original study, organizations have become flatter and less hierarchical. Also, the importance of information and technology has increased the number of knowledge workers. The study developed what they term the "value-creation continuum".

A key difference between Watson Wyatt's perspective and that of Dalton et al., is that individuals, instead of following a linear progression through competencies, can contribute on multiple dimensions, depending on their role at a given moment. In the Watson Wyatt model, a new dimension has been added called contributing through expertise—dimension three. This was added to capture, particularly, workers in technology fields. They added another factor to the fourth dimension—contributing through others—which is the ability to accomplish things through others, which is a higher standard than merely being proficient in more than one area. A fifth dimension has been added called contributing through vision. This is seen as higher than
the sponsor role as it defines individuals who not only have a significant influence on the whole organization, but whose organization extends outside their work group.

The Watson Wyatt study recognizes the pace of change and the complexity of the world today through its flexible structure through a seemingly simple but profound shift from the concept of stages to dimensions. It recognizes that in the 21st century individuals move back and forth through dimensions as their roles or positions change. An individual may return to dimension one or two when he or she needs to learn a new technology or role and then move back to dimension three, four or five as knowledge, skills and expertise grow. (Watson Wyatt. 1998, p. 6)

**Diaz: Competencies for Human Resources Specialists**

Diaz (1999), in his March 1999 study of challenges facing Venezuelan human resource managers in the 21st century, surveyed the opinions of a sample of 400 individuals, composed of executives, human resource practitioners, university professors, and students. In his findings, Diaz found no significant differences in the opinions of these groups of participants about the skills required for the 21st century. "Interpersonal skills such as teamwork, achievement motivation, pro-active attitude, and ethical values; and directive skills such as vision, leadership, entrepreneur spirit, able to develop strategic alliances, were ranked extremely important" (Diaz, 1999, p. iv). Ranked low in importance were knowledge of specific areas, such as psychology, labor statistics, and statistics. Diaz sets his study against the backdrop of a number of trends affecting Venezuela, including globalization, an increasingly multi-cultural workplace, the rapid growth of new information technology, and increased organizational downsizing. These
are similar to the drivers that motivated the study of future competencies of Watson Wyatt and the hypotheses of Spencer and Spencer.

In response to ongoing, increasingly rapid change, organizations of the future will be less hierarchical, more organizationally flexible, and include more horizontal teams (Spencer & Spencer, 1993). Just as IBM had by the beginning of the 1990s trained managers for a world that no longer existed, leaders to be successful in the future must have the competencies necessary for both the continually changing environment of the future and the organizational structures that will need to be adopted to function effectively. In a world where relationship defines success and where change is at an increasingly fast pace, tomorrow’s leaders must be able to deal with ambiguity while maintaining multiple relationships—both horizontally and vertically.
CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the design and methodology of the study. This study responds to the following four research questions:

Research Question 1. Has there been a shift in public sector leaders’ perception as to the leadership competencies required in the past as compared to the leadership competencies required for the 21st century?

Hypothesis 1. The ratings of leadership competencies required will differ from the past as compared to the future.

The analysis for this research question was based on an assessment of the difference in perception that leaders express with respect to past and future leadership competencies. The following two questions guided the data analysis regarding this hypothesis:

1. What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders 20 years ago?

2. What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders in the 21st century?
Research Question 2. If there is a shift in perceptions, are external environmental drivers, globalization, technology, downsizing, and diversity related to that shift?

Hypothesis 2. Leaders will rate the external drivers as influencing leadership competency requirements.

Research Question 3. Is there a divergence or convergence of views between leaders in the public sector and the general public as to the required leadership competencies in the 21st century?

Hypothesis 3. Leaders' ratings of leadership competencies required for the 21st century will differ when compared to the general public's ratings of leadership competencies required for the 21st century.

In addition, consensus between groups will be tested to determine:

Research Question 4a. Is there a consensus of views between leaders in the public sector and those in the private sector as to the size of the shift between 20 years ago and in the 21st century?

Hypothesis 4a. The public sector's size of shift between past and present required leadership competencies will differ from that of the private sector's.

Research Question 4b. Is there a consensus of views between public and private sector leaders, and the general population on which, if any, of the leadership competencies are the most important?

Hypothesis 4b. Each group will perceive some leadership competencies as more important than others.
It is hypothesized that leaders in both sectors will differ from the general population.

Methodology

To facilitate the management of the research, this study may be delineated into four phases:

1. Identifying the methodology and the survey pools (public sector leaders, general public)

2. Developing the survey instrument and identifying the leadership competencies to be investigated

3. Administering the survey to the specific populations

4. Analyzing the results:
   a. Public sector leaders
   b. Comparing the results obtained from the public sector leaders’ survey question 2 with results obtained from the general public population, identifying any similarities, and reviewing any differences
   c. Comparison of public sector leaders’ results with results from the private sector leaders’ survey.

The four phases of the research are explained and detailed below.

Phase 1: Identifying the Methodology and the Survey Pool

In order to develop an appropriate instrument for identifying current leaders’ perceptions of the competencies for the 21st century, two distinct methodologies were considered: the Delphi technique and the survey method.
The Delphi technique has been used quite successfully when attempting to ascertain views on an issue or problem related to the prediction of the future. The technique also affords an opportunity to develop a consensus of views for topics which are highly subjective. The purpose of the Delphi method, which was developed in 1953 by the Rand Corporation to ascertain if there was a consensus view among military experts on the issue of the atomic bomb, is to elicit perceptions or judgments held by experts knowledgeable in a specialized area (Boberg & Morris-Khoo, 1992). However, given that the purpose of this research was to establish whether it was possible to identify some generic attributes for leadership in the 21st century, the possibility of finding experts who would provide the breadth of experience without being linked too closely to a particular field proved difficult. Since the authors could not identify any specific empirical base for the study, it was decided that while a qualitative study might have provided a more nuanced description of the competencies for the 21st century, a quantitative survey based on the shifting perceptions of Canadian leaders would make the greatest contribution to the field in ensuring baseline data for further study in the field.

Quantitative Survey

For the purposes of this study, there were two target survey populations: the public sector leaders population, and the general public population. The following describes each sample population and the survey methodology employed.

Public sector leaders population

In responding to the first research question (Has there been a shift in public sector leaders’ perception as to the competencies required in the past as compared to the
competencies required for the 21st century?), the survey pool used for this study comes from an existing database of senior public servants at municipal, provincial, and the federal levels of government. Table 2 delineates the various clusters of individuals that made up the survey pool, and the proposed basis for sampling for the survey. As is noted in Table 2 where the sample size was not based on a census, the methodology for choosing the sample has been identified.

Table 3 delineates the response rate for the 1999 survey among the various sectors in the public sector target population.

A 12% response rate is within the 10-15% range common to mail-in surveys (Boyd & Westfall, 1972; Kanuk & Berenson, 1975; Luck, Wales, & Taylor, 1970; McDaniel & Rao, 1980; Wunder & Wynn, 1988; Yu & Couper, 1983).

The response rate of 12% was deemed acceptable based on historical data for this database. Table 4 provides the most recent response history of the Rethinking Government national survey for the public sector target sample.

While the sample was not stratified by gender, age, or region, Tables 5, 6, and 7 describe the gender, age, and educational level of the sample population.

General public sample population

In order to consider the third research question (Is there a divergence or convergence of views between leaders in the public sector and the general public as to the required leadership competencies in the 21st century?), the results of the public sector leaders' survey were compared to a sample of the general public (n=1,503). The general
Table 2. Sample Size and Selection Criteria for the Public Sector Leaders

<table>
<thead>
<tr>
<th>Leaders</th>
<th>Selection Criteria</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal MPs</td>
<td>All</td>
<td>431</td>
<td>431</td>
</tr>
<tr>
<td>Federal DMs/ADM</td>
<td>All</td>
<td>301</td>
<td></td>
</tr>
<tr>
<td>Federal MPs</td>
<td>All</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Provincial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial MPPs</td>
<td>Random All DMs/ADM</td>
<td>1,390</td>
<td>758</td>
</tr>
<tr>
<td>Provincial DMs/ADM</td>
<td>All DMs/Random ADM</td>
<td>765</td>
<td></td>
</tr>
<tr>
<td>Provincial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial MPPs</td>
<td>Random All DMs/ADM</td>
<td>765</td>
<td></td>
</tr>
<tr>
<td>Provincial DMs/ADM</td>
<td>All DMs/Random ADM</td>
<td>625</td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mayor/Reeves</td>
<td>Descending city size</td>
<td>480</td>
<td>411</td>
</tr>
<tr>
<td>Municipal clerks</td>
<td>Descending city size</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>Municipal clerks</td>
<td>Descending city size</td>
<td>225</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Response Rate for the 1999 Survey Among the Various Sectors in the Public Sector Target Population

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Federal</td>
<td>12.7</td>
</tr>
<tr>
<td>Total Provincial</td>
<td>13.6</td>
</tr>
<tr>
<td>Total Municipal</td>
<td>16.7</td>
</tr>
<tr>
<td>Total Public Sector</td>
<td><strong>14.2</strong></td>
</tr>
</tbody>
</table>
Table 4. Response History of the Rethinking Government National Survey for the Public Sector Target Sample

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>14</td>
</tr>
<tr>
<td>1997</td>
<td>12</td>
</tr>
<tr>
<td>1998</td>
<td>17</td>
</tr>
<tr>
<td>1999</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Table 5. Gender Distribution of Public Sector Leaders

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>69</td>
</tr>
<tr>
<td>Female</td>
<td>31</td>
</tr>
</tbody>
</table>
Table 6. Age Distribution of Public Sector Leaders (n=227)

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;35</td>
<td>2.6</td>
</tr>
<tr>
<td>35-44</td>
<td>18.1</td>
</tr>
<tr>
<td>45-54</td>
<td>55.1</td>
</tr>
<tr>
<td>55-64</td>
<td>21.1</td>
</tr>
<tr>
<td>65+</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Table 7. Educational Achievement of Public Sector Leaders (n=227)

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduated from high school (grade 12-13)</td>
<td>3</td>
</tr>
<tr>
<td>Vocational/technical college or CEGEP</td>
<td>2</td>
</tr>
<tr>
<td>Trade certification</td>
<td>1</td>
</tr>
<tr>
<td>Some university</td>
<td>8</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>25</td>
</tr>
<tr>
<td>Professional certification</td>
<td>17</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>44</td>
</tr>
</tbody>
</table>
public survey sample of 1,503 was randomly generated from the Canadian population of persons over the age of 16 and was conducted by means of a centralized computer-assisted telephone interviewing facility. The sample was stratified along age, gender, and regional lines (Atlantic, Quebec, Ontario, Prairies, and British Columbia) as described in the following tables (Tables 8, 9, 10).

