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

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LEADERSHIP REQUIREMENTS IN THE 21st CENTURY:
THE PERCEPTIONS OF CANADIAN
PRIVATE SECTOR LEADERS

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

by
Samy H. Watson
July 2000
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The Perceptions of Canadian Private Sector Leaders

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ABSTRACT

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

by

Samy H. Watson

Chair: James Tucker
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: Samy H. Watson

Name and degree of faculty chair: James Tucker, Ph.D.

Date completed: July 2000

Problem

Over the past few decades, change has been the only constant for organizations seeking to do business in a global economy. The drivers of such change include globalization, technology, diversity, and downsizing. To design effective development programs, organizations need to understand how these drivers affect leadership competency requirements, what the competencies will be in the future, and how they change over time.

Method

Private sector leaders were surveyed by mail-in questionnaires as to their ratings of a set of leadership competencies. Analogous research for public sector leaders,
conducted by a colleague, was incorporated for some analysis. A stratified sample of the general public was also surveyed by telephone regarding a subset of the same competencies.

Results

Private sector leaders perceived an increase in importance for cosmopolitan/world view, vision, teamwork, ability to learn, teaching skills, negotiation, interpersonal skills, ethics, entrepreneurial skills, problem solving, initiative, and stamina.

Globalization and technology were rated as highly and equally influential in determining importance of the competencies. Diversity and downsizing were rated as lesser but still important influences.

The general population rated problem solving, ethics, organizational skills, and negotiating higher than did the private sector leaders. Private sector leaders rated cosmopolitan/world view as more important than did the general population.

Private sector leaders differed from public sector leaders in their smaller shifts in ratings of importance for vision and entrepreneurial skills. Private and public sector leaders ranked cosmopolitan/world view, vision, ability to learn, communication, and teamwork as the most important competencies. Private sector leaders ranked business/technical knowledge higher than did the public sector leaders. The general population ranked cosmopolitan/world view as the least important competency.

Conclusions

Leaders perceive a need to design and implement a vision in an expanding cosmopolitan/world view context, exercising both their ability to learn and relationship
competencies. Leadership development programs will need to be focused on future-oriented competencies, such as vision and cosmopolitan/world view, and relationship competencies, such as communication and teamwork, to equip leaders for the 21st century.
DEDICATION

This work is dedicated with love to my sons,
Martin, Brandon and Justin,
who always inspire and delight me -
they are true 21st century leaders.
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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 private and public 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
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 private and public 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 private and public 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; 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

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 private and public 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 private and public 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 private and public (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 private and the public 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 private and the public 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 private sector and public 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 private and public 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 private 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 private sector leaders as to the required leadership competencies for leaders 20 years ago?

Question 1b. What are the perceptions of current Canadian private 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 private 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 private sector and those in the public sector as to the size of the shift between 20 years ago and in the 21st century?

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

*Question 4b.* Is there a consensus of views between private and public 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 private sector leaders toward the required leadership competencies for the 21st century. At the same time, a colleague (Dantzer, 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 private sector population with the public 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 private sector and the public 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 (private 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. Private sector (defined as the private sector leaders’ survey)
   b. Comparing the results obtained from the private sector leaders’ survey with results obtained from the general public population, identifying any similarities, and reviewing any differences
c. Comparison of private sector leaders' results with results from
the public 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 private sector leaders' population was not stratified by
   age or by gender.

3. The sample for the public 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 administrators 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 private and public 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 private and public 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 private and public 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 private and public 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
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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 private and public sectors. However, there are differences in the values and objectives of organizations in the private sector compared to those in the public 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 private and public sector competencies requirements are converging as the private sector becomes more citizen-focused to remain competitive and public sector adopts private sector business models. 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 private and public sectors. First, the objectives of the private and public sector may differ. While the primary focus of the private sector is profitability, for the public sector it is the common good. In addition, the environments of the private and public 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 private and public 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 private-public 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—private or public.

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 private and public 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 heterogeneous 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).
Preparing for the Future: Survey of Leaders' Perspective of Competency

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 21st-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 21st 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 facilitiation</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</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
collaborative and more organizationally aware” (Donnelly & Kezbom, 1994, p. 9).

**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
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 private 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 private sector leaders as to the required leadership competencies for leaders 20 years ago?

2. What are the perceptions of current Canadian private 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 private 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 private sector and those in the public sector as to the size of the shift between 20 years ago and in the 21st century?

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

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

Hypotheses 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 (private 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. Private sector leaders
   b. Comparing the results obtained from the private sector leaders’ survey question 2 with results obtained from the general public population, identifying any similarities, and reviewing any differences
   c. Comparison of private sector leaders’ results with results from the public sector leaders’ survey.

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

Phase I: 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 private sector leaders population, and the general public population. The following describes each sample population and the survey methodology employed.

Private sector leaders population

In responding to the first research question (Has there been a shift in private sector leaders’ perception as to the competencies required in the past as compared to the
competencies required for the 21\textsuperscript{st} century?), data from an existing pool of senior Canadian leaders including Chief Executive Officers (CEOs) and senior executives from the private sector were used. 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. A response rate of 12.6\% was achieved with 121 respondents ($n=121$).

The sample was not stratified by gender, age, or region. Table 2 delineates the response rate for the 1999 survey between private sector companies with differing numbers of employees.

A 12.6\% 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).

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 3 provides the most recent response history of the Rethinking Government national survey.

General public sample population

In order to consider the third research question (Is there a divergence or convergence of views between leaders in the private sector and the general public as to the required leadership competencies in the 21\textsuperscript{st} century?), the results of the private sector leaders’ survey were compared to a sample of the general public ($n=1,503$). The general public survey sample of 1,503 was randomly generated from the Canadian population of
Table 2. 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 3. 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>
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 4, 5, 6).

