THE IMPACT OF DOWNSIZING STRATEGIES AND PROCESSES ON ONTARIO ACADEMIC RESEARCH LIBRARIES

by

Shauna Taylor

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Graduate Department of Faculty of Information Studies
University of Toronto

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0-612-63634-8
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Ph.D. Dissertation (2001)
Shauna Taylor
Faculty of Information Studies
University of Toronto

ABSTRACT

This study investigates the patterns of organizational downsizing activities in the academic research libraries in Ontario between 1993 and 1997. The purpose of the present study was to investigate the relationship between the organizational downsizing strategies and processes academic research libraries use to downsize and the impact the downsizing has on organizational outcomes both at the individual level (attitudes towards the job) and organizational level (organizational climate). Data were collected by a mail questionnaire survey. The study population consists of the professional employees (excluding Chief Librarians) in nine academic research libraries in Ontario. The academic research libraries selected for this study belong to the Canadian Association of Research Libraries (CARL). A total of 458 mail questionnaires were sent to the professional employees in the nine participating CARL member institutions. Three hundred and twenty-eight completed questionnaires were returned giving a response rate of 72 percent.

A general conclusion from this study is that the strategies used to downsize affect employee attitudes toward their jobs as well as the organizational climate. We found that a workforce reduction strategy that relied primarily on attrition, early retirements, and regular retirements had a negative impact on both employee attitudes toward the job and organizational climate. In contrast, a systemic change strategy, which focuses on changing the culture of the
organization, had a positive impact on both employee attitudes toward the job and organizational climate.

The findings also suggest that much of what management does during the downsizing process itself has implications for how successful the efforts to minimize the negative effects for survivors, and ultimately the organization, will be. Our analysis identified three management processes in which organizations could intervene to alleviate the negative effects of downsizing on employee attitudes toward the job and organizational climate. We found that participation, communication, and transformational leadership behaviours had a positive impact on both employee attitudes toward the job and organizational climate. These processes involve employee participation in the decision-making regarding downsizing, the presence of timely, accurate, and complete communication during downsizing, and the demonstration of senior management commitment and support of the changes made during the downsizing.
ACKNOWLEDGEMENTS

This dissertation is built on the efforts of many people. First and foremost, I would like to express my sincere gratitude to my thesis supervisor, Professor Ethel Auster who does not know that I know how much of a mentor she has been to me over the years. Ethel had an incredibly difficult assignment in transforming a student into a researcher. Her guidance, insights, and devotion to this process are evident on every page of the dissertation. Her generosity in providing funding for this research was invaluable, as was her patience in my completing the dissertation. Ethel has my sincere appreciation and my deep respect and personal affection. I feel privileged to have been associated with her during my time at the Faculty of Information Studies.

My gratitude is extended to the members of my dissertation committee, Professor Joan Cherry and Professor Chun Wei Choo. They showed genuine enthusiasm for this research and took exceptional pains to give me both encouragement and tough, constructive criticism, for which I am most appreciative. Their invaluable experience, advice and feedback were essential in developing my methodological skills and improving the theoretical framework and analysis. I thank you both so very much.

I am extremely grateful to Doctor Kim Cameron for participating in the final lap of my doctoral studies as external examiner. His wonderful enthusiasm for my research and thoughtful comments and questions were instrumental in making the defence such a positive and enjoyable experience for me. Thank you.

I also wish to thank the many individuals who helped in the collection of data upon which this dissertation is based. First, Timothy Mark, Executive
Director of CARL who not only endorsed this research project from the very beginning but also made himself available to answer many of my questions throughout the research. Second, the nine Chief Librarians who despite the sensitive nature of the topic allowed me access to their employees so that we might learn more about this important phenomenon. Last, but certainly not least, I applaud the 328 library professionals who took the time to fill out a very lengthy questionnaire. This research would not have been possible without their cooperation.

I am also grateful for the friendship and support of many doctoral student colleagues, especially, Brian Detlor, Chris Halonen, Rick Kopak, Julie Stabile, and Don Turnbull who always made life more bearable during the tough times by providing pep talks and much needed camaraderie. Their friendships made all the difference.

I would like to acknowledge a close circle of family and friends who assisted me in more ways than they know. I am so grateful to my mother, Eleanor Taylor, for all her prayers; my wonderful sister, Sharon for never allowing me the luxury of doubting whether I could finish this undertaking; my brother, Patrick for always being interested in what I was doing; and my brothers George, Greg, and Robert, and sisters Lisa and Kathleen who cheered me from a distance. I thank the “two listeners” for their daily words of comfort and wisdom; Mary Wilson, the most giving, caring, and cherished friend; Mara, John, Dana, and Daniel Elford for all the fun diversions over the years that lifted my spirits; and Laurie Sweig and Kathi Lauder for all their words of encouragement.

Finally, I want to acknowledge the debt of gratitude and love I have for my husband lan who stands by my side with his ready smile of confident encouragement. His love and support is the foundation for all that I do.
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CHAPTER 1
INTRODUCTION

This study investigates the patterns of organizational downsizing activities in the academic research libraries in Ontario between 1993 and 1997. The purpose of the present study is to investigate the relationship between the organizational downsizing strategies and processes academic research libraries use to downsize and the impact the downsizing has on organizational outcomes both at the individual level and organizational level. The theoretical propositions drawn from the work of Kim Cameron and his colleagues in the context of the USA and the literature on organizational downsizing and change provided the basis of a conceptual framework to guide the research.

1.1 Background to the Problem

The 1990s were a very difficult period for Canadian universities. For almost a decade, Canadian governments have cut back their higher education expenditures resulting in universities receiving a smaller piece of a shrinking government funding pie. In response to these unprecedented financial cuts, many Canadian universities have implemented organizational downsizing. Not only have these institutions had to do more with less, they have had to reevaluate how their institutions operate and to redefine their academic missions. In Ontario - the largest province, which accounts for over one-third of Canada’s university students - provincial government funding steadily declined between 1992-93 and 1997-98. Provincial operating grants per full-time equivalent enrolment in Ontario universities, adjusted for inflation, were down by 22 percent between the years 1992-93 and 1998-99 (COU 1999b). In addition, Federal government support of Ontario post-secondary education, through Established Program Financing (EDF) and the Canada Health and Social Transfer (CHST), declined 14 percent in constant dollar terms between 1987-88 and 1999-00 (COU 2000). Compared
to the direct level of government investments in universities in the other nine provinces, Ontario universities have achieved the distinction of being the lowest funded in Canada on a per capita basis. Despite having the lowest level of government funding in the country, Ontario universities have the highest ratio of full-time equivalent (FTE) students to full-time faculty in the country, which is currently 21 percent higher than the average of the other nine provinces (COU 1999c).

The libraries of Ontario's universities have not been exempt from the economic forces pressing in on their parent institutions. As sub-units of larger, more complex institutions, academic research libraries are tightly tied and fiscally dependent on their parent institutions. Just as their parent institutions are being strained, Canadian academic research libraries are also being stretched like never before. University libraries and the services they offer are an intrinsic part of the missions of universities. Libraries are expected to acquire or promote access to the resources necessary to support teaching and research at their institutions. They are also expected to devote more time to teaching and research, provide more support to students, and explore and experiment with new means of making the accumulated knowledge of mankind accessible (Field 1996). In Ontario, the price of library books and periodicals has been increasing more rapidly than library acquisition expenditures since 1993, which in turn have been increasing more rapidly than library expenses, which in turn have been increasing more rapidly than enrolment (COU 2000). A challenge in the best of situations, academic libraries have been hard pressed to meet their basic mission to select and acquire, organize, provide equitable access to, and preserve, information of all types while having the millstone of declining operating budgets around their neck.

Compounding the fiscal situation in Canadian academic libraries are a number of trends including the increase in price of all library materials and the shrinking value of the Canadian dollar; the large rise in the body of published
knowledge; changing technologies for the delivery of information; and greater demands for library services. These trends relentlessly squeeze existing resources while simultaneously demand more spending. Nor is it likely that any of these trends will become less significant or less ubiquitous in the coming years. The current financial situation and the general economic climate facing higher education will not substantially improve any time soon. Thus, for academic research libraries the years ahead will require refinement of purpose and invention in method. Choices will have to be made and new ways of accomplishing library objectives will have to be found.