The full sample yielded a margin of error of +/- 1.8 percentage points, 19 times out of 20.

The research question noted above was embedded in the Ekos Research Associates Rethinking Government survey and represented 1 of the 21 questions posed in the survey.

Telephone Survey

The intent is to compare the results of public sector leaders' perception of required leadership competencies for the 21st century with results obtained from a telephone survey of the general population's perception of the requirement for 11 of the same leadership competencies as were tested in the public sector leaders survey. Not included in the survey of the general population were: interpersonal, teamwork, business/technical knowledge, and vision.

Private sector leaders population

In responding to the fourth research question (Is there a consensus of views between public and private sector leaders, and the general population on which, if any, of the leadership competencies are the most important?), data from a separate research study

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Table 8. Gender of General Population Telephone Survey \((n=1503)\)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>51</td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
</tr>
</tbody>
</table>

Table 9. Age Breakdown of the General Population Sample \((n=1499)\)

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>17</td>
</tr>
<tr>
<td>25-34</td>
<td>18</td>
</tr>
<tr>
<td>35-44</td>
<td>22</td>
</tr>
<tr>
<td>45-54</td>
<td>20</td>
</tr>
<tr>
<td>55-64</td>
<td>7</td>
</tr>
<tr>
<td>65+</td>
<td>15</td>
</tr>
<tr>
<td>DK/NR*</td>
<td>1</td>
</tr>
</tbody>
</table>

* don’t know, no response
were used (Watson, 2000). The Private Sector Leader survey data come from an existing pool of senior Canadian leaders including Chief Executive Officers (CEOs) and senior executives from the private sector. A sample of 960 CEOs of the top economic performing Canadian companies, as identified by total revenues, was sent a survey questionnaire with a mail-in response.

The sample was not stratified by gender, age, or region. Table 11 delineates the response rate for the 1999 survey between private sector companies with differing numbers of employees.

A response rate of 12.6% was deemed acceptable based on historical data for this group which has been identified by Ekos for a longitudinal study. Table 12 provides the most recent response history of the Rethinking Government national survey.

Phase 2: Developing the Survey Instrument and Reviewing Competencies

Survey Instrument

Mail-in "Public Sector Survey"

The survey instrument was developed as a mail-in survey. Given the time constraints of the individuals being surveyed and the number of surveys these individuals see in any given period, the length and the presentation of the questionnaire were key considerations.

Respondents were asked to use a Likert scale to rank their perceptions of the leadership competencies required 20 years ago and those that will be necessary 20 years from now. The researcher chose a Likert scale because of the advantages of this scaling
Table 10. Sample Stratified by Region \((n=1503)\)

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia</td>
<td>13</td>
</tr>
<tr>
<td>Alberta</td>
<td>10</td>
</tr>
<tr>
<td>Prairies</td>
<td>7</td>
</tr>
<tr>
<td>Ontario</td>
<td>38</td>
</tr>
<tr>
<td>Quebec</td>
<td>24</td>
</tr>
<tr>
<td>Atlantic</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 11. Response by Number of Employees \((n=121)\)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Number</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>38</td>
<td>&lt;100</td>
</tr>
<tr>
<td>29</td>
<td>35</td>
<td>100-500</td>
</tr>
<tr>
<td>40</td>
<td>48</td>
<td>over 500</td>
</tr>
</tbody>
</table>
Table 12. Response History of the Rethinking Government National Survey

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>14</td>
</tr>
<tr>
<td>1997</td>
<td>12</td>
</tr>
<tr>
<td>1998</td>
<td>17</td>
</tr>
<tr>
<td>1999</td>
<td>14.2</td>
</tr>
</tbody>
</table>

...technique. First, individuals typically have the same understanding of the differences between the points on the scale which enables comparison of rankings. Second, this approach has been found to yield data which can be analyzed by statistics for normal distributions. For both reasons this type of scale provides informative and uncomplicated data (Arnold, McCroskey, & Prichard, 1967; Edwards, 1957).

A sample questionnaire is provided in Appendix 4 of this paper.

Reviewing and identifying the competencies

The 15 competencies were identified by the sponsors of the research, and therefore closely track the competencies currently used in the Canadian federal public service. The competencies, including teamwork, problem solving, ability to learn, communication skills, vision, interpersonal, entrepreneurial initiative, stamina, ethics, organizational and negotiation/consult/engage, are identified as part of the Public Service Commission’s competencies for public service managers. In addition, business/technical
knowledge, cosmopolitan/world view, and teaching were added to be consistent with the literature.

**Phase 3: Administering the Survey**

**Mail-in Leaders Survey**

The survey was sent by mail to all leaders in the survey pool in September 1999 to maximize the response rate, by avoiding both the summer holiday season and any fiscal year-end considerations. Included in the package was a letter describing the study, the questionnaire, and the response envelope. Respondents were reminded to complete the survey 21 days after the initial mail-out. Once a 12-15% response rate had been achieved and a minimum of 4 weeks had elapsed, the results were tabulated for analysis. The sample of public sector leaders for the purposes of this study included 227 individuals ($n=227$). The sample of private sector leaders for the purpose of this study included 121 individuals ($n=121$) (Watson, 2000).

**Telephone Survey of a Random Sample of the General Population**

The telephone survey of the general population with respect to question 2 was embedded in an existing Rethinking Government survey, with a sample population of 1,503 ($n=1,503$). This survey was administered by Ekos Research Association.

The results of this national random sample of Canadians over the age of 16 were gathered between July 15 and July 30, 1999. The time lag between the mail-in survey and the telephone survey is not deemed to be significant as there were no outstanding short-term economic or political events during the period that would have influenced perceptions.
Phase 4: Analyzing the Results

In analyzing the results, the Statistical Program for Social Sciences (SPSS) was used. The results were tabulated, with the data analyzed to respond to the research questions.

Public Sector Leaders’ Analysis

The focus of the analysis was to determine if among the sample population there has been a shift in perception as to the required leadership competencies. The comparison of the leaders’ perceptions of the required skills for leaders 20 years ago and their perceptions of the required skills for leaders in the 21st century provides some basis to evaluate whether training and development needs of potential leaders should be altered as a result of the changing requirements. This analysis was completed by comparing responses and adjusting statistically for the variance in the responses.

*t*-tests for dependent paired means were applied for within group comparisons as the actual population variance is unknown. Two-tailed probabilities are reported as the direction of the differences could not be predicted from the research base for every competency.

In comparing shifts in competency ratings, only cases where a rating was provided for both 20 years ago and the 21st century were included in the analysis. To compute a mean within one time epoch, all ratings are included. In the paired *t*-test that is applied to determine the significance of changes between time epochs, only where ratings are provided for both time epochs are they included in computing a change. One effect of
paired ratings can be that means computed for each time epoch separately may not match exactly means that are based on paired ratings. For example, if a respondent rates a competency as important in the past, that rating is included in computing the mean for the past. When computing the mean difference over time, that rating would be excluded if the respondent did not also provide a rating for that competency in the future. Because some ratings that contribute to the mean in one time epoch may not be included in the computation of the shift in a competency rating, means may differ when the data contain missing cases.

The 95% confidence level was adopted as the cut-off for significance, reflecting research and publication standards (Coldeway, 1989). When probabilities were slightly above .05 but less than .10, differences were described as approaching significance.

Although there is some hesitation in applying inferential statistics such as $t$ to ordinal scale data, it is a commonly used approach for Likert data as responses are generally normally distributed and results are considered relevant for discussions of general trends (Arnold et al., 1967; Edwards, 1957).

**External Drivers Analysis**

To support the premise that changes in perceived competency requirements are related to external drivers, the leaders' ratings of the importance of each of the four drivers was analyzed. Respondents were asked to rate the importance of each external driver on a scale of 1-7, from low to high importance.
In testing for significance, the researcher chose a two-tailed \( t \)-test applied on the differences between dependent means of the external driver ratings. This test was chosen based on one group of subjects, with a repeated measure, and not more than two observations per subject (Coldeway, 1989).

Comparison of Results Between the Public Sector Leaders' Survey and the General Public

The results obtained from the public sector leaders' survey (survey question 2) were compared with results obtained for the same survey question from the General Public population survey, identifying any similarities and reviewing any differences. This analysis is important in testing how broadly the future competencies are acknowledged. In addition, this allows a comparison of individual versus organizational perspectives.

\( z \)-tests were applied on comparisons of means between groups. \( z \)-tests are commonly used when population variance is known, and \( t \)-tests when population variance is unknown. However, \( t \)-tests for differences even for independent means are based on the assumption that sample variances are equal, even though they are unknown. In this case, the variance of the general population and leaders' samples could not be assumed to be equal because the leaders, by virtue of their position, would be likely to differ in at least demographic variables, such as age or education. A modified \( z \) formula does not require the equal sample variance assumption and was therefore considered to be the more appropriate statistic. In addition, the large sample size supports the application of the \( z \) formula because convergence with population variance increases with sample size (Hogg & Tanis, 1993).
Comparison of Results Between the Public Sector and the Private Sector Leaders' Survey

The shifts in perceptions of the required competencies for leaders in the 21st century as measured by the survey of the public sector were compared to the shifts in perceptions as measured by the analysis of the private sector survey.

This analysis is particularly useful in determining if there is a convergence of perceptions by both public sector and private sector leaders as to the importance of leadership competencies for the 21st century. To the extent that both sectors are seeking to "cross fertilize" their leadership personnel, the extent to which both sectors share a common perception of the future competencies facilitates that transfer of personnel.

Ranking: Within groups

The ratings for the competencies were ranked to establish an order of level of importance. Mean rankings were tested for significance to determine if any competencies are of higher importance. This was applied for each leader's group and the general population.