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 private 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 private sector leaders survey. Not included in the survey of the general population were: interpersonal, teamwork, business/technical knowledge, and vision.

**Public sector leaders population**

In responding to the fourth research question (Is there a consensus of views between private and public sector leaders, and the general population on which if any of the leadership competencies are the most important?), data from a separate research study were used (Dantzer, 2000). The survey pool used for this study comes from an existing
Table 4. 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 5. 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>
database of senior public servants at municipal, provincial, and the federal levels of government. Table 7 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 7 where the sample size was not based on a census, the methodology for choosing the sample has been identified.

The sample was not stratified by gender, age, or region. Table 8 delineates the response rate for the 1999 survey among the various sectors in the public sector target population.

The response rate of 14% was deemed acceptable based on historical data for this database. Table 9 provides the most recent response history of the Rethinking Government national survey for the public sector target sample.

**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 6. 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 7. 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 DMs/ADM</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/MLA</td>
<td>Random</td>
<td>1,390</td>
<td>758</td>
</tr>
<tr>
<td>Provincial DMs/ADM</td>
<td>All DMs/Random ADMs</td>
<td>765</td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mayor/Reeve</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>
</tbody>
</table>

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Table 8. 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><strong>Total Public Sector</strong></td>
<td><strong>14.2</strong></td>
</tr>
</tbody>
</table>

Table 9. 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>
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 Private Sector Leaders for the purpose of this study
included 121 individuals \((n=121)\). The sample of Public Sector Leaders for the purposes
of this study included 227 individuals \((n=227)\) (Dantzer, 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 is 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: Analysing 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.

**Private 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 will provide some basis to evaluate whether training and development needs of potential leaders should be altered as a result of 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 (Coldewey, 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 were 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 (Coldewey, 1989).

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

The results obtained from the private 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 Private Sector and the Public Sector Leaders’ Survey

The shifts in perceptions of the required competencies for leaders in the 21st century as measured by the survey of the Private Sector were compared to the shifts in perceptions as measured by the analysis of the Public Sector survey.

This analysis was particularly useful in determining if there is a convergence of perceptions by both private sector and public 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 will facilitate 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 were 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 private and public sector leaders to identify organizational versus individual perspective differences.
CHAPTER 4

RESULTS AND ANALYSIS

Introduction

The perceptions of private sector leaders regarding changes in the importance of leadership competencies were the focus of this research. The perceptions of the general population were also surveyed to enable the study of differences in individual and organizational perspectives. Another aspect of this research was collaborative in that the results of a study of the perceptions of public sector leaders (Dantzer, 2000) were combined with those of the private sector leaders of this study. This enabled a comparison of perceptions of the two sectors. The collaborative section examined differences in the degree of shift between past and future leadership competency requirements and in the ranking of the competencies perceived as most important. Both private and public sector leaders were compared with the general population to explore differences between organizational and individual perspectives. Results are reported as they relate to each of the four research questions.

To facilitate the interpretation of the results, the competencies used in the survey are grouped in clusters of similar constructs, consistent with the clustering that many organizations use to simplify the communication and implementation of their competency profiles (see Appendix 3). The competencies comprising each cluster are presented in Table 10.
Table 10. Clusters of Leadership Competencies

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual</td>
<td>Problem Solving</td>
</tr>
<tr>
<td></td>
<td>Ability to Learn</td>
</tr>
<tr>
<td>Future-Building</td>
<td>Cosmopolitan/World View</td>
</tr>
<tr>
<td></td>
<td>Vision</td>
</tr>
<tr>
<td>Relationship</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Negotiation</td>
</tr>
<tr>
<td></td>
<td>Interpersonal</td>
</tr>
<tr>
<td></td>
<td>Teaching</td>
</tr>
<tr>
<td>Management</td>
<td>Entrepreneurial</td>
</tr>
<tr>
<td></td>
<td>Organizational</td>
</tr>
<tr>
<td></td>
<td>Business/Technical Knowledge</td>
</tr>
<tr>
<td>Personal</td>
<td>Stamina</td>
</tr>
<tr>
<td></td>
<td>Ethics</td>
</tr>
<tr>
<td></td>
<td>Initiative</td>
</tr>
</tbody>
</table>

Shift: 20 Years Ago to 21st Century

Research Question 1. Has there been a shift in private sector leaders’ perception of the abilities required in the past as compared to the abilities required for the 21st century? The importance of each competency was rated by private sector leaders 20 years ago and in the 21st century. Means are presented in Table 11. Two-tailed t-tests for dependent means were used to compare ratings for past and future competency requirements. Results are presented in Table 12.
Table 11. Means and Standard Deviations of the Ratings by Private 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>1. Initiative</td>
<td>5.600 (.141)</td>
<td>1. Vision</td>
<td>6.446 (.866)</td>
</tr>
<tr>
<td>2. Stamina</td>
<td>5.430 (.196)</td>
<td>2. Cosmo./World</td>
<td>6.372 (.743)</td>
</tr>
<tr>
<td>3. Problem Solving</td>
<td>5.421 (.257)</td>
<td>3. Ability to Learn</td>
<td>6.248 (.849)</td>
</tr>
<tr>
<td>5. Organizational</td>
<td>5.242 (.115)</td>
<td>5. Teamwork</td>
<td>6.182 (.876)</td>
</tr>
<tr>
<td>8. Vision</td>
<td>5.083 (.458)</td>
<td>8. Problem Solving</td>
<td>5.992 (.948)</td>
</tr>
<tr>
<td>10. Communication</td>
<td>4.675 (.354)</td>
<td>10. Interpersonal</td>
<td>5.842 (.944)</td>
</tr>
<tr>
<td>11. Ability to Learn</td>
<td>4.613 (.263)</td>
<td>11. Negotiation</td>
<td>5.835 (.916)</td>
</tr>
<tr>
<td>13. Teamwork</td>
<td>4.042 (.381)</td>
<td>13. Teaching</td>
<td>5.496 (.1034)</td>
</tr>
<tr>
<td>15. Cosmo./World</td>
<td>3.702 (.424)</td>
<td>15. Organizational</td>
<td>5.000 (.174)</td>
</tr>
</tbody>
</table>