Over the past two decades, organizations of all types and sizes have been under constant pressure to cope with factors such as resource scarcity, increased competition, slow economic growth, increased utilization of technology and an increase in mergers and/or acquisitions. Organizational downsizing has often been used as an adaptive response to these environmental pressures. In fact, downsizing represents one of the most widespread organizational strategies that management is employing today (Vanderheiden, De Meuse, and Bergmann 1999). While the stimuli to downsize can be many and varied, the basic motivation is to optimize the achievement of fundamental organizational objectives, for example, improving effectiveness, efficiency, and productivity. Some of the expected benefits from downsizing include lower overhead costs; less bureaucracy; higher profits; greater efficiency in decision-making, communication, and productivity (Cascio 1993; Freeman and Cameron 1993). Yet after nearly two decades of indiscriminate downsizing, the organizational benefits purported to accrue have not materialized (Cascio 1993; De Meuse, Vanderheiden, and Bergmann 1994).

Although in theory downsizing is presumed to have positive outcomes for the organization, the negative consequences of downsizing often outweigh any expected benefits. The negative consequences associated with downsizing are well documented in the literature and include loss of productivity, downtime of
employees learning to do more with less while simultaneously learning new jobs, increased job insecurity among those who were not downsized, reduced loyalty to the organization, and general demoralization (e.g., Noer 1993; Tomasko 1991). As a result, much of the recent theoretical development related to organizational downsizing has been directed towards the reactions of individuals who survived downsizing (e.g., Armstrong-Stassen 1993; Brockner et al., 1986; Brockner 1990; Mishra and Mishra 1992; Mishra, Spreitzer, and Mishra 1998; Mone 1994; O'Neill, Lenn, and Caimano 1995). The general consensus of this research is that downsizing affects the emotions, attitudes, and behaviours of individuals who survived the downsizing. The impact on these remaining employees is often referred to as the "survivor syndrome" and is considered to be a major factor contributing to the failure of most organizations to achieve their objectives after downsizing (Clark and Koonce 1995; Labib and Appelbaum 1994). The symptoms of survivor syndrome have been described in the literature as lack of motivation, loyalty, and trust as well as feelings of fear, anxiety, depression, guilt, sadness, and anger (Noer 1993). These employee attitudes are the antecedents for behaviour and action and may have an impact on performance level. Consequently, an organization's postdownsizing success is contingent upon the reactions of the remaining employees.

Downsizing is a complex phenomenon. There are many issues that intervene between the organizational decision to downsize, the implementation of downsizing, and the eventual impacts of downsizing at the individual level and organizational level (Cameron, Freeman, and Mishra 1991, 1993; Kozlowski, Chao, Smith, and Hedlund 1993). There is, however, a wide gap in the theory and research that addresses the implementation processes of downsizing and the impacts on organizational outcomes both at the individual level and organizational level. There is a need for research that recognizes the individual perspective, as the reactions and subsequent behaviours of remaining employees are fundamental to the success of the changes instituted during downsizing. This requires the development of a comprehensive framework of
downsizing that considers (1) strategies used to downsize, (2) implementation processes used during downsizing, and (3) impacts of downsizing at the individual and organizational level.

Despite a high level of awareness of the problems and consequences associated with organizational downsizing, limited empirical investigative efforts have focused on downsizing in academic research libraries. While there is some anecdotal material as to why downsizing has occurred, how it has been managed, and what its impacts are likely to be, there is much less theory and research to substantiate these views. How library employees react to downsizing and what issues need to be confronted are critical questions for library directors and senior management. The surviving library employees are too important a resource to risk alienating. Therefore, it is necessary to examine how downsizing has been implemented in academic research libraries and what impact the downsizing has on organizational outcomes both at the individual level and organizational level.

1.2 Problem Statement

As a response to the reduction in government funding to their parent institutions, Canadian academic research libraries have implemented organizational downsizing. Despite the impressive amount of research organizational downsizing has generated in the business literature, this topic remains virtually unexplored in the literature on academic librarianship. The impact of organizational downsizing on academic research libraries both at the individual level and organizational level has yet to be empirically examined. As a result, we are currently uninformed about the implementation of downsizing and the impact downsizing has had on Canadian academic research libraries.
1.3 Purpose of the Study

This study investigates the patterns of organizational downsizing activities in the academic research libraries in Ontario between 1993 and 1997. The purpose of the present study is to investigate the relationship between the organizational downsizing strategies and processes academic research libraries use to downsize and the impact the downsizing has on organizational outcomes both at the individual level and organizational level. Given the prevalence of downsizing, it is important to study how downsizing is accomplished and what its effects are, both in order to understand the phenomenon and to contribute to the success of future downsizing efforts. The conceptual framework is constructed on theoretical foundations in organization theory. In particular, the literatures on organizational downsizing, decline, and change were used to identify the variables that were pertinent to our research. We examine the relationships among seven independent variables and two dependent variables. The seven independent variables in the study are: Downsizing Approach, Workforce Reduction, Work Redesign, Systemic Change, Participation, Communication, and Transformational Leadership. The two dependent variables are Employee Attitudes Toward the Job and Organizational Climate. The study addresses two research questions:

(1) How is downsizing implemented in academic research libraries?
(2) What is the impact of downsizing on academic research libraries?

How is downsizing implemented in academic research libraries?

Academic research libraries are under intense pressure to cut costs and improve the quality of services. The question is, how? What does it mean to do less with fewer resources? Cameron, Freeman, and Mishra (1993) propose that organizations may adopt two generic approaches to downsizing - convergence and reorientation. The distinction between the two approaches is based on the
goal of the change activity. Is the organization getting smaller or becoming different? When approaching downsizing as convergence, the organization will be focused on doing more with less (i.e., getting smaller). When approaching downsizing as reorientation, the organization will be more focused on becoming different.

In addition, Cameron, Freeman, and Mishra (1991, 1993) found that the two downsizing approaches were associated with a number of strategies used to accomplish the downsizing. Specifically, the authors identified three types of downsizing strategies utilized by organizations - workforce reduction; work redesign; and systemic change. The first strategy is aimed at reducing the number of employees in an organization. The second type of downsizing strategy involves changing work processes and organizational arrangements so that the amount of work is reduced rather than the number of employees. The third downsizing strategy is intended to promote a more fundamental change that affects the culture of the organization. These three downsizing strategies can be implemented individually or jointly. Thus, downsizing may be implemented solely through reducing the size of the organization's workforce or in combination with one or both of the other strategies that focus on reducing the amount of work undertaken and bringing about structural and cultural organizational change.

Independent of the downsizing strategies are the processes used to manage downsizing. There are certain significant processes that occur in organizations as they downsize and some of the most important are: participation; communication; leadership. The processes by which downsizing is managed are important because they may influence the way in which organizational downsizing is understood and accepted. Thus, much of what management does during the downsizing process itself has profound implications for how successful the efforts to minimize the negative effects for survivors will be.
A logical starting question for the study is therefore to understand what approaches, strategies and processes were used to implement organizational downsizing in academic research libraries.

What is the impact of downsizing on academic research libraries?

The consequences of downsizing are many. Studies have shown that employees' attitudes and work behaviours have been negatively affected as their employers cut the number of people they employ, redesign work, or change the culture. The collective attitudes of employees have also had an impact at the organizational level. For example, Cameron, Freeman, and Mishra (1993) identified 12 characteristics of organizations that emerge during downsizing and characterize the organizational climate as negative. A negative organizational climate may undermine any effort for long-term organizational improvement. It would be useful therefore to investigate if downsizing in academic research libraries has the same effects on employees and on the organization as identified in previous downsizing research.