To determine if any competencies were perceived as being more important than others, the mean ratings for each competency were ranked in descending order. Confidence interval comparisons were used to determine if the ranked mean for one competency rating differs significantly from the ranked mean for another competency. If the confidence intervals for two competencies overlap, it cannot be inferred that their means differ significantly. Therefore, only when the confidence intervals do not overlap can ranked means be described as significantly higher or lower than another.
Ranking: Between groups

The order in which the competencies were ranked was compared across groups to determine if both leaders groups rated similar sets of competencies as more important than other competencies. The general population's rankings were compared to the public and private sector leaders to identify organizational versus individual perspective differences.
CHAPTER 4

RESULTS

Introduction

The ratings by public sector leaders of leadership competencies were used to determine if there is a difference between perceived importance 20 years ago and in the 21st century. The hypothesis that a shift would be due to a set of external drivers was tested by public sector leaders rating the importance of each driver. To support the validity of considering public sector leaders as subject matter experts, differences between organizational perceptions, those of the leaders, and individual perceptions, those of a sample of the general population, were compared. Two additional analyses combine data from the two research studies: public sector leaders and private sector leaders. One addresses the size of shift in requirements over time: Will the changes be larger for one sector than another? The other analysis compares the top ranked competencies across groups: Is there a difference in what public and private leaders consider the most important competencies and do they differ from what individuals in the general population perceive?

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Shift: 20 Years Ago to 21st Century

*Question 1.* Has there been a shift in public sector leaders' perception as to the leadership competencies required in the past as compared to the leadership competencies required for the 21st century?

It was hypothesized that the ratings of leadership competencies required will differ from the past as compared to the future.

The analysis for this research question was based on an assessment of the difference in perception that leaders express with respect to past and future leadership competencies. The following two questions guided the data analysis regarding this hypothesis:

*Question 1a.* What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders 20 years ago?

*Question 1b.* What are the perceptions of current Canadian public sector leaders as to the required leadership competencies for leaders in the 21st century?

The importance of each competency was rated by public sector leaders 20 years ago and in the 21st century.

The variability of responses is greater for the ratings of competencies in the past as compared to the future. For the ratings of the 21st century, there is less variability especially among the top-rated competencies, demonstrating a strong consensus of views.

In examining Table 13, it is apparent that the relative ordering of importance for some competencies has changed from the past as compared to the future. For example, 20 years ago cosmopolitan/world view had the lowest mean at 3.493, whereas
Table 13. Means and Standard Deviations of the Ratings by Public Sector Leaders of Leadership Competency Requirements 20 Years Ago and in the 21st Century

<table>
<thead>
<tr>
<th>Competency</th>
<th>20 Years Ago</th>
<th>Competency</th>
<th>21st Century</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiative</td>
<td>5.486 (1.199)</td>
<td>Vision</td>
<td>6.419 (.807)</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>5.450 (1.143)</td>
<td>Communication</td>
<td>6.379 (.702)</td>
</tr>
<tr>
<td>Organizational</td>
<td>5.390 (1.188)</td>
<td>Teamwork</td>
<td>6.242 (.740)</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>5.344 (1.306)</td>
<td>Cosmo./World View</td>
<td>6.185 (.863)</td>
</tr>
<tr>
<td>Stamina</td>
<td>5.256 (1.227)</td>
<td>Ability to Learn</td>
<td>6.159 (.854)</td>
</tr>
<tr>
<td>Ethics</td>
<td>5.158 (1.381)</td>
<td>Ethics</td>
<td>6.128 (1.007)</td>
</tr>
<tr>
<td>Communication</td>
<td>4.789 (1.272)</td>
<td>Problem Solving</td>
<td>6.009 (.882)</td>
</tr>
<tr>
<td>Vision</td>
<td>4.586 (1.391)</td>
<td>Initiative</td>
<td>5.969 (.840)</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>4.574 (1.374)</td>
<td>Interpersonal</td>
<td>5.925 (.972)</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>4.561 (1.546)</td>
<td>Negotiation</td>
<td>5.797 (.947)</td>
</tr>
<tr>
<td>Negotiation</td>
<td>4.516 (1.237)</td>
<td>Entrepreneurial</td>
<td>5.661 (1.028)</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>4.491 (1.291)</td>
<td>Stamina</td>
<td>5.619 (1.065)</td>
</tr>
<tr>
<td>Teamwork</td>
<td>3.897 (1.440)</td>
<td>Teaching</td>
<td>5.489 (1.036)</td>
</tr>
<tr>
<td>Teaching</td>
<td>3.857 (1.318)</td>
<td>Organizational</td>
<td>4.991 (1.244)</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>3.493 (1.345)</td>
<td>Business/Technical</td>
<td>4.867 (1.211)</td>
</tr>
</tbody>
</table>
in the 21st century respondents gave a mean response of 6.185. With respect to business/technical knowledge 20 years ago, the mean response of 5.344 was among the top five mean scores, whereas for the 21st century this competency received the lowest mean score.

*t*-tests, two-tailed, were used to compare rating means for past and future requirements. Results are presented in Table 14. Differences were significant for all competencies with ratings higher for the 21st century than for the past across all competencies except for business/technical knowledge and organizational skills where 21st-century ratings were lower.

**External Driver Influence on Competency Requirements**

*Question 2.* If there is a shift in perceptions, are the external drivers—globalization, technology, downsizing, and diversity—related to that shift?

It was hypothesized that leaders will rate the external drivers as influencing leadership competency requirements.

It has been previously suggested that the external drivers used in this research are influencing the need for leadership competencies. To support this relationship, public sector leaders were asked to rate the importance of each external driver on the 1-7 point scale. Responses were described at high, moderate, or low points on the scale and percentages calculated for each driver at each descriptor. *t*-tests, two-tailed, were applied to the means. Data are presented in Table 15.
Table 14. Significance of Shift. Degrees of Freedom, $t$ Values and Probabilities of the Ratings by Public Sector Leaders of Past and Future Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>$df$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmopolitan/World View</td>
<td>222</td>
<td>26.782</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Teamwork</td>
<td>223</td>
<td>21.375</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Vision</td>
<td>221</td>
<td>17.946</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>222</td>
<td>16.577</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Communication</td>
<td>222</td>
<td>16.531</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Teaching</td>
<td>220</td>
<td>15.103</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Negotiation</td>
<td>222</td>
<td>12.434</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>222</td>
<td>12.056</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Ethics</td>
<td>221</td>
<td>9.834</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>222</td>
<td>9.743</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>221</td>
<td>5.751</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Initiative</td>
<td>221</td>
<td>5.424</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Stamina</td>
<td>222</td>
<td>3.165</td>
<td>$p \leq .002$</td>
</tr>
<tr>
<td>Organizational</td>
<td>221</td>
<td>-3.397</td>
<td>$p \leq .001$</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>222</td>
<td>-3.777</td>
<td>$p \leq .002$</td>
</tr>
</tbody>
</table>
Table 15. Means, Standard Deviations, and Percentages of the Ratings by Public Sector Leaders of the Influence of External Drivers on Leadership Competency Requirements for the 21st Century

<table>
<thead>
<tr>
<th>External Driver</th>
<th>Ratings</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Globalization</td>
<td>5.911 (1.014)</td>
<td>86%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>Technology</td>
<td>5.964 (1.024)</td>
<td>90%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Diversity</td>
<td>4.920 (1.386)</td>
<td>65%</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td>Downsizing</td>
<td>4.200 (1.323)</td>
<td>39%</td>
<td>32%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Comparison of mean ratings indicates that globalization and technology are considered equally important. Globalization and technology are considered to have more influence than diversity, \( t (224) = 9.303 (p \leq .000) \); \( t (223) = 9.222 (p \leq .000) \), and than downsizing, \( t (224) = 15.500 (p \leq .000) \); \( t (223) = 17.060 (p \leq .000) \). Diversity is considered to have more influence than downsizing, \( t (224) = 6.324 (p \leq .000) \).

The ranking of the drivers is significant in that some are considered more important than others; however, it should be noted that almost 40% of the sample considered even the lowest rated driver, downsizing, to have a high influence and 71% considered it to have at least a moderate influence.

**Leader and General Population Perspectives**

*Question 3.* Is there a divergence or convergence of views between leaders in the public sector and the general public as to the required leadership competencies in the 21st century?
It was hypothesized that leaders' ratings of leadership competencies required for the 21st century will differ when compared to the general public's ratings of leadership competencies required for the 21st century.

Because the external drivers' impact on the general population as well as organizations, it was important to establish that the ratings by the public sector leaders were reflecting an organizational perspective rather than that of an individual. Individuals may experience the external drivers as more general influences without consideration of specific strategic objectives, values, or work while leaders may experience them specifically as they affect their organization's objectives, values, and work. An individual may rate the importance of leadership competencies from the point of view of what they personally would need to focus on to take a leadership role, whereas an organizational perspective would frame a response in terms of the needs of the organization itself.

To determine if there were differences in the perceptions of the general population and public sector leaders, z-tests (as described previously) on the independent sample means were calculated. Results are presented in Table 16.