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Table 12. Significance of Shift, Degrees of Freedom, *t* Values, and Probabilities of the Ratings by Private Sector Leaders of Past and Future Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>df</th>
<th><em>t</em></th>
<th><em>p</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmopolitan/World View</td>
<td>120</td>
<td>17.528</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Teamwork</td>
<td>119</td>
<td>14.529</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>118</td>
<td>12.294</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Communication</td>
<td>119</td>
<td>11.384</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Teaching</td>
<td>120</td>
<td>11.360</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>118</td>
<td>9.833</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Vision</td>
<td>120</td>
<td>8.733</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Negotiation</td>
<td>119</td>
<td>7.475</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Ethics</td>
<td>120</td>
<td>6.168</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>120</td>
<td>4.650</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Initiative</td>
<td>119</td>
<td>4.529</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>119</td>
<td>4.172</td>
<td><em>p</em> ≤ .000</td>
</tr>
<tr>
<td>Stamina</td>
<td>120</td>
<td>2.557</td>
<td><em>p</em> ≤ .012</td>
</tr>
<tr>
<td>Organizational</td>
<td>118</td>
<td>-1.678</td>
<td>ns</td>
</tr>
<tr>
<td>Business/Technical</td>
<td>119</td>
<td>-1.033</td>
<td>ns</td>
</tr>
</tbody>
</table>

*Note:* ns=non-significant results

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Key Observations: Shift in Ratings of Importance of Leadership Competencies Between 20 Years Ago and the 21st Century

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

Private sector leaders' ratings increased significantly for all competencies except organizational skills and business/technical knowledge. This suggests that private sector leaders perceive that organizational skills and business/technical knowledge remain relatively stable requirements in achieving their strategic objectives and values, while the higher ratings for the other competencies may reflect that they are considered to be more sensitive to the environmental factors that change over time and require the organization to adapt. This may not be solely the effect of a general increase in the perceived importance of all competencies for the future: The least important competency for leadership 20 years ago was considered to be cosmopolitan/world view, whereas in the 21st century it is perceived as being the second most essential for successful leadership, resulting in the largest change over time. Vision was rated as the eighth most important competency for leadership in the past, but moves to the top-rated competency for the future. Relationship competencies also indicate large shifts in importance: specifically, teamwork, communication, and teaching. Of the intellectual competencies, ability to learn indicated a marked increase in importance. These findings may be inter-related: Designing and implementing a vision in an expanding cosmopolitan/world view context may have implications both for leaders' ability to learn and to establish and maintain relationships.
External Driver Influence on Competency Requirements

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

The literature review described how the external drivers used in this research may be influencing the need for leadership competencies. To examine this relationship, private 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. Results are presented in Table 13. Two-tailed t-tests for dependent means were applied to the data and are presented in Table 14.

Key Observations: Influence of External Drivers

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

Comparison of mean ratings indicates that globalization and technology are considered equally important. Globalization and technology are considered to have more influence than diversity, and more than downsizing. Diversity is considered to have more influence than downsizing.

Private sector leaders rated the drivers as influential in terms of their effects on leadership competency requirements for the 21st century. The ranking of the drivers is significant in that some are considered more important than others. However, it should be noted that almost 35% of the sample considered even the lowest rated driver,

<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>5.924 (.865)</td>
<td>93%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Technology</td>
<td>5.992 (.930)</td>
<td>92%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Diversity</td>
<td>4.567 (1.471)</td>
<td>54%</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>Downsizing</td>
<td>4.143 (1.277)</td>
<td>34%</td>
<td>28%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Table 14. Comparisons Between External Drivers, Degrees of Freedom, t Values, and Probabilities for Differences Between Ratings of External Drivers

<table>
<thead>
<tr>
<th>External Drivers</th>
<th>Comparisons Between External Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technology</td>
</tr>
<tr>
<td>Globalization</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Technology</td>
<td>$t (119) = 9.164$</td>
</tr>
<tr>
<td></td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Diversity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Downsizing</td>
<td></td>
</tr>
</tbody>
</table>

Note: Redundant comparisons have been omitted; ns=non-significant results.
downsizing, to have a high influence, and 62% considered it to have at least a moderate influence. All of these drivers were perceived to be important in terms of their effect on the nature of the 21st-century environment. Leaders gave these high ratings in response to the question: To what extent will the following factors influence the abilities required for leaders 20 years from now? This suggests that the shift in the way the competencies were rated for the 21st century may be a function of the perceptions of private sector leaders of the effect that these drivers will have on the importance of specific competencies for organizational performance in the new environment.

**Leader and General Population Perspectives**

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

Because the external drivers impact on the general population as well as organizations, it was important to explore if the ratings by the private sector leaders were reflecting an organizational perspective rather than that of an individual. This is derived from the competency-based management approach that suggests four aspects to determining competency requirements: (1) identify and react to the external drivers; (2) identify the strategic/business objectives and the values of the organization; (3) identify the work required to achieve the objectives and values; and, (4) identify the competencies required to achieve the work. 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 he or she 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. Private sector leaders and general population mean ratings are presented in Table 15.