1.4 Significance of the Study

The present study builds upon past research in library science and organization theory. Research on organizational downsizing in academic libraries has investigated resource strategies used to cope with declining budgets and the effects of downsizing on structure and decision-making processes (e.g., Auster 1991; Melville 1994). However, to date, there does not exist any research in library science that has examined the relationships between the downsizing strategies and processes, and the impact these have on the organization. This study provides a framework of downsizing, including the strategies and processes used to implement downsizing and their impact on academic libraries.
Organization theory suggests that particular downsizing strategies and processes are often associated with negative outcomes for both the individuals and the organization. This study seeks to verify these relationships by testing the theoretical propositions related to the strategies and processes used to downsize and the impact they have had at the individual level (i.e., employee attitudes toward the job) and organizational level (i.e., organizational climate).

In addition, the Freeman and Cameron (1993) model of organizational downsizing has provided a theoretical cornerstone for research on downsizing, yet it has not been widely investigated within the context of public organizations. By adapting the Freeman and Cameron (1993) research design, modifying their instrument and using a different audience, the generalizations of the findings are extended, providing additional validation of the instrument and support for the interactions proposed in the model. This study further explains the interactions proposed by Freeman and Cameron (1993) by gathering data from survivors in a downsized academic research library instead of a corporation. Comparing this study's findings with the Cameron, Freeman, and Mishra (1993) research yields similarities and differences in relationships predicting downsizing strategies and downsizing outcomes in a corporate and an educational organization. If the same hypotheses were confirmed in different organizational settings, then the internal and external validity of the results would add to the literature on organizational downsizing.

This study contributes to the existing level of knowledge regarding the phenomenon of organizational downsizing. While previous research has been done on the impact of downsizing on organizational performance (Cameron, Freeman, and Mishra 1993; De Meuse, Vanderheiden and Bergmann 1994; Morris, Cascio, and Young 1999), little empirical research has examined the impact of downsizing on employee attitudes toward the job. In addition, even less attention has been given to the relationship between the processes used to manage downsizing and the impact these have at the individual level and
organizational level of analysis. This study provides a structure for integrating existing theoretical perspectives with issues of relevance to downsizing.

The findings of this study translate into implications for the management of downsizing. Being aware of the likelihood of, and the problems accompanying, downsizing can assist those involved in the decision-making process to plan accordingly. Research focused on identifying effective downsizing strategies and processes is not only critical in order to enable management to avoid the negative consequences often associated with downsizing, but also to enable them to realize the strategic goals that downsizing is designed to achieve. We discuss these implications in more detail in the concluding chapter.

1.5 Chapter Summary

This chapter identified organizational downsizing as a pervasive strategy that management is employing today. While the libraries of Canada's universities have not been immune to the downsizing environment, there does not exist any research in library science that has examined the relationships between the downsizing strategies and processes, and the impact these have on the organization. This study addresses this deficiency. In the next chapter, the literature review further defines organizational downsizing and describes the theory on which this research is based.
CHAPTER 2
LITERATURE REVIEW

2.1 Chapter Overview

In presenting the foundation for this study, the literature review is divided into two sections. First, we explore the relevant literature on organizational downsizing. Specific attention will focus on how downsizing is defined in the literature, the strategies used to accomplish downsizing, the processes used to manage downsizing, and the consequences associated with downsizing both at the individual and organizational level. Second, we examine the literature on downsizing as it pertains to the field of library science.

2.2 Literature on Organizational Downsizing

Organizational downsizing has been the pervasive phenomenon of the workplace since the mid-1980s. In fact, downsizing represents one of the most widespread organizational strategies that management is employing today (Vanderheiden, De Meuse, and Bergmann 1999). Downsizing has touched almost all organizations whether they are a for-profit company, a not-for-profit university, agency or church. Indeed, McKinley and associates speculate that, "As America enters the twenty-first century, we see that organizational downsizing has become solidly entrenched in its corporate and public sectors" (McKinley, Zhao, and Rust 2000, 227). Moreover, downsizing seems to be a global phenomenon. A 1993 study of six industrialized countries (Canada, France, Germany, Great Britain, Japan, and the United States) found that more than 90 percent of the firms had downsized, and more than two-thirds were planning to do it again (Wyatt 1993; cited in Cameron 1998, 186).
There are numerous reasons why the management of an organization may decide to downsize. The most common of these follow: economic contractions; competition for the production and sales of goods and services; increased applications of technology in the workplace; increasing availability of a contingent work force; and changes in public policy (Applebaum, Simpson, and Shapiro 1987; Cascio 1993; Freeman and Cameron 1993; Kozlowski, Chao, Smith, and Hedlund 1993). Thus, when we conceptualize downsizing within these frameworks, it becomes clear that we are speaking of downsizing both as a response to and as a catalyst of organizational change.

2.2.1 Definition of downsizing

Downsizing is a term that originated in popular business usage and as a consequence lacks a universal definition. The term appears to have come into general usage in the early 1980s to refer to workforce reductions of blue-collar employees in the manufacturing sector. By the mid-1980s, it had become a commonplace expression as interest in the subject intensified and the scope of downsizing broadened beyond manufacturing organizations and blue-collar employees to include the professional staff of service organizations. Moreover, downsizing took on a broader definition to encompass not only a change in the size of the workforce but also changes in what work was done and the way it was done. Efforts by researchers to bring more precision to the term have resulted in the preeminence of two definitions, the distinction between whether the term is narrowly or broadly defined. Those that use the narrow definition restrict the term to the planned reduction of the organization's workforce (Brocker 1988; Cascio 1993; McCune, Beatty, and Montagno 1988; McKinley, Sanchez, and Schick 1995). From this perspective, the term can be viewed as synonymous with layoffs. The broadly defined perspective views downsizing as a set of activities, undertaken on the part of the management of an organization, designed to improve organizational efficiency, productivity and/or competitiveness. It represents a strategy
implemented by managers that affects the size of the firm's work force and the work processes used (Freeman and Cameron 1993, 12).

According to this viewpoint, downsizing encompasses a wide variety of activities beyond workforce reductions. Downsizing can include any number of combinations from personnel reductions to work redesign to organizational restructuring. Thus conceptually, this broad definition of downsizing allows it to be differentiated from the narrower scope of layoffs. Freeman and Cameron (1993) offer two further distinguishing features of downsizing in relation to layoffs: downsizing is an organizational-level concept whereas layoffs are approached at the level of the individual. Following from this differentiation, downsizing should be approached as a strategic issue whereas layoffs is an operational one. For the purpose of this study, we followed the lead of Freeman and Cameron (1993), and define downsizing as,

a planned organizational change made in response to declining resources. It is a set of strategies undertaken on the part of management that has wide-ranging implications for many aspects of the organization including the personnel, processes, structure, and climate. Organizational downsizing may involve workforce reduction, changes to programs and services, and simplifying processes.

While the stimuli to downsize can be many and varied, the basic motivation is to optimize the achievement of fundamental organizational objectives, for example, improving effectiveness, efficiency, and productivity.

2.2.2 Implementation of downsizing

The initial concern of organizations is how to accomplish the downsizing. Decisions must be made as to what segments of the organization will be targeted for downsizing, and what strategies will be used to accomplish the downsizing. Once the downsizing strategies have been identified, the process must be
implemented and managed. The processes used to manage downsizing are important because they influence the way in which organizational change is understood and accepted.

### 2.2.2.1 Downsizing strategies

The most extensive empirical investigation of downsizing to date is a four-year longitudinal study of 30 organizations in the American auto industry conducted by Cameron, Freeman, and Mishra (1991). During the study's timeframe, the researchers conducted multiple interviews with the CEOs regarding the implementation of the downsizing. In addition, they collected 2,500 questionnaires from a sample of white-collar employees from these same organizations regarding their perceptions of the strategies, culture, leadership and outcomes of downsizing. Based on this research, Cameron, Freeman, and Mishra (1991, 1993) have advanced a typology of three core strategies organizations use to downsize. The first of these is labelled a workforce reduction strategy, and is aimed at reducing the number of employees in an organization. A workforce reduction strategy may consist of such tactics as offering early retirements, transfers and outplacement, buyout packages, attrition, and layoffs and firings. While the main advantage of this strategy is one of cost reduction, Cameron compares it to, “throwing a grenade into a crowded room, closing the door, and expecting the explosion to eliminate a certain percentage of the workforce” (1994, 197). Thus, the disadvantage of such a strategy is that it is difficult to predict who will leave. Consequently, this strategy may lead to the loss of critical knowledge, skills, and abilities when employees leave as well as negative consequences for those remaining (an aspect which will be discussed in section 2.4.2 below).