While it is important to note that a direct comparison between the rankings of competencies between the leaders and the general population is somewhat constrained given the fact that four of the competencies (business/technical knowledge, interpersonal, teamwork, and vision) rated by the leaders were not ranked by the general populations, it is nonetheless possible to make some general observations with respect to the comparisons between the two groups. The general population rated a number of
Table 16. Means and Standard Deviations of the Ratings by Public Sector Leaders and the General Population of Leadership Competency Requirements for the 21st Century

<table>
<thead>
<tr>
<th>Competency</th>
<th>Public Sector Leaders</th>
<th>General Population</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>6.009 (.882)</td>
<td>6.290 (.948)</td>
<td>-0.281</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>6.159 (.854)</td>
<td>6.364 (.695)</td>
<td>-0.205</td>
</tr>
<tr>
<td>Communication</td>
<td>6.379 (.702)</td>
<td>6.318 (.913)</td>
<td>0.061</td>
</tr>
<tr>
<td>Initiative</td>
<td>5.969 (.840)</td>
<td>6.170 (.991)</td>
<td>-0.201</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>5.661 (1.028)</td>
<td>5.694 (1.170)</td>
<td>-0.033</td>
</tr>
<tr>
<td>Teaching</td>
<td>5.489 (1.036)</td>
<td>5.672 (1.239)</td>
<td>-0.183</td>
</tr>
<tr>
<td>Stamina</td>
<td>5.619 (1.065)</td>
<td>5.668 (1.197)</td>
<td>-0.049</td>
</tr>
<tr>
<td>Ethics</td>
<td>6.128 (1.007)</td>
<td>6.262 (1.106)</td>
<td>-0.134</td>
</tr>
<tr>
<td>Organizational</td>
<td>4.991 (1.244)</td>
<td>5.998 (1.094)</td>
<td>-1.007</td>
</tr>
<tr>
<td>Negotiation</td>
<td>5.797 (1.947)</td>
<td>6.106 (1.022)</td>
<td>-0.309</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>6.185 (1.863)</td>
<td>5.668 (1.283)</td>
<td>0.517</td>
</tr>
</tbody>
</table>
competencies as more important for the 21st century than did public sector leaders. Of these the following were statistically significant: problem solving, \( z = -4.795 \ (p \leq .000) \); ability to learn, \( z = -3.595 \ (p \leq .000) \); initiative, \( z = -3.597 \ (p \leq .000) \); teaching, \( z = -2.646 \ (p \leq .008) \); ethics, \( z = -2.008 \ (p \leq .044) \); organizational skills, \( z = -12.171 \ (p \leq .000) \); and negotiating, \( z = -4.905 \ (p \leq .000) \).

Public sector leaders rated cosmopolitan/world view at a significantly higher rate than did the general population, \( z = 9.028 \ (p \leq .000) \).

In reporting these results it is important to note that significance is achieved even when actual mean differences are small. This results from the high degree of consensus among the raters regarding the importance of each competency for each epoch.

**Combined Data: Public and Private Sector Leaders and General Population Differences**

This section of the results combines findings from the public sector leaders group and the private sector leaders group (Watson, 2000). It has been established for both groups that there is a shift in the perception of leadership competency requirements between the past and the 21st century. It has been supported that this shift is a function, to some extent, of the set of external drivers defined for this study. Additional analysis indicates that each group of leaders differs from the general population in their perspective of how important each competency will be in the future.

Comparisons of ratings by public and private sector leaders are reported to address two issues. First, is there a difference in the size or degree of shift between these
groups of leaders, that is, is there a bigger change for leaders in one sector or the other? Second, is there a difference in which of the leadership competencies is perceived as the most important, and, does that differ from the perspective of the general population?

**Degree of Shift**

*Question 4a.* Is there a consensus of views between leaders in the public sector and those in the private sector as to the size of the shift between 20 years ago and in the 21st century?

It was hypothesized that the public sector's size of shift between past and present required leadership competencies will differ from that of the private sector's.

Data are presented in Table 17. *z*-tests (as described previously in chapter 3) on the differences in the mean differences indicated significantly different size shifts.

Public sector leaders demonstrated a larger shift in leadership requirements than did private sector leaders on vision, $z = 2.488 \ (p \leq .016)$; entrepreneurial skills, $z = 2.305 \ (p \leq .022)$; and approached significance for negotiating, $z = 1.898 \ (p \leq .056)$. Public sector leaders indicated that the difference in the requirements for these competencies will increase more so than in the private sector.

**Ranking of Competencies: Within Groups**

*Question 4b.* Is there a consensus of views between public and private sector leaders, and the general population on which, if any, of the leadership competencies are the most important?
Table 17. Mean Differences and Standard Deviations of the Shift in Ratings by Public Sector Leaders and Private Sector Leaders of Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>Public Sector Leaders Shift</th>
<th>Private Sector Leaders Shift</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork</td>
<td>2.348 (1.644)</td>
<td>2.133 (1.608)</td>
<td>0.215</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>0.559 (1.447)</td>
<td>0.567 (1.488)</td>
<td>-0.008</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>1.677 (1.511)</td>
<td>1.639 (1.454)</td>
<td>0.038</td>
</tr>
<tr>
<td>Communication</td>
<td>1.596 (1.442)</td>
<td>1.558 (1.500)</td>
<td>0.038</td>
</tr>
<tr>
<td>Vision</td>
<td>1.829 (1.510)</td>
<td>1.364 (1.718)</td>
<td>0.465</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>1.345 (1.886)</td>
<td>1.479 (1.641)</td>
<td>-0.134</td>
</tr>
<tr>
<td>Initiative</td>
<td>0.482 (1.324)</td>
<td>0.525 (1.270)</td>
<td>-0.043</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>1.103 (1.691)</td>
<td>0.678 (1.603)</td>
<td>0.425</td>
</tr>
<tr>
<td>Teaching</td>
<td>1.629 (1.803)</td>
<td>1.521 (1.473)</td>
<td>0.108</td>
</tr>
<tr>
<td>Stamina</td>
<td>0.372 (1.745)</td>
<td>0.331 (1.422)</td>
<td>0.041</td>
</tr>
<tr>
<td>Ethics</td>
<td>0.959 (1.484)</td>
<td>0.802 (1.430)</td>
<td>0.157</td>
</tr>
<tr>
<td>Organizational</td>
<td>-0.392 (1.719)</td>
<td>-0.227 (1.475)</td>
<td>-0.165</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>-0.471 (1.882)</td>
<td>-0.142 (1.502)</td>
<td>-0.329</td>
</tr>
<tr>
<td>Negotiation</td>
<td>1.291 (1.551)</td>
<td>0.975 (1.429)</td>
<td>0.316</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>2.691 (1.500)</td>
<td>2.669 (1.575)</td>
<td>0.022</td>
</tr>
</tbody>
</table>
It was hypothesized that each group will perceive some leadership competencies as more important than others.

It was hypothesized that leaders in both sectors will differ from the general population.

Public sector leaders

To determine if the ratings by public sector leaders of the leadership competencies required in the 21st century differed in terms of importance, the ratings were ranked and compared using a 95% confidence interval. Data are presented in Table 18. Organizational skills and business/technical knowledge indicate lower ratings for importance than the other competencies ($p \leq .05$).

Private sector leaders

To determine if the ratings by private sector leaders of the leadership competencies required in the 21st century differed in terms of importance, the ratings were ranked and compared using a 95% confidence interval. Data are presented in Table 19 (Watson, 2000). Private sector leaders rated a number of competencies significantly higher than others. These include vision, cosmopolitan/world view, ability to learn, communication, teamwork, and initiative ($p \leq .05$).

General population

To determine if the ratings by the general population of leadership competencies required in the 21st century differed in terms of importance, the ratings were
Table 18. Public Sector Leaders’ Ranking of Leadership Competency Requirements by Mean Ratings With Standard Deviations and Confidence Intervals

<table>
<thead>
<tr>
<th>Competency</th>
<th>Rank</th>
<th>Rating</th>
<th>Confidence Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>1</td>
<td>6.419 (.807)</td>
<td>6.313</td>
<td>6.524</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
<td>6.379 (.702)</td>
<td>6.288</td>
<td>6.470</td>
</tr>
<tr>
<td>Teamwork</td>
<td>3</td>
<td>6.242 (.740)</td>
<td>6.146</td>
<td>6.339</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>4</td>
<td>6.185 (.863)</td>
<td>6.073</td>
<td>6.297</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>5</td>
<td>6.159 (.854)</td>
<td>6.048</td>
<td>6.271</td>
</tr>
<tr>
<td>Ethics</td>
<td>6</td>
<td>6.128 (1.007)</td>
<td>5.997</td>
<td>6.259</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>7</td>
<td>6.009 (.882)</td>
<td>5.894</td>
<td>6.124</td>
</tr>
<tr>
<td>Initiative</td>
<td>8</td>
<td>5.969 (.840)</td>
<td>5.880</td>
<td>6.079</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>9</td>
<td>5.925 (.972)</td>
<td>5.799</td>
<td>6.052</td>
</tr>
<tr>
<td>Negotiation</td>
<td>10</td>
<td>5.797 (.947)</td>
<td>5.674</td>
<td>5.921</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>11</td>
<td>5.661 (1.028)</td>
<td>5.527</td>
<td>5.795</td>
</tr>
<tr>
<td>Stamina</td>
<td>12</td>
<td>5.619 (1.065)</td>
<td>5.481</td>
<td>5.758</td>
</tr>
<tr>
<td>Teaching</td>
<td>13</td>
<td>5.489 (1.036)</td>
<td>5.354</td>
<td>5.624</td>
</tr>
<tr>
<td>Organizational</td>
<td>14</td>
<td>4.991 (1.244)</td>
<td>4.829</td>
<td>5.153</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>15</td>
<td>4.867 (1.211)</td>
<td>4.709</td>
<td>5.025</td>
</tr>
</tbody>
</table>
Table 19. Private Sector Leaders’ Ranking of Leadership Competency Requirements by Mean Ratings With Standard Deviations and Confidence Intervals

<table>
<thead>
<tr>
<th>Competency</th>
<th>Rank</th>
<th>Rating</th>
<th>Confidence Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>1</td>
<td>6.446 (.866)</td>
<td>6.292</td>
<td>6.601</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>2</td>
<td>6.372 (.743)</td>
<td>6.239</td>
<td>6.504</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>3</td>
<td>6.248 (.849)</td>
<td>6.097</td>
<td>6.399</td>
</tr>
<tr>
<td>Communication</td>
<td>4</td>
<td>6.231 (.883)</td>
<td>6.074</td>
<td>6.369</td>
</tr>
<tr>
<td>Teamwork</td>
<td>5</td>
<td>6.182 (.876)</td>
<td>6.026</td>
<td>6.338</td>
</tr>
<tr>
<td>Initiative</td>
<td>6</td>
<td>6.116 (.829)</td>
<td>5.968</td>
<td>6.263</td>
</tr>
<tr>
<td>Ethics</td>
<td>7</td>
<td>6.041 (.970)</td>
<td>5.869</td>
<td>6.214</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>8</td>
<td>5.982 (.946)</td>
<td>5.822</td>
<td>6.161</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>9</td>
<td>5.843 (.885)</td>
<td>5.685</td>
<td>6.001</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>10</td>
<td>5.842 (.944)</td>
<td>5.673</td>
<td>6.011</td>
</tr>
<tr>
<td>Negotiation</td>
<td>11</td>
<td>5.835 (.916)</td>
<td>5.671</td>
<td>5.998</td>
</tr>
<tr>
<td>Stamina</td>
<td>12</td>
<td>5.760 (1.017)</td>
<td>5.579</td>
<td>5.941</td>
</tr>
<tr>
<td>Teaching</td>
<td>13</td>
<td>5.496 (1.034)</td>
<td>5.312</td>
<td>5.680</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>14</td>
<td>5.225 (1.104)</td>
<td>5.028</td>
<td>5.422</td>
</tr>
<tr>
<td>Organizational</td>
<td>15</td>
<td>5.000 (1.174)</td>
<td>4.790</td>
<td>5.210</td>
</tr>
</tbody>
</table>
ranked and compared using a 95% confidence interval. Data are presented in Table 20. Results indicate that ability to learn, communication, problem solving, ethics, initiative, and negotiation were rated as the most important ($p \leq .05$). Organizational skills, entrepreneurial skills, teaching, stamina, and cosmopolitan/world view were rated as less important ($p \leq .05$). The 95% confidence interval was adopted as the cut-off for significance, reflecting research and publication standards.