To determine if there were differences in the perceptions of the general population and private sector leaders, z-tests on the independent sample means were applied. Results are presented in Table 16.

**Key Observations: Divergence of Private Sector Leaders and General Population Ratings of Leadership Competency Requirements for 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. This hypothesis was supported.

The general population rated a number of competencies as more important for the 21st century than did private sector leaders. These are: problem solving, ethics, organizational skills, and negotiating. The general population higher mean rating for teaching approached significance.

Private sector leaders rated cosmopolitan/world view higher than did the general population; and private sector leaders' higher rating for entrepreneurial skills approached significance.
<table>
<thead>
<tr>
<th>Competency</th>
<th>Private Sector Leaders</th>
<th>Competency</th>
<th>General Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Ethics</td>
<td>6.041 (.970)</td>
<td>5. Initiative</td>
<td>6.170 (.991)</td>
</tr>
<tr>
<td>6. Problem Solving</td>
<td>5.992 (.945)</td>
<td>6. Negotiation</td>
<td>6.106 (1.022)</td>
</tr>
<tr>
<td>7. Entrepreneurial</td>
<td>5.843 (.885)</td>
<td>7. Organizational</td>
<td>5.998 (1.094)</td>
</tr>
<tr>
<td>8. Negotiation</td>
<td>5.835 (.916)</td>
<td>8. Entrepreneurial</td>
<td>5.694 (1.170)</td>
</tr>
<tr>
<td>9. Stamina</td>
<td>5.760 (1.017)</td>
<td>9. Teaching</td>
<td>5.672 (1.239)</td>
</tr>
<tr>
<td>10. Teaching</td>
<td>5.496 (1.034)</td>
<td>10. Stamina</td>
<td>5.669 (1.197)</td>
</tr>
<tr>
<td>11. Organizational</td>
<td>5.000 (1.174)</td>
<td>11. Cosmopolitan/World View</td>
<td>5.668 (1.283)</td>
</tr>
</tbody>
</table>
Table 16. Mean Differences, z Values and Probabilities for Differences in the Ratings by Private Sector Leaders and the General Population of Leadership Competency Requirements for the 21st Century

<table>
<thead>
<tr>
<th>Competency</th>
<th>Difference</th>
<th>z value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmopolitan/World View</td>
<td>0.704</td>
<td>10.419</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Organizational</td>
<td>-0.998</td>
<td>-9.313</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-0.298</td>
<td>-3.442</td>
<td>$p \leq .000$</td>
</tr>
<tr>
<td>Negotiation</td>
<td>-0.271</td>
<td>-3.254</td>
<td>$p \leq .002$</td>
</tr>
<tr>
<td>Ethics</td>
<td>-0.221</td>
<td>-2.503</td>
<td>$p \leq .012$</td>
</tr>
<tr>
<td>Teaching</td>
<td>-0.176</td>
<td>-1.870</td>
<td>$p \leq .062$</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>0.149</td>
<td>1.849</td>
<td>$p \leq .064$</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>-0.116</td>
<td>-1.499</td>
<td>ns</td>
</tr>
<tr>
<td>Communication</td>
<td>-0.087</td>
<td>-1.084</td>
<td>ns</td>
</tr>
<tr>
<td>Stamina</td>
<td>0.091</td>
<td>0.991</td>
<td>ns</td>
</tr>
<tr>
<td>Initiative</td>
<td>-0.054</td>
<td>-0.721</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: ns=non-significant results

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This divergence may reflect differences in individual and organizational perspectives. The general population appears to focus on the more traditional skills associated with private sector leaders. The emphasis that the private sector places on cosmopolitan/world view and entrepreneurial skills may reflect that the private sector leaders are already coping with the initial impact of these drivers and are predicting their longer term effects. Viewing this from an individual perspective, the drivers may not yet be having an impact on the day-to-day experience of individuals. This may be a reflection of the distinctions between contexts and time frames: individuals referring to day-to-day activities, while leaders are interpreting and predicting effects in terms of impact on business.

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

This section of the results combines findings from the private sector leaders group and a group of public sector leaders being studied by a colleague (Dantzer, 2000). Results have supported hypotheses that for both groups of leaders there is a shift in the perception of leadership competency requirements between the past and the 21st century. It has also been supported that the set of external drivers of interest in this study is influential in determining perceptions of importance of leadership competency requirements. Results also suggest that each group of leaders differs from the general population in their perspective of how important each competency will be in the future.

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

**Degree of Shift**

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

Data are presented in Table 17. z-tests on the means indicated significantly different size shifts and are presented in Table 18.

**Key Observations: Degree of Shift**

It was hypothesized that the size of the private sector leaders' shift between past and present required leadership competencies will differ from that of the public sector leaders. This hypothesis is supported.