The second type of downsizing strategy, labelled work redesign, involves changing work processes and organizational arrangements so that the amount of work is reduced rather than the number of employees. This can be
accomplished through three basic elements. First, there are changes in work, for example, eliminating specific tasks. Second, there are changes in technology such as introducing automation. Finally there are changes in structure, as in the case of merging two departments that have overlapping functions. The main advantage of this strategy is the degree of efficiency that should result from the organization's redesign, as in the cases of simplified work processes and a more streamlined structure. The disadvantage of this strategy is that it is difficult to implement quickly, as it requires some advanced analysis of the areas to be redesigned.

The third downsizing strategy is labelled a systemic change strategy and is intended to promote a more fundamental change that affects the culture of the organization. The changes are directed at the values and beliefs that govern employee behaviour. This strategy also focuses on the internal (e.g., human resource systems) and external systems (e.g., suppliers and customers) of the organization. The strategy may consist of activities such as employee development programs that reinforce new career paths and new performance standards; changes in the reward and recognition systems of the organization; and employee training programs. The advantage of this strategy is that employees are valued as critical resources needed to implement organizational downsizing successfully. Rather than being seen as a target for cost reduction, employees are seen as strategists in identifying cost savings. This is a long-term strategy and as a consequence will not generate the immediate cost savings that a workforce reduction strategy will generate. In fact it may lead to an increase in spending as the organization invests in employee development and training.

These three downsizing strategies are not mutually exclusive, that is, they can be implemented individually or jointly. Thus, downsizing may be implemented solely through reducing the size of the organization's workforce or in combination with one or both of the other strategies that focus on reducing the amount of work undertaken and bringing about structural and cultural
organizational change. Cameron, Freeman, and Mishra (1991) found that organizations that relied solely on a workforce reduction strategy experienced a reduction in organizational performance. In comparison, when work redesign and systemic change strategies were used, organizational performance was enhanced. However, the highest levels of performance were achieved in organizations that used the three strategies in concert. Yet, according to Cameron (1994), it is much more common for organizations that are downsizing to rely on several methods of one strategy than to adopt several alternatives across the different strategies.

A second analytical typology advanced by Cameron, Freeman, and Mishra (1993; see also Freeman 1992) is the relationship between the organizational approach adopted for downsizing and the subsequent nature of the changes that follow. In their study, the authors found that organizations used two generic approaches to downsizing – convergence and reorientation\(^1\). Those organizations engaged in downsizing as convergence were more focused on making minor adjustments to the firm's mission, strategy, structure, and processes. Their goal was to do the same thing more efficiently. For example, during a downsizing as convergence, management set as their target for downsizing the maintenance and perpetuation of the current mission, strategy, and systems and focused on adapting to their current environmental circumstances. In contrast, organizations approaching downsizing as reorientation were more focused on making major modifications to their mission, strategy, structure, and processes. Their goal was to redesign the organization to do things more effectively. Thus, during a downsizing as reorientation, management attempted to change the organization's mission, strategy, and systems and to pursue new activities. The authors also found that the two

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\(^1\) This typology was developed and tested in the doctoral dissertation of Sarah Freeman (1992) where she explores the managerial interpretation of a downsizing situation as an explanation for the two approaches.
downsizing approaches were not mutually exclusive although one or the other tended to be the dominant focus during downsizing.

In addition, the authors found that the two downsizing approaches were associated with the strategies used to downsize. For example, organizations adopting a convergence approach to downsizing tended to rely primarily on a workforce reduction strategy. Organizations adopting a reorientation approach tended to use work redesign and systemic change strategies. In other words, when downsizing as convergence was adopted, getting smaller was the primary target of the change effort. In this form of downsizing, the number of people affected may be huge, but the changes to the organization are relatively minor. Whereas when downsizing as reorientation was adopted, redesigning work was the primary target of the change effort.

A third analytical typology advanced by Kozlowski, Chao, Smith, and Hedlund (1993) distinguishes between a proactive and a reactive approach to downsizing. Proactive downsizing takes a long-term perspective, is integrated with a larger set of objectives, and focuses on preserving the knowledge, skills, and abilities of employees through the human resource management system. In contrast, reactive downsizing, which is typified by cost cutting as a last resort, takes a short-term perspective without consideration for the preservation of relevant competencies.

The three typologies discussed above are similar in intent. That is, the researchers draw a distinction between downsizing for the short-term (i.e., strictly a cost-cutting method) and downsizing for the long-term (i.e., organization of the basic functions and processes). The latter, long-term orientation may benefit the organization because it represents a fundamental alteration in the way that work is done, theoretically synchronized with the needs of the business and strategy
the organization is pursuing. It is also more complex, involving the use of multiple decision criteria in the selection and configuration of downsizing strategies (Kozlowski, Chao, Smith, and Hedlund 1993). Although evidence suggests that downsizing is more likely to be effective when it occurs as part of an organization’s long-term strategic planning process, most organizations downsize reactively with little consideration of the long-term costs and implications for future effectiveness (Appelbaum, Leblanc, and Shapiro 1998; Cameron, Freeman, and Mishra 1993; De Meuse, Vanderheiden, and Bergmann 1994; Kozlowski, Chao, Smith, and Hedlund 1993).

2.2.2.2 Downsizing processes

Organizational downsizing has been described as one of the most disruptive and dramatic types of change organizations are likely to experience (Drew 1994). Thus, the management of downsizing is a subset of the general problem of managing change. As in any organization preparing for change, personnel management is a difficult problem. Downsizing can have a tremendous impact on people, especially because of related effects such as job loss or relocation, new working environments, or new technologies (Tomasko 1993). Downsizing challenges people’s perceptions of their organization and their place in it. Downsizings increase employee uncertainty, and with that increase there is a rise in stress and a decrease in satisfaction, commitment, intentions to remain in the organization, and perceptions of the organization’s trustworthiness, honesty, and caring (Cascio 1993; Mone 1994; Noer 1993). These attitudes can spread and become endemic among employees. Employee attitudes are intangible and as a result are often difficult to assess and manage. Consequently, management often underestimates employee attitudes and the powerful effect they have on achieving organizational goals.
The primary function of the processes by which organizational downsizing is managed is to ameliorate the negative effects downsizing may have on individuals remaining in the organization. Recent evidence reveals that a number of implementation processes used when downsizing may ameliorate the negative effects of downsizing (e.g., Appelbaum, Leblanc, and Shapiro 1998; Brockner 1992; Cameron, Freeman, and Mishra 1993). These implementation processes are: participation, communication, leadership.

2.2.2.2.1 Participation

A major theme in the literature on change is that decentralized decision structures are conducive to organizational change and adaptation. In fact, employee participation has long been recognized as a tool for reducing resistance to change and gaining support (Coch and French 1942). Participation encompasses a range of policies that, at the low end, permit employees to suggest improvement and, at the high end, provide all employees the motivation and authority to continuously improve how the organization operates.

Employees affected by change may resist change either actively or passively (Clark and Koonce 1997). In the case of downsizing, such reactions can appear as visible resistance to new objectives or as subtle resistance to new ways of doing work, and can jeopardize or even destroy the goals that the changes were intended to produce. Organizational change theory suggests that those who are to be affected by the change should be involved in the decision-making which brings the change about (e.g., Jick 1993; Kanter 1984; Tichy 1983). By encouraging participation in decision-making, organizations can increase the probability that the change will be accepted as well as the overall effectiveness of that change (Tichy 1983). In fact, the more extensive the changes are to the organization, the more people have reason to be involved (Freeman 1992). For example, changes in structure and the redesign of jobs should move decisions to lower levels of the organization so that people make
relevant and salient decisions about their work and work lives (Kotter 1996). Peoples' roles and responsibilities will be new, and they may seem overwhelming. Involving employees in decisions will help secure their commitment, reduce resistance, and thus motivate them to make the change work (Coch and French 1948; Kanter 1984; Kotter and Schlesinger 1979).