**Ranking of Competencies: Between Groups**

Means associated with the rankings were compared across groups using a 95% confidence interval. Data are presented in Table 21. Public sector and private sector leaders ranked the competencies similarly. Vision, communication, teamwork, cosmopolitan/world view, and ethics were common to both groups as higher rated competencies. Private sector leaders ranked business/technical knowledge higher than did public sector leaders ($p \leq .05$). The competencies rated the highest by the general population differed from those of both groups of leaders ($p \leq .05$). The general population rated problem solving as more important than did both groups of leaders and rated ability to learn higher than did the public sector leaders ($p \leq .05$).

**Summary of Results**

Public sector leaders perceived a shift in importance of most leadership competencies from 20 years ago to the 21st century; however, they rated business/technical knowledge and organizational as decreasing in importance.
Table 20. General Population Ranking of Leadership Competency Requirements by Mean Ratings With Standard Deviations and Confidence Intervals

<table>
<thead>
<tr>
<th>Competency</th>
<th>Rank</th>
<th>Rating</th>
<th>Confidence Lower</th>
<th>Interval Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Learn</td>
<td>1</td>
<td>6.364 (.895)</td>
<td>6.318</td>
<td>6.409</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
<td>6.318 (.913)</td>
<td>6.272</td>
<td>6.365</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>3</td>
<td>6.290 (.948)</td>
<td>6.242</td>
<td>6.338</td>
</tr>
<tr>
<td>Ethics</td>
<td>4</td>
<td>6.262 (1.105)</td>
<td>6.206</td>
<td>6.318</td>
</tr>
<tr>
<td>Initiative</td>
<td>5</td>
<td>6.170 (.991)</td>
<td>6.120</td>
<td>6.220</td>
</tr>
<tr>
<td>Negotiation</td>
<td>6</td>
<td>6.106 (1.022)</td>
<td>6.054</td>
<td>6.157</td>
</tr>
<tr>
<td>Organizational</td>
<td>7</td>
<td>5.998 (1.094)</td>
<td>5.943</td>
<td>6.053</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>8</td>
<td>5.694 (1.170)</td>
<td>5.635</td>
<td>5.754</td>
</tr>
<tr>
<td>Teaching</td>
<td>9</td>
<td>5.672 (1.238)</td>
<td>5.609</td>
<td>5.734</td>
</tr>
<tr>
<td>Stamina</td>
<td>10</td>
<td>5.669 (1.197)</td>
<td>5.608</td>
<td>5.730</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>11</td>
<td>5.668 (1.263)</td>
<td>5.604</td>
<td>5.732</td>
</tr>
</tbody>
</table>
Table 21. Ranking of Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>Public Sector</th>
<th>Private Sector</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Teamwork</td>
<td>3</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>4</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Ethics</td>
<td>6</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>7</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Initiative</td>
<td>8</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>9</td>
<td>10</td>
<td>n/a</td>
</tr>
<tr>
<td>Negotiation</td>
<td>10</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>11</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Stamina</td>
<td>12</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Teaching</td>
<td>13</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Organizational Skills</td>
<td>14</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>15</td>
<td>14</td>
<td>n/a</td>
</tr>
</tbody>
</table>
They rated all external drivers as having influence on the competencies, especially globalization and technology.

Public sector leaders rated problem solving, ability to learn, initiative, teaching, ethics, and organizational skills lower than the general population, and a similar effect for negotiating approached significance. Public sector leaders rated cosmopolitan/world view as more important than did the general population. This may reflect the differences in organizational versus individual experiences of the impact of the external drivers.

Public sector leaders differed from private sector leaders in that they rated larger shifts in importance for vision, entrepreneurial skills, and negotiating.

Both public and private sector leaders identified the same top five ranked competencies, including vision, communication, teamwork, cosmopolitan/world view, and ability to learn. The general population ranked ability to learn as the most important competency (within a smaller group of 11 competencies).
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a summary overview, including a brief review of the purpose, conclusions, and recommendations for further study.

Summary

As previously established in chapter 2, the pace of change in the 21\textsuperscript{st} century is most evident when considered in the context of the effects of globalization, technology, diversity, and downsizing. These external drivers, individually as well as in combination, will affect the way in which we think about leadership requirements for the future. Leaders' perceptions as to the trend toward particular leadership competencies required for future leadership will be important input into training and development opportunities for current managers.

In this context, the purpose of this study was to identify whether public sector leaders perceive a shift in the required leadership competencies for the 21\textsuperscript{st} century. The hypothesis that the shift would be perceived to be related to a set of external drivers was then tested by private sector leaders rating their perception of the influence of each external driver on leadership competency requirements. To support the validity that public sector leaders are subject matter experts, differences between organizational

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perspective and the individual perspective are then compared. Two additional analyses combine data from the two research studies: public sector leaders and private sector leaders using data from a similar study (Watson, 2000). Using these combined data, the size of shift in leadership requirements over time was compared between the two sectors. The other analysis compared top-ranked competencies across groups, specifically public sector leaders, private sector leaders, and the general public.

Finding 1

As described in chapter 4, public sector leaders perceive that the following leadership competencies will be more important in the 21st century: teamwork, problem solving, ability to learn, communication, vision, interpersonal, initiative, entrepreneurial, teaching, stamina, ethics, negotiation, and cosmopolitan/world view. At the same time, public sector leaders perceive that both organizational and business/technical competencies will be less important for leaders in the 21st century than 20 years ago.

Finding 2

Respondents identified both globalization and technology as important environmental factors which are driving the requirements for leadership competencies into the 21st century. While there was more divergence of perceptions, the respondents further identified both diversity and downsizing as having an impact on the competencies for 21st-century public sector leaders.
Finding 3

Because the external drivers impact on the general population as well as organizations, it was important to establish that the ratings by the public sector leaders were reflective of an organizational perspective rather than that of an individual. The public sector leaders rated cosmopolitan/world view higher than did the general public. The general public rated problem solving, ability to learn, initiative, teaching, ethics, organizational skills, and negotiating higher than public sector leaders.

Finding 4

In comparing public sector leaders and private sector leaders, the variation in perception is measured by the size or degree of shifts between these two groups of leaders. As noted in chapter 4, public sector leaders demonstrated a larger shift in leadership requirements for vision and entrepreneurial skills than did private sector leaders.

Both public and private sector leaders ranked the competencies similarly with the exception that public sector leaders ranked business/technical knowledge somewhat less than private sector leaders. The general public rated problem solving as more important than both groups of leaders and rated ability to learn higher than did the public sector leaders.

Conclusions

The results of this study inform leadership training and development opportunities for current public sector managers as they plan for the future. Very simply,
this study demonstrated that public sector leaders acknowledged that future leadership competencies will be different than they were in the past. Adding to this simple finding is that another researcher (Watson, 2000) has found that private sector leaders in general acknowledge a similar shift in leadership competencies for the future. A key question is, Why? Both groups experience the external drivers firsthand in the daily operation of their organization. At the same time, both groups of leaders operate within different organizational structures and have recognizably different organizational values. In the past, there was general, though unspoken, acceptance that, notwithstanding similar external drivers, public and private sectors required very different leaders. The results of this study would indicate that a shared understanding of the leadership competencies which will be needed in the future is being developed. By understanding the external drivers and their influence on the 21st century, the convergence on particular leadership competencies can be better understood.

As established previously, the 21st century is characterized by the interdependence of the external drivers including globalization, technology, diversity, and downsizing. The speed of technology has facilitated increased globalization in the same way that diversity is demanded to address complex global issues. The complex interdependence of the external drivers has created an environment in which the increased speed of change is not only accepted but assumed. The findings in this study confirm that the external drivers of globalization and technology are perceived by public sector leaders as pervasive influences in their vision of the future. Diversity and downsizing have a somewhat lesser yet still important influence in modelling the future for leaders.
What is notable in the 21st century is leaders’ consensus with respect to the perception that the external drivers including globalization, technology, diversity, and downsizing will have in shaping future leadership requirements. For the public sector, the convergence of required leadership competencies among sectors, both public and private, is an important consideration given the urgent need to recruit and retain leadership candidates at the federal level.

The discussion of the findings of this study is facilitated by grouping the 15 competencies in this study into the five clusters as described in Table 22. Each cluster is discussed individually.

Table 22. Leadership Competencies Grouped in Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future</td>
<td>Vision\nCosmopolitan World View</td>
</tr>
<tr>
<td>Relational</td>
<td>Teamwork\nCommunication\nInterpersonal\nTeaching\nNegotiation</td>
</tr>
<tr>
<td>Intellectual</td>
<td>Ability to Learn\nProblem Solving</td>
</tr>
<tr>
<td>Personal</td>
<td>Ethics\nInitiative\nStamina</td>
</tr>
<tr>
<td>Managerial</td>
<td>Entrepreneurial\nOrganizational\nBusiness /Technical</td>
</tr>
</tbody>
</table>
In considering the top five ranked future leadership competencies for the public sector leaders—vision, communication, teamwork, cosmopolitan/world view, and ability to learn—a compelling story can be told about future leadership and the trend toward future and relational clusters of competencies for leaders. It is a story that can be explained in large part by understanding the interaction that the external environmental drivers have had on shaping leaders’ perception of the future. This is particularly evident when the various clusters of competencies and their ranking in the 21st century are considered.