Both private and public sector leaders' ratings displayed shifts in the importance of leadership competencies between the past and the 21st century. Private sector leaders demonstrated a smaller change in the requirements for vision, which may reflect that the organizations they lead have already experienced the effect of 21st-century forces more directly than governments due to the requirement to compete in a global economy. Private sector leaders also demonstrated a smaller change than public sector leaders with respect to entrepreneurial skills. This could be attributed to the fact that entrepreneurial skills have traditionally been associated with the private sector and have
<table>
<thead>
<tr>
<th>Competency</th>
<th>Private Sector Leader Shift</th>
<th>Competency</th>
<th>Public Sector Leader Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cosmopolitan/World View</td>
<td>2.669 (1.575)</td>
<td>1. Cosmopolitan/World View</td>
<td>2.691 (1.500)</td>
</tr>
<tr>
<td>2. Teamwork</td>
<td>2.133 (1.608)</td>
<td>2. Teamwork</td>
<td>2.348 (1.644)</td>
</tr>
<tr>
<td>3. Ability to Learn</td>
<td>1.639 (1.454)</td>
<td>3. Vision</td>
<td>1.829 (1.510)</td>
</tr>
<tr>
<td>4. Communication</td>
<td>1.558 (1.500)</td>
<td>4. Ability to Learn</td>
<td>1.677 (1.511)</td>
</tr>
<tr>
<td>5. Teaching</td>
<td>1.521 (1.473)</td>
<td>5. Teaching</td>
<td>1.629 (1.803)</td>
</tr>
<tr>
<td>6. Interpersonal</td>
<td>1.479 (1.641)</td>
<td>6. Communication</td>
<td>1.596 (1.442)</td>
</tr>
<tr>
<td>7. Vision</td>
<td>1.364 (1.718)</td>
<td>7. Interpersonal</td>
<td>1.345 (1.886)</td>
</tr>
<tr>
<td>8. Negotiation</td>
<td>0.975 (1.429)</td>
<td>8. Negotiation</td>
<td>1.291 (1.551)</td>
</tr>
<tr>
<td>9. Ethics</td>
<td>0.802 (1.430)</td>
<td>9. Entrepreneurial</td>
<td>1.103 (1.691)</td>
</tr>
<tr>
<td>10. Entrepreneurial</td>
<td>0.678 (1.603)</td>
<td>10. Ethics</td>
<td>0.959 (1.484)</td>
</tr>
<tr>
<td>11. Problem Solving</td>
<td>0.567 (1.488)</td>
<td>11. Problem Solving</td>
<td>0.559 (1.447)</td>
</tr>
<tr>
<td>12. Initiative</td>
<td>0.525 (1.270)</td>
<td>12. Initiative</td>
<td>0.482 (1.324)</td>
</tr>
<tr>
<td>13. Stamina</td>
<td>0.331 (1.422)</td>
<td>13. Business/Technical</td>
<td>-0.471 (1.882)</td>
</tr>
<tr>
<td>14. Organizational</td>
<td>-0.227 (1.475)</td>
<td>14. Organizational</td>
<td>-0.392 (1.719)</td>
</tr>
<tr>
<td>15. Business/Technical</td>
<td>-0.142 (1.502)</td>
<td>15. Stamina</td>
<td>0.372 (1.745)</td>
</tr>
</tbody>
</table>

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Table 18. Mean Differences, z Values, and Probabilities for Differences in the Degree of Shift in Ratings by Private and Public Sector Leaders for Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>Difference</th>
<th>z Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>-0.465</td>
<td>2.488</td>
<td><em>p ≤ .016</em></td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>-0.425</td>
<td>2.305</td>
<td><em>p ≤ .022</em></td>
</tr>
<tr>
<td>Negotiation</td>
<td>-0.316</td>
<td>1.898</td>
<td><em>p ≤ .056</em></td>
</tr>
<tr>
<td>Business/Technical</td>
<td>0.329</td>
<td>-1.776</td>
<td></td>
</tr>
<tr>
<td>Teamwork</td>
<td>-0.215</td>
<td>1.172</td>
<td>ns</td>
</tr>
<tr>
<td>Ethics</td>
<td>-0.157</td>
<td>0.964</td>
<td>ns</td>
</tr>
<tr>
<td>Organizational</td>
<td>0.165</td>
<td>-0.928</td>
<td>ns</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>0.134</td>
<td>-0.714</td>
<td>ns</td>
</tr>
<tr>
<td>Teaching</td>
<td>-0.108</td>
<td>0.630</td>
<td>ns</td>
</tr>
<tr>
<td>Initiative</td>
<td>0.043</td>
<td>-0.295</td>
<td>ns</td>
</tr>
<tr>
<td>Stamina</td>
<td>-0.041</td>
<td>0.239</td>
<td>ns</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>-0.038</td>
<td>0.230</td>
<td>ns</td>
</tr>
<tr>
<td>Communication</td>
<td>-0.038</td>
<td>0.227</td>
<td>ns</td>
</tr>
<tr>
<td>Cosmopolitan/World View</td>
<td>-0.022</td>
<td>0.115</td>
<td>ns</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>0.008</td>
<td>-0.049</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: ns=non-significant results

*Higher ratings by public than Private Sector Leaders.
only more recently been exported to public sector management due to the fiscal crises of the 1980s.

**Ranking of Competencies**

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

**Within Groups**

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 by means and compared using a 95% confidence interval. Data are presented in Table 19.

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 20.

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 mean ratings were ranked and compared using a 95% confidence interval. Data are presented in Table 21.
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 Skills</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>

*Note:* 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 ($p \leq .05$).
Table 20. 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>Interval 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>

Note: Organizational skills and business/technical knowledge indicate lower ratings for importance than the other competencies (p ≤ .05).
Table 21. 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>

Note: 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 ($p \leq .05$).
Between Groups

Means associated with the rankings were compared across groups using a 95% confidence interval. Data are presented in Table 22.

Key Observations: Ranking of Competencies

It was hypothesized that each group will perceive some leadership competencies as more important than others. This hypothesis is supported. Private sector leaders rated a number of competencies significantly higher than other competencies. These include: vision, cosmopolitan/world view, ability to learn, communication, and teamwork. Public sector leaders rated the same set of competencies as highly important, but they rated organizational skills and business/technical knowledge lower in importance than the other competencies. The general population rated ability to learn, communication, problem solving, ethics, initiative, and negotiation as the most important competencies. Organizational skills, entrepreneurial skills, teaching, stamina, and cosmopolitan/world view were rated as less important.