When change is occurring at multiple levels of the organization, as is usually the case when downsizing, more people need to be involved because top managers do not have all the relevant knowledge or details necessary to plan and execute the change. Different groups of people have a greater quantity and diversity of information and in most cases are in the best position to know how to solve problems because they are closest to the situation (Kotter 1996). At the very least, employee participation provides feedback to management on the options it has generated and helps provide new options.

During downsizing, many employees feel confused and anxious, and often experience a loss of personal control in response to the multitude of changes affecting work procedures, organizational values, reporting relationships, and so on (Noer 1993). This seems to be especially true where the changes are led by directive strategies rather than through the processes of employee participation and consultation. Several authors have suggested that it is crucial to involve employees in at least part of the decision-making process related to downsizing (Appelbaum, Leblanc, and Shapiro 1998; Brockner 1992; Hardy 1987). Such involvement would help employees to better understand the constraints and opportunities facing the organization as well as reduce feelings of powerlessness and provide a forum in which employee interests can be protected.
2.2.2.2 Communication

Communication is one of the most significant aspects of the downsizing process, yet management often reduces communication while downsizing (Brockner 1992; Cameron, Freeman, and Mishra 1993; Hirschhorn 1983). Numerous reasons have been given for this. One reason reported in the literature is that downsizing happens so fast that it results in too much to do in too little time (Kets de Vries and Balazs 1997). A second reason is that downsizing is a stressful event and during stressful times no one likes to be the bearer of bad news. In a recent study of downsizing in ten Canadian organizations by Wright and Barling (1998) it was reported that the morale of managers, as the bearers of the bad news to employees, was negatively affected. A further reason for insufficient communication is the management dilemma of whether to reveal or conceal bad news. During downsizing periods, management is reluctant to share any negative information for fear of causing damage in employee morale and productivity (Kets de Vries and Balazs 1997).

The lack of communication in organizations undergoing downsizing is quite common. According to a 1992 survey of 1,020 directors of human resources, it was found that only 44 percent of companies downsizing share details of their plans with employees and only 34 percent told survivors how they would fit into the company’s new strategy (Cascio 1993). Likewise, Smeltzer and Zener’s (1992) study of eight organizations facing major layoffs found that layoff announcements contained financial data but no information about how the layoffs would affect employees.

The literature on organizational change and downsizing (e.g., Brockner 1992; Isabella 1989; Schweiger and DiNisi 1991; Smeltzer 1991; Smeltzer and Zener 1992, 1995) consistently reports that employees become preoccupied with how changes could affect them. As reported by Isabella (1989), the survivors of downsizing are concerned about their long-term job security and future
possibilities for promotion and advancement. Anxiety and insecurity about their ability to function in a new environment also plague survivors especially if their jobs have been redesigned as part of the downsizing. Schweiger and DiNisi (1991) found that, regardless of its cause, failure to communicate increased employee uncertainty, stress, and anxiety levels. Thus, the common management practice of deliberately withholding information regarding organizational change results in employees feeling starved for information especially in an uncertain environment such as downsizing (Hirschhorn 1983; Isabella 1989).

The existence of uncertainty within an organization's environment contributes toward negative attitudes among employees. DiFonzo and Bordia (1998) argue that the key element distinguishing effective communication strategies during any organizational change is the proper management of uncertainty. Their research explored the links between change, uncertainty, and rumour through a case-study methodology in 15 organizations in the U.S. and India. For example, rumours of an impending shutdown of a large pharmaceutical subsidiary went unabated because of the parent company's refusal to explain certain activities (e.g., closed-door meetings, unexplained travel, production of irregular financial reports) in which top management was engaged. They found that excessive uncertainty and pervasive rumours are the result of poor communication strategies during organizational change efforts. Smeltzer (1991) highlighted the importance of communication and collaboration in his study of change in 43 organizations. The most commonly cited reason for failure of the change effort was the presence of inaccurate and negative rumours, often caused by management neglecting to provide timely and accurate information.

The literature related to organizational downsizing suggests that one way organizations can minimize the negativity felt by survivors after the downsizing is to design survivor programs which seek to communicate consistent and clear
information concerning the transition plans (e.g., Appelbaum, Everard, and Hung 1999; Brockner 1992; Clark and Koonce 1997). The general consensus is that employees will benefit from information about the reasons for the downsizing, how they will be affected, what will be required of them following the changes, and what help they will be given to adapt to the new demands placed on them. In other words, the communication should be proactive, not reactive. In addition, communication regarding downsizing should be shared early on in the process rather than later.

2.2.2.2.3 Leadership

The literature on organizational downsizing is quite consistent on at least one aspect of effective downsizing - namely, leadership style counts. For example, in their extensive literature review of organizational downsizing, Kozlowski, Chao, Smith, and Hedlund (1993) state that the most common mistakes made when implementing downsizing include a tendency toward authoritarian management and a general lack of communication. By contrast, organizations that implement downsizing effectively are those that couple strong leadership at the top of the organization with receptivity to suggestions and input from lower levels of the organization (Cameron, Freeman, and Mishra 1993). In fact, Cameron, Freeman, and Mishra (1993) found that the manner in which downsizing is implemented is often as important as the actual downsizing strategy. They found that the major significant predictors of improvement in organizational performance were increased communication and participation of employees in the downsizing process. Further evidence comes from an extensive benchmarking study on downsizing. The research team found that senior leadership and communication plays a vital role in downsizing. Successful

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2 This 1997 benchmarking study report entitled, *Serving the American Public: Best Practices in Downsizing*, was chartered by Vice President Gore's National Performance Review. Eight federal agencies joined together to study the topic of downsizing. The sample consisted of a mix of federal agencies, state and city governments, and several private sector companies, all of which had been recognized for best practices in some area of downsizing. For further discussion see, http://www.npr.gov/library/papers/benchmrk/downsize.html.
downsizing resulted when senior leadership became involved early on in the process, remained visible and active throughout the process, and was perceived by employees to be their source of communication concerning major downsizing actions.

Any practical approach to change acknowledges the realities of the workplace and the abilities and attitudes of the people who work there. One of the greatest obstacles for senior management, as the managers of change during downsizing, is to overcome organizational tradition— that is, to challenge "the way things have always been done." It is very difficult for employees to understand why their jobs are being eliminated or their work processes changed dramatically when they are doing as good a job— if not better— than they have always done. Thus, senior management play a critical role in creating a vision of the future for the organization; motivating employees to embrace that vision; and providing the necessary resources and support for employees who strive toward the realization of the vision. Visions are necessary for change in an organization because they help define and shape the direction in which an organization will go in the future. They reflect the purposes, values, and beliefs of the organization. Unless people in the organization clearly understand what must change to achieve the leader's vision, the leader has no reliable mandate.

Appelbaum, Leblanc, and Shapiro (1998) make the point that many managers think employees are resisting change but in reality employees lack the readiness to move forward. The inability of employees to move forward does not equal unwillingness to do so. It is difficult for employees to support any kind of organizational change if they do not know what is taking place, when it is taking place, and how it will affect them. Kotter and Schlesinger (1979) state that an individual is likely to resist change for three reasons: uncertainty, concern over personal loss, and the belief that the change is not in the organization's best interest. In the case of downsizing, employees need to know the rationale behind
the downsizing, the expected organizational benefits, and the personal ramifications – whether positive or negative. Moreover, they want to hear this information from senior management. Employees who believe that senior management are open and honest about the downsizing may be less threatened because uncertainty is reduced. One important benefit of having senior management explain the reasons for downsizing to employees is that it helps dispel rumours. Another benefit is that it demonstrates to employees that senior management are aware of what is happening, are committed to keeping people informed, and are concerned about the impact of its decisions on employees. A belief that senior management are reliable, credible, and trustworthy may lead to more constructive employee responses during downsizing (Mishra and Mishra 1994; Mishra and Spreitzer 1998).

When implementing organizational downsizing, senior management need to be sensitive to the fact that they play an integral role in mobilizing and motivating employees toward change and that their actions and statements will be scrutinized by employees. It is critical that senior management provide employees with a clear picture or vision of the future, demonstrate commitment to change, tell people exactly what is expected of them, and offer positive reinforcement. When the organization has a widely shared, clear sense of its purpose, direction, and desired future state, people in the organization are able to define their roles in that organization.