**Future Competencies**

Public sector leaders ranked vision and cosmopolitan/world view as among the most important competencies. Furthermore, the public sector leaders demonstrated a larger shift in vision leadership requirements than did private sector leaders. Finally, there was a convergence of perceptions between the public sector leaders and private sector leaders who ranked vision and cosmopolitan/world view as the most important.

At the same time, the general public ranked cosmopolitan/world view last among their 11 rated competencies.

Relating these results to the external drivers is useful. Globalization and technology are causing the velocity of change to increase exponentially. Current public sector leaders’ perception that the importance of future-related competencies, such as vision, cannot be surprising in this environment. The need for a diversity of ideas, perceptions, and biases in order to solve tomorrow’s challenges is to some extent
captured by the demonstrated preference of public sector leaders for a leadership competency called cosmopolitan/world view. It is worth noting that while this term has not been formally defined, the term has sufficient significance to elicit a consensus among public sector leaders that future leaders need to have this competency.

The fact that public sector leaders rated cosmopolitan/world view higher than did the general public, and that the general public ranked this competency last, is consistent with the theory that the external drivers may have a different effect depending on whether the individual is considering the external driver from an organizational versus an individual perspective. The ranking comparisons between the three groups starkly demonstrate a difference in perspective from top-ranked competency among the leader groups to last among the general public. It is quite possible that globalization and diversity have not influenced the individual’s perspective of future leadership to the same extent that they have organizations. Which is not to say that the external drivers have not influenced the individual perspective; they have, but with differing results. The individual perspective for future leadership competencies follows a trend toward personal and intellectual clusters competencies. Individuals may be very interested in how the external drivers influence their place of work, but take an individual perspective when asked about future leadership competencies.

The results of this study would at a minimum confirm that from an organizational perspective the trend toward cosmopolitan competencies is more evident. This result is similar in the private sector leaders’ analysis, which provides more evidence from an organizational perspective regarding the emerging importance of cosmopolitan/
world view. Adding to this finding was the lower ranking by the general public for cosmopolitan/world view. While both public and private sector leaders ranked this future competency near the top, the general public indicated their quite different perception by ranking it near the bottom.

In seeking to understand why there was such a break between the organizational and the individual perspectives on this competency, it may be useful to examine the environment beyond the four external drivers. The public debate regarding pay equity, employment quotas, and affirmative action plans have all been part of the corporate debate for some time. This in a sense has positioned organizations to be prepared for the speed with which organizations have had to cope with global change, global markets, and global customers. The diversity that legislation in many cases encouraged organizations to seek beyond their normal scope in fact positioned them for the demands of the 21st century.

Another trend which is evident in examining the future competencies identified by the public sector leaders is the similarities with the perceptions and rankings of the private sector leaders. In a world where external drivers such as technology, both its development and transfer, and downsizing are compelling organizations to form partnerships, trade information, and personnel, the finding that both public sector and private sector leaders have very similar perceptions, with respect to future leadership competencies, provides for significant opportunities between the two sectors. The convergence despite different organizational values and objectives creates potential for increased exchange opportunities as well as shared training and development opportunities.
Relational Competencies

A second trend that is evident is the public sector leaders’ perception that in the 21st century there will be an increased reliance on the cluster of relational competencies for leaders. In particular, the ranking of both teamwork and communication competencies among the top-rated competencies is worthy of note. These competencies, along with interpersonal, teaching, and negotiation, were all perceived by public sector leaders to shift towards greater importance for future leaders. The ranking of teamwork and communication was similarly ranked by private sector leaders as among the top five future competencies.

The 21st century has been characterized as the relationship age (Renesch, 1992) and the perceptions of current public sector leaders would seem to confirm that view. The ability to communicate has always been important. But with the increased diversity of the workplace, and the demands of a constantly changing work-place with new technologies and applications, the capacity to envision the future may not be sufficient. Leaders must be able to communicate the vision. And communicate that vision to various teams.

The concept of teamwork as being the organizational construct of choice in the 21st century is confirmed by the results in this study. Problems in the 21st century have become more complex and multi-faceted. Resolving issues in the 21st century will require multi-dimensional teams of individuals and perhaps even organizations who come together with a shared objective to resolve a particular problem. We are already seeing evidence of this in the increased partnership arrangements among Canadian government
departments, as well as in the corporate field. Where organizations do not have the existing capacity or the diversity of experience required for a particular project, they seek it out, more and more on a short-term basis. Not only are organizations as a result of downsizing embracing this organizational construct, but as importantly, workers, especially new entrants into the workforce, and women are taking advantage of project-specific employment as a means to preserve their flexibility as well as a means to ensure a dynamic work environment which is constantly contributing to their personal experience base. In this paradigm, teamwork becomes essential. Again the results of this study demonstrate that there is convergence between the public sector leaders and the private sector leaders with respect to the importance of the cluster of relationship competencies.

**Intellectual Competencies**

Ability to learn was ranked by public sector leaders as among the top five rated leadership competencies for the 21st century. The general population ranked this leadership competency as their number one ranked priority, with the private sector leaders ranking ability to learn third. The cluster of intellectual competencies typically includes both ability to learn as well as problem solving. Taken together, these intellectual competencies were ranked by leaders in the top eight competencies. It is noteworthy that ability to learn ranked higher than even problem solving in the context of the 21st century.

In an environment where change is commonplace and technologies are evolving at a pace never seen before, the ability to learn and adapt is essential. It differs
from the 1980s' term of leaders as change agents which reflected the need for leaders to convince organizations of the need to either downsize or catch up with the latest technology. Leaders were seen to be the catalyst for change. In the 21st century, the salient competency has become an ability to learn. The term itself is neutral in terms of leadership. The competency ability to learn fits into a 21st-century context because it suggests that, in the 21st century, the changes which an organization will face will not be predictable. Instead the changes will be fast, and qualitatively different from the status quo. In this environment the ability to learn and integrate will be key. The convergence of the public sector leaders and the private sector leaders on this cluster of competencies is consistent with a view of the 21st century as one of interdependent leadership.

Personal Competencies

The personal competencies including ethics, initiative, and stamina/resilience/self-renewal are consistently ranked in the middle tier of the 15 competencies. Both public and private sector leaders ranked the personal competencies similarly.

It is interesting that the public sector leaders ranked ethics higher than initiative, whereas the situation is reversed with respect to the private sector leaders. In part this may be understood by considering the differing values that exist in the two sectors. The public sector promotes the public good and in this context it is not surprising that the public sector would rank ethics higher than the private sector. In a highly competitive environment such as the private sector where innovation and first movers are prized, the higher ranking of initiate by the private sector is in part explainable.
Managerial Competencies

In the 21st century, across both sectors there is a clear perception that the cluster of managerial competencies, especially organizational skills and business/technical knowledge, will be less important than other competencies. Entrepreneurial skills are ranked higher by the private sector leaders, which is consistent with the organizational values of that sector. In the 21st century, with the perception of the velocity of change, the need for static skills is less important. To some extent this will represent a dramatic shift in the planning for leadership development training. The assumption in the 21st century will be that the business or technical skills will be so precise and project specific that it will be more efficient to buy or borrow them for the specific project. This is especially true if projects are of short duration.

Leadership Development

The results of this study suggest that public sector leaders perceive an important shift in the required leadership competencies for the 21st century. The trend is mirrored by leaders in the private sector (Watson, 2000). This information enables current leaders to re-evaluate and modify current training and development plans in preparation for a dynamic future environment. Directionally, the trend towards clusters of future competencies and relationship competencies is clear. As importantly, especially in a public sector dynamic, the general public perceives the same future to a large extent.
Recommendations

The following are recommendations for further research:

Recommendation 1. Implement a quantitative study which would test whether or not the convergence of view of Canadian public sector leaders with respect to the shift in leadership competencies for the 21st century is reflected in other countries.

Recommendation 2. Implement a quantitative study to ascertain if leaders perceive the effects of the external drivers as having differing impacts on the individual leadership competencies.

Recommendation 3. Repeat the general population telephone survey to ensure that all 15 of the competencies are ranked.
APPENDIX I

LEADERSHIP COMPETENCIES FOR ADMs AND SENIOR EXECUTIVES:
Correspondance with other organizations.
APPENDIX 1. LEADERSHIP COMPETENCIES FOR ADMs AND SENIOR EXECUTIVES:
Correspondence with other organizations

Table 23. CORRESPONDENCE WITH BEST PRACTICES IN EXECUTIVE SELECTION

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<th>Insurance</th>
<th>Manufacturing</th>
<th>Technology</th>
<th>Transportation</th>
<th>Training Centre</th>
<th>Prov. Govt</th>
<th>Foreign Govts.</th>
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APPENDIX 2

LEADERSHIP COMPETENCIES FOR ADMs AND SENIOR EXECUTIVES
Leadership Competencies for ADMs and Senior Executives

The Public Service Commission and Deputy Ministers recognize there are a certain number of competencies required to ensure an individual’s success at senior management levels. These competencies form the basis of a standard of leadership behaviour that can be consistently applied across the executive community.

Assistant Deputy Ministers are champions of the Canadian Public Service. In the midst of change and ambiguity, they elicit commitment and enthusiasm for the Public Service vision of the future. ADMs develop and carry out government policies that are in the best interests of the public. They plan strategies to help move toward the vision, committing to action and achieving their goals in the most efficient and effective manner. Working with other ADMs, they join forces in the interest of serving the public good. ADMs build partnerships with other organizations to better meet the objectives of all partners and in the interest of better serving the public.