Confidence interval overlap indicates that private sector leaders’ rankings of organizational skills and business/technical knowledge were not significantly different from others in the lower ranked competencies. However, public sector leaders did rate organizational skills and business/technical knowledge significantly lower than others. This may reflect that organizational structures and business practices in public service are less flexible in terms of adaptations to external factors, especially since many of these aspects are legislated. Referring to the four-step model of competency identification, whereas the external drivers may be perceived as important influences by other groups of
Table 22. Ranking of Leadership Competency Requirements

<table>
<thead>
<tr>
<th>Competency</th>
<th>Private Sector</th>
<th>Public 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>Cosmopolitan/World View</td>
<td>2</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Ability to Learn</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Communication</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Teamwork</td>
<td>5</td>
<td>3</td>
<td>n/a</td>
</tr>
<tr>
<td>Initiative</td>
<td>6</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Ethics</td>
<td>7</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>8</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>9</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>10</td>
<td>9</td>
<td>n/a</td>
</tr>
<tr>
<td>Negotiation</td>
<td>11</td>
<td>10</td>
<td>6</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>Business/Technical</td>
<td>14</td>
<td>15</td>
<td>n/a</td>
</tr>
<tr>
<td>Organizational</td>
<td>15</td>
<td>14</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note:* Private sector and public sector leaders ranked the competencies similarly. Vision, cosmopolitan/world view, ability to learn, communication, and teamwork were common to both leader 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 ($p \leq .05$).
leaders, the strategic objectives, values, and the work required to achieve those may differ for the public sector and may affect priorities in terms of competencies.

A direct comparison of rankings for competencies by leaders and general population is constrained by the fact that four of the competencies rated by leaders were not included in the general population survey for reasons provided previously. These competencies are vision, teamwork, interpersonal, and business/technical knowledge. However, comparisons can be made in the placement of those competencies rated by all groups. That cosmopolitan/world view was one of the lowest rated competencies for the general population may reflect differences between organizational and individual perspectives. While individuals may also experience the effects of external drivers, particularly globalization and technology, their interpretations and responses may be on a personal level and focused on developing strategies based on their intellectual and personal competencies. Leaders may focus on broadening their understanding of the external environment in order to form proactive, comprehensive strategies for change. The basic difference may be that individuals comprehend leadership requirements in terms of what they personally would require to improve the control they have of their own lives and/or careers, while leaders may understand them in terms of what is required by the organizations and people they lead.
CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This research surveyed private sector leaders to determine if there was a
difference in their perceptions of the required competencies for leadership 20 years ago in
comparison with those required for the 21st century. Private sector leaders were asked to
rate on a 1-7 scale the importance of the following leadership competencies for each of
the time periods of the study: teamwork, problem solving, ability to learn,
communication, vision, interpersonal, initiative, entrepreneurial, teaching, stamina,
ethics, organizational, business/technical knowledge, negotiation, cosmopolitan/world
view. The research also tested the hypothesis that private sector leaders would perceive
that the shift would be influenced by a set of external drivers, namely: globalization,
technology, diversity, and downsizing. A survey of the general public was undertaken so
that comparisons could be made with the perceptions of private sector leaders to
determine if leaders' perceptions were organizationally based or were solely individual
perceptions. Two additional analyses combine data from (Dantzer, 2000) a similar study
of public sector leaders to first determine if the perceived shift in leadership requirements
from 20 years ago to the 21st century is larger for one sector than the other; and second, to
compare the top-ranked competencies across groups to determine any differences or similarities in what private and public sector leaders consider the most important competencies in the future and how their views compare with those of individuals in the general population.

Finding 1—Shift: 20 Years Ago to 21st Century

Private sector leaders perceived a shift in the importance of most leadership competencies from 20 years ago to the 21st century except business/technical knowledge and organizational. Results suggest that the shift differs for some competencies, particularly cosmopolitan/world view, which was perceived to be the least important competency for leadership 20 years ago but the second most essential for successful leadership in the 21st century, resulting in the largest change over time.

Finding 2—External Driver Influence on Competency Requirements

Private sector leaders’ ratings indicate that globalization and technology are considered equally important and have more influence than diversity. Diversity is considered to have more influence than downsizing. It should be noted that almost 35% of the sample considered even the lowest rated driver, downsizing, to have high influence, and 62% considered it to have at least moderate influence.

Finding 3—Leader and General Population Perspectives

The general population rated a number of competencies as more important for the 21st century than did private sector leaders. These are: problem solving, ethics,
organizational skills, negotiation, and, to a lesser degree, teaching. Private sector leaders rated cosmopolitan/world view and, to a lesser degree, entrepreneurial skills higher than did the general population.

Finding 4—Combined Data: Private and Public Sector Leaders and General Population Differences

Comparison of ratings by private and public sector leaders addressed two questions: first, Is there a difference in the degree of shift between these groups of leaders? second, Is there a difference in the importance assigned to particular competencies by each group and does that vary between groups?

Degree of shift

Private sector leaders demonstrated a smaller shift in leadership requirements than did public sector leaders on vision, entrepreneurial skills, and, to a lesser degree, negotiation.

Ranking of competencies

Private sector leaders rated a number of competencies significantly higher than others. These include: vision, cosmopolitan/world view, ability to learn, communication, and teamwork. Public sector leaders rated organizational skills and business/technical knowledge lower in importance than the other competencies. The general population rated ability to learn, communication, problem solving, ethics, initiative, and negotiation as the most important. Organizational skills, entrepreneurial skills, teaching, stamina, and cosmopolitan/world view were rated as less important.