2.2.3 The effects of downsizing

The consequences of downsizing are many. At the individual level, there are likely to be changes in employees' attitudes toward the job as their employers cut the number of people they employ, redesign work, or change the culture (Brockner 1988; Cameron, Freeman, and Mishra 1993; Isabella 1989; Noer 1993). At the organizational level, these include the loss of productivity, a drop in
long-term financial performance (De Meuse, Vanderheiden, and Bergmann 1994; McKinley, Sanchez, and Schick 1995; Morris, Cascio, and Young 1999), and negative organizational climate (Cameron, Freeman, and Mishra 1993).

2.2.3.1 Individual level

The goals of personnel and human resource management have been to staff an organization with competent, high-performing employees who are capable of sustaining their performance level over the long term. These goals are consistent with contemporary human resource philosophies that stress organizational success is directly related to success in attracting, developing, and retaining a competent, motivated workforce. Yet downsizing may be an obstacle to these goals given the fact that reducing the number of employees in an organization still continues to be the primary downsizing strategy used by organizations today.

In response to the downsizing phenomenon, there has been much research on the impacts layoffs have had on employees who have been terminated (i.e., the victims) and those who remain with the organization (i.e., the survivors). A number of researchers from the fields of psychology and sociology have investigated the impact of layoffs, due to organizational downsizing, on the victims. The general finding is that the victims of layoffs, along with their families, experience a high degree of stress on many levels: financial, sociological, psychological, and physiological (Leana and Ivancevich 1987; Leana and Feldman 1988, 1992). Subsequent research has focused on the role of institutional support systems in assisting layoff victims (Latack 1986, 1990; Leana and Feldman 1988, 1990, 1992) and in managing downsizing in terms of the fairness of treatment, respect, compassion, and sensitivity toward the victims (Bennett, Martin, Bies, and Brockner 1995). Generally, this research proposes that treating the laid-off employees with respect and dignity while providing
support systems and programs (e.g., job search assistance, extended medical coverage, retraining) helps them to cope better with their job loss.

Apart from those who have been laid off are those who remain with the organization. It has been suggested by previous research that downsizing affects survivors’ emotions, attitudes and behaviours (Brockner 1990; Greenhalgh and Rosenblatt 1984; Noer 1993; O'Neill, Lenn, and Caimano 1995). The impact on these remaining employees is often referred to as the “survivor syndrome” and is considered to be a major factor contributing to the failure of most organizations to achieve their objectives after downsizing (Clark and Koonce 1995; Labib and Appelbaum 1994). The symptoms of survivor syndrome have been described in the literature as lack of motivation, loyalty, and trust as well as feelings of fear, anxiety, depression, guilt, sadness, and anger (Noer 1993). These emotions and attitudes of survivor syndrome have been shown to affect the behaviours of survivors making them indecisive, risk-adverse and reducing employees’ commitment to the organization (Brockner et al., 1986, Brockner, Grover, Reed, DeWitt, and O’Malley 1987; Cascio 1993; Noer 1993). Interestingly, Allen (1997) points out that both the victims and survivors of downsizing share the same set of characteristics. The only difference is that the victims of downsizing take their negative feelings elsewhere, while the survivors remain in the organization with the same feelings. Thus, the long-term implications of survivor syndrome – lowered morale and commitment – are likely to be damaging for organizations.

The research on layoffs is particularly salient to downsizing because a workforce reduction strategy is the most frequently used tactic used to downsize. Earlier research has indicated that the most important effects of downsizing on survivors include a change in job security and productivity, motivation, organizational commitment, and employee turnover (Greenhalgh 1982; Greenhalgh and Rosenblatt 1984; Sutton, Eisenhardt, and Jucker 1986; Whetton 1980). For example, in their study of downsizing at a computer game
manufacturing company, Sutton, Eisenhardt, and Jucker (1986) reported that the organization was reluctant to lay off senior managers and opted instead to focus on the lower-level employees. Thus, the most expensive employees remained while the least expensive were removed. This strategy proved to be especially damaging because the morale of survivors was negatively affected by the apparent inequities resulting in decreased job motivation and commitment. The lesson learned was that justice must be present during downsizing. To preserve employee morale while reducing the workforce, employees must perceive that the method used was fair.

More recently, theory and research on the potentially adverse effects of layoffs on individuals have motivated researchers to explore the factors that determine the nature of layoff reactions. Much of this work has been done by Brockner and his colleagues (1985, 1986, 1987, 1990a,b,c, 1992a,b, 1993a,b) who have performed a series of laboratory and field studies on survivor reactions to layoffs. This body of research suggests that layoffs cause the most anxiety and threat to survivors when they are perceived as unfair, unpredictable, and uncontrollable. Brockner and Greenberg (1990) developed a conceptual model of factors that moderate an individual's reactions to layoffs of fellow workers. This conceptualization is based on justice theory, in which the survivor evaluates the fairness of the organization's actions during a workforce reduction. Accordingly, survivors are likely to be influenced by the negativity of the outcomes associated with the layoff, as well as with the fairness of the procedures used to manage the layoff. Factors affecting outcome negativity include: (a) the severity of the layoff - the greater the number of people laid off, the more negative the collective outcome, and (b) the caretaking activities that the organization provides to the layoff victims (e.g., counselling after the termination notice, lessons in job hunting, career replanning). The lower the caretaking activities, the more negative are the outcomes associated with the layoffs. For example, Brockner, Grover, Reed, DeWitt, and O'Malley (1987) found that survivors reacted negatively to a layoff when they felt that employees
were dismissed with little or no compensation. This negative reaction took the form of lowered productivity and commitment to the organization.

Factors affecting the fairness of procedures used to manage the layoff include: (a) the rules used to decide who to lay off, (b) how to implement these rules, and (c) how to inform individuals who will be laid off. For example, what rules were used to decide which employees would be laid off versus those chosen to remain? Did everyone have equal chance of being laid off, or were the layoffs solely aimed at lower level employees? Did the organization provide ample forewarning to those who would be laid off? Did the organization provide a detailed explanation as to why the layoffs were necessary? Survivors will judge an organization’s future interactions with them on how fairly it treats those laid off. In general, survivors’ productivity and morale will be greater to the extent that they view the layoffs as fair (Brockner 1992).

The aftermath of downsizing can affect the working environment of survivors in numerous ways. First, remaining employees may only momentarily breath a sigh of relief for having retained a job since downsizing can significantly effect commitment by instilling a sense of insecurity and a reduced sense of loyalty to the organization. Consequently, this may lead to the withdrawing of any form of commitment to the goals and values of the organization since those who remain may feel sad about the past and anxious about the future (Appelbaum, Bethune, and Tannenbaum 1999; Grieves 2000). Survivors miss their former colleagues who may have exited during the downsizing as well as experience an increase in job insecurity as they worry about the stability of their own future employment (O’Neill, Lenn, and Caimano 1995). In their study of downsizing in a telecommunications company, Doherty, Bank, and Vinnicombe (1996) found that survivors experienced a decrease in motivation because their confidence in a future with the organization was diminished as the number of layoffs escalated.
Second, although the workforce may be smaller after downsizing, it does not mean the workload is any smaller. Reports abound in the literature that indicates survivors are facing more demands, more deadlines, and more responsibilities as a result of downsizing (e.g., Isabella 1989; O’Neill, Lenn, and Caimano 1995; Tombaugh and White 1990). Isabella (1989) identified key employee concerns that focus on career questions after a downsizing. She grouped these career concerns into three categories: performance related, advancement related, and growth-and-security related. She found that survivors are usually not informed about their place in the newly structured organization, expected performance standards, and the existence or lack of opportunities for advancement. Instead, survivors have been assigned the work and responsibilities of their departing coworkers in addition to their normal work duties. Not surprising, survivors are often unclear about their responsibilities and what managers expect of them especially if their jobs have been redesigned. As a result they worry that they will not possess the skills necessary to meet the job requirements of their new job descriptions (O’Neill, Lenn, and Caimano 1995).