Intellectual Competencies

Cognitive Capacity

ADM s possess the cognitive capacity to understand and respond strategically to the complexities inherent in public service. The cognitive capacity of the ADM allows him or her to understand complex and divergent issues and to interpret key messages and trends. They recognize how these relate to their organization and develop policies that are acceptable from multiple points of view. While focusing on their ultimate goal of the public good, they recognize that a multiplicity of different facets must work together to achieve that goal. ADM s use their cognitive capacity to protect the public interest: they create order out of chaos and develop long-term and short-term strategies that will prevent as well as solve problems.
Creativity

ADM s respond to challenges with innovative solutions and policies. They demonstrate a willingness to question conventional means of serving the public. They may use intuition, non-linear thinking, fresh perspectives and information from non-traditional fields to generate new and imaginative ways to succeed. They will often address several objectives simultaneously, solving multiple problems at once. To prepare for future challenges, ADMs enhance their creativity by continuous learning.

Future Building Competency

Visioning

ADM s champion the vision of the Public Service. They describe the future of service to the public in compelling terms, promoting enthusiasm and commitment in others. The leader's commitment to the vision sends a message to others that change is a positive endeavour, thus creating an atmosphere that generates new ideas. They explain how the vision incorporates the Public Service culture and values and how it responds to external factors at the local, national and international level. This includes opportunities for partnerships, worldwide competition and community involvement. ADMs foresee potential roadblocks to success and take action to avoid or overcome them.

Management Competencies

Action Management

ADM s are action-oriented individuals who anticipate the short- and long-term consequences of their strategies. They consider strategies as they relate to their own organization, the Public Service as a whole, and the common good. Their efficiency in carrying out policies ensures the public is properly served. They develop backup strategies to deal with potential negative outcomes. As ADMs deal with serious, time-sensitive issues and may have to manage a number of crises simultaneously, they remain focused in the face of multiple distractions. They know that most decisions must be taken before all the facts are available and are at ease with ambiguity and risk in this regard. They have the courage to propose courses of action that others may hesitate to suggest. These skills enable ADMs to make things happen and get things done: they are known for their ability to accomplish objectives.

Organizational Awareness

ADM s understand the inner workings of the government, the Public Service, and their own organizations in terms of structure, processes and key players. They actively develop this awareness in order to effectively position themselves to achieve strategic
objectives. This requires acute sensitivity to the relationships between key players in the organization, in addition to both acknowledged and private agendas. ADMs actively seek out opportunities to keep their organizational awareness comprehensive and current. Organizational awareness allows one to set the stage when making strategic decisions, in both the short- and long-term. This competency must be actively maintained by the individual, using good judgement about the relationships that influence the organization. ADMs use this competency to steer decision-making in the direction that will most effectively serve the public interest. Learning from experience. ADMs develop the wisdom to know when to cut their losses or when to pursue an issue more aggressively. Organizational awareness comes from a range of sources from intuitive perception to factual data.

Teamwork

ADMs are aware that service to the public compels them to contribute actively and fully to team projects by working with other ADMs and colleagues collaboratively as opposed to competitively, which includes working towards consensual solutions that enhance the output of the team. ADMs solicit and provide information that could affect the planning or the decision-making process by demonstrating a genuine interest in receiving information from others and encouraging others to offer their ideas or opinions. ADMs negotiate mutually acceptable solutions by trying to understand the positions, thoughts, concerns and feelings of others. ADMs assure all parties that fair solutions and better options will be identified. ADMs develop and maintain smooth, cooperative working relationships by showing consideration, concern and respect for others. They recognize that a diversity of experience and knowledge can only enhance the quality of the team’s work. They are sympathetic to and tolerant of differing needs and viewpoints, while meeting common goals.

Partnering

ADMs work with partners to create the policies that support integrated service delivery and eliminate red tape and bureaucracy in the interest of the public good. ADMs develop a community of shared interests with diverse levels of government, interest groups, and the non-profit and private sectors. Partners use their diversity of experience and knowledge to make the best decisions. Partners share common goals, solve common problems, and work hand in hand for the common good, not only of each partner but of the Canadian public. An essential feature of this community is that it functions on the basis of shared power and responsibility. This allows members to avoid waste, inefficiency, and duplication of effort while retaining the identity of their own organization. This allows them to serve the country to the best of their abilities, both individually and collectively. Fundamental to successful partnering are commitment, trust, and the open communication that helps to articulate and align the objectives and expectations of all members. Partnering is an expression of teamwork outside one’s organization. It requires the same spirit of collaboration and diplomacy, however, eliciting the cooperation of external partners may require even keener collaborative skills.
Relationship Competencies

Interpersonal Relations

ADM s interact effectively with public and private sector individuals in order to advance the work of the Public Service. Their interactions are based on respect and an appreciation that people with varying backgrounds and viewpoints enrich the organizational environment. Their negotiating skills allow them to maintain relationships and produce “win-win” results. Through persuasion and assertiveness they gain support for ideas and initiatives, influence peers and superiors, and effectively represent their organization’s interests to other groups. ADM s have the ability to deal with difficult and complex interpersonal situations and to take firm control in order to actualize the agenda or to protect the public interest. For an ADM, interpersonal skills are a means of achieving important management objectives.

Communication

ADM s communicate in a compelling and articulate manner that instills commitment. They adapt their communication to ensure that different audiences understand key messages. They use a variety of communications vehicles to foster open communication within their own organization and across the Public Service. ADM s effectively represent the Public Service as a protector of the common good to special interest groups, clients, and the media. They also appreciate the importance of being a good listener, providing opportunities for others to have input, listening for underlying nuances and messages, and conveying an understanding of the key points being communicated.

Personal Competencies

Stamina/Stress Resistance

ADM s must sustain high energy levels to greet the ongoing challenge of protecting the public interest. Their ability to resist stress and remain energized in the face of difficult demands and prolonged exposure to stressors often has an uplifting effect on others. ADM s are realistic about their own limits. They respond to the early signs of burnout to ensure that their energy reserves remain high over the long term.

Ethics and Values

ADM s treat people fairly and with dignity. They are willing to admit their mistakes, even in the face of adverse consequences. These individuals honour their commitments and consistently strive to act in the public interest by ensuring that the public trust is not violated. Their principles act as an internal compass to guide their behaviour, allowing them to consistently uphold the personal, social, and ethical norms of the Public Service.
They protect fairness, avoid conflicts of interest and maintain political and interpersonal neutrality. They pursue proper goals and are resilient in the face of distracting external pressures. ADMs are known for doing the right thing for the right reasons: they ensure that their actions are aligned with their principles.

**Personality**

ADM s possess the ambition to set challenging goals and the tenacity to pursue them over the long term. They have the stability and self-control to maintain focus and composure in the midst of complex logical problems or emotionally stressful interactions. ADM s are motivated by the challenge of protecting and serving the public good. For ADMs, power is pursued as a tool to accomplish objectives rather than an end in itself.

**Behavioural Flexibility**

ADM s adjust their behaviour to the demands of a changing work environment in order to remain productive through periods of transition, ambiguity or uncertainty. They can adapt the expression of their competencies to different situations and respond quickly to emerging opportunities and risks. Behavioural flexibility allows them to work effectively with a broad range of situations, people, and groups. ADM s use behavioural flexibility to move both horizontally and vertically in the Public Service. This competency enables them to adapt to the characteristics of particular situations, to acquire new and more effective behaviours, and to discard others, as contexts and roles change. It allows them to learn from the behavioural styles of others to expand their own repertoire. The essence of this competency is the ability to continuously develop new ways of interacting that are more effective in certain situations in order to accomplish one's objectives.

**Self-Confidence**

ADM s possess realistic confidence in their abilities. They are secure and are self-directed as opposed to other-directed. This inner strength is the backbone that enables them to use their competencies to the fullest and to distinguish a challenging task from an impossible mission. ADM s seek and consider input, but they are not dependent on the judgement of others. They make their decisions independently and take ownership of and responsibility for them. ADMs express their opinions willingly and take calculated risks, even when their ideas are not endorsed by others. They handle failures and criticism in a constructive manner. They project an air of assurance that quells the fears of others, which, especially in times of transition, helps to maintain productive working conditions.
APPENDIX 3

EXAMPLES OF PUBLIC AND PRIVATE SECTOR PROFILES
Appendix 3. Examples of Public and Private Sector Profiles

CANADA (La Relève - Framework)

Intellectual Competencies
- Cognitive Capacity
- Creativity

Future-Building Competencies
- Visioning

Management Competencies
- Action Management
- Organizational Awareness
- Teamwork
- Partnering

Relational Competencies
- Interpersonal Relations
- Communication

Personal Competencies
- Stamina/Stress Resist
- Ethics & Values
- Behavioural Flexibility
- Self-Confidence

Knowledge Competencies
- Knowledge

NEW ZEALAND (State Services Commission)

Outcomes & Results
- Conceptual Thinking
- Outcome Action & Excellence Orientation

Leading/Managing
- Teamwork & Commitment
- Managership
- Leadership

Client Focus
- Client/Stakeholder Service Commitment
- Influencing others
- Government & Sector Awareness
BANK OF MONTREAL (Managerial Leadership Capabilities)

Achievement Orientation
Relationship Management
Business Acumen
Change Leadership
Continuous Learning
Client Service Focus
Conceptual & Strategic Thinking
Personal Effectiveness
Managerial Orientation
GM (Competencies X Domain)

Interpersonal Effectiveness
   Builds Relationships & Partnerships
   Communication Skills
   Visionary Leadership
   Customer Focus

Leadership/Supervision
   Coaching
   Empowerment
   Team Development
   Change Leadership

Personal Qualities & Traits
   Motivational Pattern
   Maturity
   Results Orientation
   Diversity

Technical Knowledge & Management
   Decision Making
   Managing the Job
   Functional Expertise
   Integrating & Functioning Globally
   Strategic Thinking and Execution
SCOTIABANK (Competencies X Cluster)

Action & Achievement
   Results Focus
   Decision Making
   Efficiency
   Accuracy & Thoroughness
   Perseverance

Problem Solving
   Analytical Thinking
   Strategic Thinking
   Forward Thinking
   Innovation

Managerial Effectiveness
   Team Focus
   Development of Others
   Team Leadership

Personal Effectiveness
   Communication
   Persuasion
   Flexibility
   Organizational Commitment
   Self-development
   Empathy

Organizational Impact
   Relationship Building
   Influence
   Confidence

Customer Service
   Customer focus
Bank of Canada (Competency Dictionary)

Leadership
Teamwork
Communication
Planning & Organizing (Project Management)
Delegation
Coaching & Feedback
Developing Self & Others
Relationship Management
Analytic Thinking/Problem Solving
Innovation
Client Focus
Flexibility/Facilitating Change
Decisiveness
Thoroughness/Quality
Initiative
Future Thinking (Vision)
Self-Confidence
Results Focus

SUN LIFE (Core Values)

Customer Focus
Valuing our People
Teamwork
Excellence
Integrity
Financial Strength
APPENDIX 4

QUESTIONNAIRE
September 1, 1999

Dear Sir/Madam:

As we move into the 21st Century, there is an on-going and important debate as to what skills and abilities will be required of future leaders. This is a debate which is of interest to both the public sector and private sector. I would like to invite you to participate in this important debate by making your views known on these issues. The attached survey is being sent to an elite cadre of public and private sector leaders so that their views can shape and influence the debate and subsequent direction of policy in this area.