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In making comparisons across groups, private and public sector leaders ranked the competencies similarly. Private sector leaders differed from public sector leaders in that they rated smaller shifts in importance for vision, entrepreneurial skills, and negotiation. Also, private sector leaders ranked business/technical knowledge higher than did public sector leaders. The competencies rated the highest by the general population differed from those of both groups of leaders. 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.

**Conclusions**

The fast pace of change and reach of transportation, communication, and information technology has brought about a truly global economy, characterized by increasing interdependence. For example, the recent Asian financial crisis affected stock markets and bond markets and the value of national currencies around the world. Prior to December 31, 1999, governments and corporations spent billions of dollars adjusting their technologies to be compatible with a year that would start a new century; this became a global initiative given that if one country’s computer technology malfunctioned, it could well affect other countries with which it communicated.

Diversity, and specifically cultural diversity, is one outcome of global relationships. Diversity in the workplace is more than a reflection of the cultural differences in a society; it also reflects changing demographics and the employers’ need to maximize the utilization of human capital in an increasingly competitive labor market in an economy that is global in scope.
Downsizing was also a response to this new, evolving economic paradigm. Corporations layed off workers in an effort to reduce payroll costs and therefore remain competitive in the global marketplace. The approach created organizations that were more horizontal and required a re-evaluation of hierarchical management practices. This is a profound change. The need to maintain productivity in organizations with a minimized middle management layer, the consequent increases in spans of control, and within an increasingly complex environment, requires leaders to establish clear objectives, decentralize power, and emphasize team-based approaches. Thus the influence of downsizing on competencies refers not to the skills required to manage a downsizing but to those required to lead an organization post-downsizing.

The effects of the drivers and their interdependence are evident in the high proportion of leaders who rated globalization and technology as highly important in determining the leadership competencies of the future. Diversity and downsizing are ancillary effects of globalization, which may explain why those drivers received significantly lower ratings in terms of their independent effect.

Clearly the understanding of the effects and interaction of these drivers by private sector leaders influenced their perception of required leadership competencies for the 21st century. The major organizational effects of these 21st-century forces are interdependence and coping with complexity and fast-paced change. The results of this research indicated a significant shift in all of the leadership competencies except business and organizational skills. Business/technical knowledge and organizational skills have traditionally been the foundation of business and remain important competencies.
However, to respond to the new environment shaped by the external drivers, intellectual, future building, and relationship competencies are seen as more important than in the past.

Intellectual competencies have always been part of leadership models; however, the complexity of the 21st-century environment is requiring a change in how intellectual competencies are applied. Traditionally the focus for intellectual competencies was information processing; the current study indicates that private sector leaders view the ability to learn and to solve problems as the new expression for intellectual competencies. This is consistent with the need to process complexity in situations where ambiguity is prevalent and change is rapid.

Future competencies include vision and cosmopolitan/world view. Vision is particularly important in a changing world since it allows a leader to establish an objective beyond the horizon by which decisions in the near or medium term can be guided. The need for a cosmopolitan/world view is essential in a global economy where interdependence is international in scope, and understanding the effects of local decisions on trans-border relationships is crucial.

Relationship competencies such as interpersonal, communication, teaching, negotiation, and teamwork were rated higher when considered for the 21st century than for 20 years ago. Relationship-building skills take on renewed importance when the information and knowledge are readily available, and specialization is the norm. This diffusion of knowledge requires competencies that can coordinate, shape, and bring about coherence.
Management competencies such as business/technical knowledge and organizational skills were perceived to be relatively stable leadership requirements. This may result from the perception that they are basic building blocks of leadership performance, but successful performance in the future will require an emphasis on different competencies, specifically, those that enable a broader perspective and enhanced relationships.

The set of conditions that defines the 21st century will also require personal competencies. Private sector leaders rated stamina, initiative, and ethics as more important for leadership in the future. The unpredictable nature of change and the need to harness vast amounts of information in partnerships and strategic alliances in an interdependent context require a constant need to test new approaches.

The research demonstrated that private sector leaders' perceptions reflect more than individual perspectives. The general population rated problem solving, ethics, organizational skills, and negotiation higher than did private sector leaders. This suggests a focus on more traditional characteristics of leaders which may be a reflection of the probability that the general population does not have an awareness of the effect that these external forces have on the conduct of business in the 21st century. That private sector leaders rated cosmopolitan world view as more important than did the general population is a clear reflection of the increased sensitivity of private sector leaders to the effect of globalization on their business decisions. This sensitivity is not optional for successful leadership in the 21st century. These external drivers impose the need for increased expertise in cultivating dynamic, multiple relationships.
Public sector leaders indicated a similar pattern of shift in their ratings of required leadership competencies for the 21st century as did private sector leaders. One notable difference in the perspectives of public and private sector leaders is that leaders in the public sector indicated a bigger shift towards the need for vision as a future competency. This could reflect the increased challenge that the public sector has to adopt a horizontal approach, that is to say, creating cross-jurisdictional alliances and partnerships to deal with an environment that is more diffuse in terms of both information as well as economic power. It may also reflect the realization that the public interest may be redefined for the 21st century. In this context of increased ambiguity and redefinition of state power, it will be necessary to establish clear long-term targets and objectives to direct the role of government in a context that is changing more rapidly than government can adjust. Government will respond to the external drivers more slowly due at least in part to the democratic values of consultation with citizens and ensuring that change is consistent with societal values. The general population data indicate that government may need to increase the awareness of citizens to the deep effects that 21st-century forces are having on governance structures and the relationship between economic and state power.