The research by Tombaugh and White (1990) corroborates this last point. In their empirical study of downsizing survivors, they found that, while management expected employees to handle increased responsibility and decision-making, employees reported significant increases in role conflict, role ambiguity, and role overload. Furthermore, survivors who had intended to leave the organization had greater increases in role conflict and role ambiguity than those who had decided to remain.

Finally, downsizing and the accompanying changes in the workplace are challenging fundamental assumptions about employee careers (Evans, Gunz, and Jalland 1996; Feldman 1996). Traditionally, organizations offered employees a set of inducements to participate and contribute, for example, lifetime careers in exchange for compliance and loyalty to the organization. The onset of downsizing threatens the continued availability of inducements and thereby abrogates the existing psychological contract. Removing levels of
management undoubtedly reduces opportunities for career progression leaving survivors concerned about future chances for promotion and advancement. The perceived break in the psychological contract alters employees' relationships to the organization. Band and Tustin (1995) note that changes in sources of employee motivation go hand in hand with changes in the nature of the job. For example, if work burdens increase without relative increases in compensation or other types of inducements, resentment towards the more for less attitude can be expected to rise. People see themselves having to work harder just to stay in the same place. As a result, the affected variables include job security, propensity to leave, job involvement, job effort, and organizational commitment. In a case study of a Fortune 100 company, Mone (1994) found that employees with high self-efficacy and high role self-esteem may be more inclined to leave the downsizing organization than would their low self-efficacy, low role and low self-esteem counterparts. The reason these employees leave is that they are more likely to have the capabilities and confidence to successfully pursue job opportunities elsewhere than are low self-efficacy and low role self-esteem individuals. It was also noted that employees with low self-efficacy and low role self-esteem tend to perform at lower levels. Consequently, this may hinder the future success of organizations because "highly capable and confident people are precisely what the downsizing organization needs most to compete and survive" (Mone 1994, 296).

2.2.3.2 Organizational level

Although broad ranges of organizations have been implementing downsizing, the general consensus seems to be that the expected benefits – to cut expenses, improve productivity, and become more profitable – are elusive (Cascio 1993). In fact, several researchers have questioned the efficacy that downsizing has on the long-term financial health of organizations (De Meuse, Vanderheiden, and Bergmann 1994; McKinley, Sanchez, and Schick 1995; Morris, Cascio, and Young 1999). A handful of researchers have looked into the
impact of downsizing on performance and long-term productivity and found that downsizing does not always lead to improvement in profitability. De Meuse, Vanderheiden, and Bergmann (1994) discovered that companies using layoffs as a strategy for financial improvement failed to achieve that result. In fact, they found that profit margins, return on assets, and return on equity continued to deteriorate at a faster rate than before the downsizing. Likewise, Morris, Cascio, and Young (1999) studied the financial performance of 537 companies listed on the Standard and Poor's 500 Index from 1981 to 1992. Using a firm's return on assets and stock returns as measures of financial performance, Morris and associates did not find significant, consistent evidence that laying off employees led to improved financial performance. Cameron, Freeman, and Mishra (1993) discovered that very few organizations in their study implemented downsizing in a way that improved their effectiveness. To assess the effectiveness of downsizing, respondents were asked to compare their organization's current performance with (1) its performance during the previous two years, (2) the performance of its best domestic and international competitors, (3) the stated goal for the year, and (4) perceived customer expectations. Based on the data analysis, the authors discovered that the majority of the companies failed to improve their performance on the measures noted above.

While layoffs continue to be the most frequently used tactic to reduce the size of the workforce in the corporate sector, attrition (e.g., limiting the influx of new employees) and incentive packages (e.g., retirement incentives, buyouts) are the primary tactics for reducing the workforce in public sector organizations (Jones 1998). These workforce reduction tactics – attrition and incentive packages - are generally thought to be a more humane way to reduce the workforce because they have fewer negative effects on employees who remain in the organization (Tomasko 1991). According to Greenhalgh, Lawrence, and Sutton (1988) a workforce reduction that is accomplished via attrition is less threatening to employees who remain in the organization because they have no reason to feel guilty about being spared, and they also have no immediate
reason to worry about job loss. However, these tactics can also negatively affect the organization's future performance in two ways.

First, an organization's future performance may be negatively affected by the change in the composition of the workforce. Individuals who leave the organization may possess the relevant knowledge, skills, and abilities that the organization will need in the future. For example, the effect of attrition tactics is to eliminate a cohort of entrants into the organization. This usually alters its age and experience distribution. Fewer young people are hired into junior positions; there is less inflow of new ideas and new perspectives; and there is no bottom-up mechanism for retooling and reeducating older workers (Feldman 1996). Subsequently, the organization's capacity for innovation will be low due its homogeneity and the consequences of limiting or freezing the infusion of individuals who bring an awareness of new technology or stimulate a search for novel solutions to existing problems (Kuzmits and Sussman 1988; Greenhalgh and McKersie 1980). Additionally, when a significant number of valued employees accept an organization's early retirement offer or cash buyout, the success of current and future programs and activities can be jeopardized. For example, Fisher and White (2000) argue that the loss of an individual in downsizing is directly related to the quantity and value of the information held in that individual's memory and not retained elsewhere in the organization. Specifically, individual memories represent necessary pieces in the collective organizational memory. Thus, the loss of a significant individual memory "chunk" can create a hole in the organizational memory that damages ongoing processes.

A second way workforce reductions can negatively affect future performance is that the individuals who remain may become less inclined to exert effort on the organization's behalf. As a consequence organizational productivity may suffer. For instance, Cameron, Freeman, and Mishra (1991, 1993) identified
12 characteristics of organizations, labelled the "dirty dozen"\(^3\), that emerge during downsizing and characterize the organization's climate as dysfunctional. These include increased centralization of decision-making; adoption of a short-term crisis mentality; loss of innovativeness; resistance to change; decreasing morale; increased politicized interest groups; non-prioritized cutbacks; loss of trust; increasing conflict; restricted communication; lack of teamwork; and lack of leadership. In their study of 30 organizations in the automotive industry the authors found these dysfunctional organizational characteristics to be associated with deterioration in organizational performance.

According to Labib and Appelbaum (1994) a major factor that contributes to the failure of most organizations to achieve long-term financial health after downsizing is that the needs of those remaining with the organization are often overlooked or not given due attention during the downsizing effort. While considerable financial resources are often allocated to provide personal counselling, job searching techniques, and support to those exiting the organization, very little support is given to those remaining employees. Moreover, when downsizing is driven by a strategy of cost reduction and relies mainly on a workforce reduction strategy it is likely to impair the achievement of organizational objectives and organizational performance through the consequential generation of negative survivor reactions.

### 2.3 Literature on Downsizing in Academic Libraries

As we have seen, managing and coping with the effects of downsizing are not challenges unique to library administration; they are problems which have touched almost all organizations in all sectors of society. However, when public

\(^3\) The term "dirty dozen" was first used to describe a variety of dysfunctional organizational characteristics that emerged in declining organizations. For a complete discussion see, Cameron, K., M. Kim, and D. Whetten. 1987. Organizational Effects of Decline and Turbulence. *Administrative Science Quarterly* 32: 222-240.
sector organizations are faced with absorbing major reductions in recurrent funds they are rarely able to turn away customers and close down part of their operations (Jones 1998). Instead, choices have to be made and new ways of accomplishing objectives must be found to make diminished resources stretch across existing responsibilities.

The literature review on downsizing in academic libraries is divided into three sections. The first two sections describe the fiscal environment in higher education and academic libraries in Canada over the past 10 years. The third section identifies how academic libraries have coped with downsizing.

2.3.1 Fiscal environment in higher education

The 1990s were a very difficult period for Canadian universities. For almost a decade, Canadian governments have cut back their higher education expenditures resulting in universities receiving a smaller piece of a shrinking government funding pie. Reductions in government support have forced universities to rely more heavily on alternate non-public sources of revenue such as tuition fees, investment income, gifts, donations, and contracts and grants from the private sector. Yet despite these added sources of capital, universities have not been able to make up for the loss in government funding. Since 1993, the real level of government support, adjusted for inflation, is down an average of 20 percent across Canada (AUCC 1999). In response to these unprecedented financial cuts, many Canadian universities have implemented organizational downsizing. Not only have these institutions had to do more with less, they have had to reevaluate how their institutions operate and to redefine their academic missions.