Your contribution to this debate can be secured by completing the attached questionnaire and returning it as soon as possible using the envelope provided. Knowing how limited your time is, every effort has been made to ensure the questionnaire is brief and to the point.

All of your responses will be completely confidential — your name or the name of your organization will never be linked to any of your answers. There is no way to track the completed questionnaires we receive — there are no hidden codes or identifiers. We would appreciate it if you could answer the questionnaire as soon as possible and return it to us in the envelope provided. If you have any questions about the study, please do not hesitate to call Dr. Sheila Redmond, Project Co-ordinator at Ekos Research Associates Inc., at (613) 335-7215 (collect).

To thank you for your input we would like to send you an executive summary of the report when the project is completed. If you are interested, please enclose your business card with the questionnaire or, if you prefer, send us a note separately.

Thank you in advance for taking the time to complete the questionnaire and for contributing to the debate on the abilities required for leaders of the future.

Sincerely,

Maurice Demers
Director General
Strategic Planning and Research

Dr. La Salle
Tel: (613) 944-3265
Fax: (613) 944-3261

Dr. La Salle
Telephone: (613) 995-1263
Telex: (613) 995-1261
While the purpose of this survey is to identify the key leadership abilities for the 21st century (i.e., 20 years from now), initially it will be important to get your views as to the most important leadership abilities which were required 20 years ago.

1. Rate the importance of the following abilities for leaders 20 years ago. Please rate your response on a scale from 1, not at all important, to 7, extremely important, where the mid-point 4 is moderately important.

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<td>b. Problem solving (analytical, decision, judgement)</td>
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<td>e. Vision</td>
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<tr>
<td>i. Teaching (coaching, mentoring)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Stamina/resilience/self-renewal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Ethics (integrity, values)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Organizational (administrative)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Business/technical knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Negotiation/consult and engage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Cosmopolitan/world view</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.a. Rate the importance of the following abilities for leaders of the 21st century (i.e., 20 years from now). Please rate your response on a scale from 1, not at all important, to 7, extremely important, where the mid-point 4 is moderately important.

<table>
<thead>
<tr>
<th>Ability</th>
<th>Not at All Important</th>
<th>Moderately Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Teamwork</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Problem solving (analytical, decisive, judgement, innovative)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Ability to learn (integrative, intelligence, change agents)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Communications skills</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Vision (creativity)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Interpersonal (relationship, collaborate, serving others)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Initiative (measured)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Entrepreneurial (risk taker, experiment)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Teaching (coaching, mentoring)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Stamina/resilience/self-renewal</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Ethics (integrity, values)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Organizational (administrative)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Business/technical knowledge</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Negotiation/consult and engage</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Cosmopolitan/world view</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b. Now please identify which two of the abilities listed above will be most critical for leaders in 20 years, and then rate the extent to which the two abilities will be easy or difficult to find in 20 years.

<table>
<thead>
<tr>
<th>Ability</th>
<th>Very Easy To Find</th>
<th>Neither</th>
<th>Extremely Difficult To Find</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1 2 3</td>
<td>4 5 6 7</td>
</tr>
</tbody>
</table>

3. Are there any abilities needed for leaders over the next 20 years that you feel have not been included in this survey?

4. How important do you think leadership is in relation to intelligence? Please rate your response on a scale from 1, not at all important, to 7, extremely important, where the mid-point 4 is moderately important.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Not at All Important</th>
<th>Moderately Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
5.a. Rate the importance of the following abilities for workers of the 21st century (i.e., 20 years from now). Please rate your response on a scale from 1, not at all important, to 7, extremely important, where the mid-point 4 is moderately important.

<table>
<thead>
<tr>
<th>Ability</th>
<th>Not at All Important</th>
<th>Moderately Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Teamwork</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b. Problem solving (analytical, decisive, judgement, innovative)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c. Ability to learn (integrative, intelligence, change agent)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d. Communications skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>e. Vision (creativity)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>f. Interpersonal (relationship, collaborating, serving others)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>g. Initiative (motivated)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>h. Entrepreneurial (risk taker, experiment)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>i. Teaching (coaching, mentoring)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>j. Stamina/resilience/self-renewal</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>k. Ethics (congruency, values)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>l. Organizational (administration)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>m. Business/technical knowledge</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>n. Negotiation/consult and engage</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>o. Cosmopolitan/world view</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

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b. Now please identify which two of the abilities listed above will be most critical for workers in 20 years, and then rate the extent to which the two abilities will be easy or difficult to find in 20 years.

<table>
<thead>
<tr>
<th></th>
<th>VERY EASY TO FIND</th>
<th>NEITHER</th>
<th>EXTREMELY DIFFICULT TO FIND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

6. Thinking of the abilities Canadian leaders and workers will require over the next 20 years, how different would you say the abilities required for leaders will be compared to those required of the average worker? Please respond using a 7-point scale where 1 means not at all different, 7 means very different, and the mid-point 4 means somewhat different.

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL DIFFERENT</th>
<th>SOMewhat DIFFERENT</th>
<th>VERY DIFFERENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thinking of 20 years ago, please rate the degree to which you agree or disagree with each of the following statements using a 7-point scale where 1 means you strongly disagree, 7 means you strongly agree and the mid-point 4 means you neither agree nor disagree.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neither Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I think that society has the same need for designated leaders in the public and private sectors as it did 20 years ago</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Given higher overall levels of education and skills and a greater emphasis on shared decision-making in the workplace, there is less need for designated leaders than there was 20 years ago</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. The abilities for private sector leaders 20 years ago were fundamentally the same as those for public sector leaders</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. If you responded 1, 2 or 3 (i.e., “disagree”) to question 7c: What is the key difference?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Now, thinking 20 years from today, please rate the degree to which you agree or disagree with each of the following statements using a 7-point scale where 1 means you strongly disagree, 7 means you strongly agree and the mid-point 4 means you neither agree nor disagree.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neither Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think that society will have the same need for designated leaders in the public and private sectors 20 years from now as it does today</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Given higher overall levels of education and skills and a greater emphasis on shared decision-making in the workplace, there will be less need for designated leaders 20 years from now than there is today</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The abilities required for private sector leaders 20 years from now will be fundamentally the same as those for public sector leaders</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you responded 1, 2 or 3 (i.e., &quot;disagree&quot;) to question 8c: What is the key difference?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.a. In your opinion, is the choice of abilities for leaders indicative of a trend towards generalists or towards specialists. Please rate your response on a 7-point scale where 1 means a trend towards generalists, 7 means a trend towards specialists and 4 means no trend.

<table>
<thead>
<tr>
<th>Trend towards Generalists</th>
<th>Trend towards Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
b. In your opinion, to what extent will the following factors influence the abilities required for leaders 20 years from now? Please rate your response on a scale from 1, not at all, to 7, a great deal, where the mid-point 4 is somewhat.

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Globalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Downsizing</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Diversity (race, gender, culture, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Which best describes the style of leadership?

<table>
<thead>
<tr>
<th>Combination of Hierarchical, Horizontal</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 20 years ago</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 20 years from now</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B BACKGROUND CHARACTERISTICS

Now we have a few final questions for statistical purposes only.

11. In what year were you born?

   1989

12. What is your gender?

   Male ................................................................. 1
   Female ............................................................... 2

13. What sector do you work in?

   Public Sector
   Federal ......................................................................... 1
   Provincial/territorial ................................................. 2
   Municipal .................................................................... 3
   Private Sector
   Manufacturing ........................................................... 4
   Hi-Tech ....................................................................... 5
   Financial Services ..................................................... 6
   Entertainment/Media ................................................... 7
   Tourism ....................................................................... 8
   Other (please specify) .................................................. 9
   Voluntary Sector
   Health .......................................................................... 10
   Social Services ............................................................ 11
   Other (please specify) .................................................. 12
14. How many employees work in your organization?

- Under 100 ................................................................. 1
- Between 100 and 300 ................................................. 2
- Between 301 and 500 ................................................. 3
- Over 500 ............................................................................

15. How long have you been in a leadership position?

[Blank]

[Blank] Years

16. What is the highest level of schooling that you have completed?

- Public/elementary school or less (grade 1-8) ............................................. 1
- Some high school ........................................................................... 2
- Graduated from high school (grade 12-13) .......................................... 3
- Vocational/technical college or CEGEP ............................................. 4
- Trade certification ........................................................................ 5
- Some university ........................................................................... 6
- Bachelor's degree .......................................................................... 7
- Professional certification ................................................................ 8
- Graduate degree ........................................................................... 9

17. How long have you been in your present organization?

- Under 3 years ............................................................................ 1
- 3-5 years .................................................................................. 2
- 6-10 years .................................................................................. 3
- 11-20 years ................................................................................ 4
- Over 20 years ............................................................................. 5
18. How long have you been a member of the workforce?

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>1</td>
</tr>
<tr>
<td>5-10 years</td>
<td>2</td>
</tr>
<tr>
<td>11-20 years</td>
<td>3</td>
</tr>
<tr>
<td>21-30 years</td>
<td>4</td>
</tr>
<tr>
<td>Over 30 years</td>
<td>5</td>
</tr>
</tbody>
</table>
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