Regardless of the degree of shift between 20 years ago and the future, both private and public sector leaders identified the same competencies as the most important requirements for leadership in the 21st century, namely: vision, cosmopolitan/world view, ability to learn, communication, and teamwork. This suggests a common need to create a vision within a global cosmopolitan context and to use relationship skills such as
teamwork and communication to achieve it. Margaret Wheatley (1994) concluded that in organizations, real power and energy are generated through relationships. The patterns of relationships and the capacities to form them are more important than tasks, functions, roles, and positions.

**Recommendations**

As organizations continue to adjust their strategies and approaches to meet 21st-century challenges, leadership development will become more essential. State and business interests will need to work in a complementary rather than antagonistic fashion. This research provides a foundation for:

1. Similar studies in different countries should explore whether the response to 21st-century forces are paralleled in an international context. This would be valuable to the development of more effective global partnerships and alliances.

2. A study should be conducted to explore the effect of demographic variables such as gender and age on perceptions of the effect of the external drivers on the requirements for leadership to better understand group differences within the leadership population.

3. A study should be conducted to examine approaches to development that are best suited to nurturing these leadership competencies. For example, there may be differences in the effectiveness of formal learning events versus integrating learning approaches within the organizational culture and whether different approaches to learning are more effective for the development of particular competencies.
APPENDIX 1

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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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

ADMs 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. ADMs 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

ADMs 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

ADMs 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

ADMs 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

ADMs 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

ADMs 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. ADMs 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

ADMs 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. ADMs 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

ADMs 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. ADMs 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

ADMs 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

ADMs 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. ADMs 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

ADMs 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. ADMs 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

ADMs 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. ADMs 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) 235-7215 (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
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.

I. 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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<th>Not At All Important</th>
<th>Moderately Important</th>
<th>Extremely Important</th>
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<tr>
<td>a. Teamwork</td>
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<td>3</td>
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<tr>
<td>b. Problem solving (analytical, decisions, judgement)</td>
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<td>2</td>
<td>3</td>
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<td>c. Ability to learn (integrative, intelligence, change agent)</td>
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<td>d. Communication skills</td>
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<td>f. Interpersonal (relationships, collaborative, serving others)</td>
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<td>i. Teaching (coaching, mentoring)</td>
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<td>o. Cosmopolitan/world view</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

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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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Problem solving (analytical, decision making, judgment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Ability to learn (integrative, intelligence, change agent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Communications skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Vision (creativity)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Interpersonal (relationship, collaborative, serving others)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>g. Initiative (motivation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Entrepreneurial (risk taker, experimenter)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Teaching (coaching, mentoring)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Stamina/resilience/self-renewal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Ethics (generosity, values)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Organizational (administrative)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Business/technical knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Negotiation/consult and engage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Cosmopolitan/world view</td>
<td></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></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 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></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></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></td>
<td></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 AS 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, decision, judgment, innovation)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c. Ability to learn (innovative, intelligence, change agency)</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, collaborative, serving others)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>g. Initiative (entrepreneur)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>h. Entrepreneurial (risk taker, experimenter)</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 (integrity, values)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>l. Organizational (administrative)</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>
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>Very Easy To Find</th>
<th>Neither</th>
<th>Extremely Difficult To Find</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. ____________________________

2. ____________________________

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>Not At All Different</th>
<th>Somewhat Different</th>
<th>Very Different</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. 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., &quot;disagree&quot;) to question 7c: What is the key difference?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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 Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 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>b. 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>c. 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>d. If you responded 1, 2 or 3 (i.e., &quot;disagree&quot;) to question b: What is the key difference?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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>Towards Generalists</th>
<th>No Trend</th>
<th>Towards Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></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>Not at All</th>
<th>Somewhat</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Globalization</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b. Technology</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c. Downsizing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d. Diversity (race, gender, culture, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>e. Other (please specify)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

10. Which best describes the style of leadership?

<table>
<thead>
<tr>
<th>Combination of Hierarchical, Hierarchical/Horizontal, Horizontal</th>
<th>Not at All</th>
<th>Somewhat</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 20 years ago</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b. 20 years from now</td>
<td>1</td>
<td>2</td>
<td>3</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?

12. What is your gender?

<table>
<thead>
<tr>
<th>Male</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>2</td>
</tr>
</tbody>
</table>

13. What sector do you work in?

<table>
<thead>
<tr>
<th>Public Sector</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>1</td>
</tr>
<tr>
<td>Provincial/territorial</td>
<td>2</td>
</tr>
<tr>
<td>Municipal</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Private Sector</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>4</td>
</tr>
<tr>
<td>Hi-Tech</td>
<td>5</td>
</tr>
<tr>
<td>Financial Services</td>
<td>6</td>
</tr>
<tr>
<td>Entertainment/Media</td>
<td>7</td>
</tr>
<tr>
<td>Tourism</td>
<td>8</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voluntary Sector</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>10</td>
</tr>
<tr>
<td>Social Services</td>
<td>11</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>12</td>
</tr>
</tbody>
</table>
14. How many employees work in your organization?
   Under 100 ................................................................. 1
   Between 100 and 300 .................................................. 2
   Between 301 and 500 .................................................. 3
   Over 500 ..................................................................... 4

15. How long have you been in a leadership position?
   
   [blank line] 
   [blank line] 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 1 year ....................................................................... 1
   1-3 years ........................................................................... 2
   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?

Under 5 years

5-10 years

11-20 years

21-30 years

Over 30 years

1 2 3 4 5
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