In Ontario - the largest province, which accounts for over one-third of Canada's university students - provincial government funding has steadily
declined and left universities in a weakened state. According to the most recently available statistical information gathered by the Council of Ontario Universities\(^4\), the financial situation of Ontario's universities is deteriorating more quickly than that of universities in any other province (COU 2000). The provinces are the primary source of government funding to universities through provincial operating grants. These grants are the most critical source of revenue for universities because they enable universities to hire faculty and staff, run laboratories, purchase equipment and books, provide services for students, maintain buildings and grounds, and so on. Between 1992-93 and 1998-99, Ontario provincial operating grants per full-time equivalent enrolment, adjusted for inflation, were down by 22 percent. In fact, Ontario universities are currently the lowest funded in Canada on a per capita basis and the second lowest funded on a per student basis (COU 2000). Provincial funding to Ontario universities would have to increase by about $550 million to reach the funding per capita level of the other nine provinces, and by about $275 million to reach the funding per student level (COU 2000, xii). Despite having the lowest level of government funding in the country, Ontario universities have the highest ratio of full-time equivalent (FTE) students to full-time faculty in the country, which is currently 21 percent higher than the average of the other nine provinces (COU 1999c).

The loss in funding for Ontario universities has resulted in fewer full-time faculty and staff, a deteriorating physical infrastructure, and a diminished research capacity. Between 1990 and 1998, Ontario universities lost approximately 1,986 full-time faculty and 2,700 full-time non-academic staff (COU 1999a). During this same time, full-time enrolment climbed by over 8,000

\(^4\) The Council of Ontario Universities (COU) represents the collective interests of 17 member institutions and two associate member institutions. The 17 members are: Brock University, Carleton University, University of Guelph, Lakehead University, Laurention University, McMaster University, Nipissing University, University of Ottawa, Queen's University, Ryerson University, University of Toronto, Trent University, University of Waterloo, University of Western Ontario, Wilfred Laurier University of Windsor, York University. The two associate members are: Ontario College of Art & Design, Royal Military College of Canada.
students (COU 1999a). Ontario universities are also being challenged by the problem of deteriorating physical infrastructure. The years of inadequate funding have resulted in universities deferring maintenance and renewal of facilities and instructional equipment. Studies estimate that the cost of deferred maintenance now stands at approximately $600 million and is projected to escalate to more than $1.3 billion by 2010 (COU 1999c). These deteriorating physical conditions represent a serious problem and compromise the quality of the learning environment. For example, deteriorating physical infrastructures have made it more difficult for Ontario universities to perform leading edge, basic and applied research. A greater share of university research is taking place in some of the other provinces, most notably Quebec and British Columbia, where the infrastructure has not been permitted to deteriorate to the same extent as in Ontario (COU 1996), and where the provincial governments have taken steps to encourage research.

Although provincial funding of Ontario universities has begun to move in an upward direction over the past two years, funding has not yet been restored to previous levels. Additionally, recent predictions indicate that enrolments in this province are likely to increase 25 to 40 percent by 2010, and 11,000 to 13,000 new faculty will be needed to meet the increased enrolment demand, offset faculty retirements, and lower the student/faculty ratio (COU 1999c). Ontario universities will be hard pressed to cope with increasing enrolments without additional resources. Consequently, the quality and accessibility of higher education may seriously be jeopardized in the years to come.

2.3.2 Fiscal environment in academic libraries

As sub-units of larger, more complex institutions, academic research libraries are tightly tied and fiscally dependent on their parent institutions. Just as their parent institutions are being strained, Canadian academic research libraries
are also being stretched like never before. For the five fiscal years between 1987-88 and 1992-93, average library expenditures (1992 dollars) increased 17.2 percent (2.4 million dollars) in Ontario academic research libraries that are members of the Canadian Association of Research Libraries (CARL)\(^5\). This represents an average annual increase of 3.2 percent. However, a noticeable decline occurred in the next five year period (1992-93 to 1997-98) where library expenditures dropped 1.9 percent (.3 million dollars). This represents an average decrease of .4 percent per year.

Library expenditures include costs associated with salaries, wages, fringe benefits, travel, acquisitions, operational supplies, furniture and equipment purchase and rental, contracted services, and professional fees and institutional memberships. This decline in library expenditures between 1992-93 and 1997-98 takes on greater meaning when examined in more detail. Library expenditures can be broken down into three major categories: salaries and wages, materials, and other operating expenditures (e.g., insurance, memberships, equipment, etc.). In 1992-93 salaries and wages represented 63.1 percent of the total library expenditures and materials and other operating expenditures representing 29.9 percent and 7.0 percent, respectively. In 1997-98 salaries and wages represented 54.9 percent and materials and other operating expenditures comprising 36.3 percent and 8.8 percent of total library expenditures. Other operating expenditures remained fairly steady during this time period; however, salaries and wages dropped 8.2 percent while expenditures for materials increased 25 percent. Clearly the growth in material expenditures came at the expense of the salaries and wages portion of the total library expenditures.

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\(^5\) The Canadian Association of Research Libraries consists of 27 university libraries plus the National Library of Canada and the Canada Institute for Scientific and Technical Information (CISTI). Membership is institutional, and is open to libraries of Canadian universities that have doctoral graduates in both the arts and the sciences. Ontario has the largest concentration of CARL member institutions, 10 of the 27 members.

\(^6\) Data on library expenditures have been collected from CARL.
Compounding the fiscal situation in Canadian academic libraries are a number of trends including higher prices for library materials and the shrinking value of the Canadian dollar, the continuous increase in the body of published knowledge, changing technologies for the delivery of information, and greater demands for library services. The cost, number, and extreme diversity of publications and other information sources have all increased enormously and the emphasis has shifted from building strong local collections for the long term to accessing remote materials for current use. According to the Canadian Association of Research Libraries (CARL), Canadian academic research libraries have steadily increased their acquisition budgets since 1990. Yet despite the increase in money spent on library materials, the steep increases in journal prices and the shrinking value of the Canadian dollar have decreased real spending power. For example, since 1986 average subscription prices for U.S. journals have increased by 207 percent, and 148 percent for Canadian publications (Schofield 2000). However, the effective purchasing power (of the Canadian dollar) for journals has declined by more than 40 percent (CARL 2000a). Consequently, academic libraries are being forced to carry out massive journal cancellation programs. CARL libraries have had to cancel thousands of subscriptions worth more than $25 million dollars since 1995 (Schofield 2000).

At the same time, the expanding use of information and communications technology (ICT) is also having an impact on academic research libraries. Both the role of the library within the academic institution and the internal operations of the library itself have been dramatically affected by the increasing availability of information in electronic form. Since the early 1990s academic libraries have been building an “infrastructural” for the 21st century. They have been continuously updating and acquiring a wide range of resources including software, fibre optic hook-ups, broadband requirements, and terminal outlets. While libraries have been able to offer new services and improve existing ones based on rapidly changing technology, these changes have not brought about a reduction in cost. Hardware and software expenditures are becoming an
increasingly significant component of CARL library budgets. For example, the average expenditure on hardware in CARL libraries was $420,350 in 1998-99 (CARL 2000b). Similarly, average software expenditures averaged $485,618 in 1996-97 (CARL 2000b). Thus, the capabilities of ICT cannot be viewed simply as an extrapolation of what has gone before. They are essentially additive and the large sums invested in ICT have to be viewed not simply as a one-off expenditure, but as a long-term commitment.

While public investment in postsecondary education has declined, demands on the system to meet the educational and research needs of a knowledge-based economy have increased as the new capabilities of ICT have provided greater capacity to access information. Library users are becoming more diverse and decentralized as their parent institutions expand programs and increase distance education. This in turn has implications for how and where the libraries provide services and information. In addition, academic libraries are required to service both the traditional information gathering behaviour of students and academic staff as well as their new needs as they participate in the scholar’s workstation environment. Consequently, libraries have to invest in new technologies to organize and deliver information, maintain services and collections in parallel environments (print and electronic), and maintain and preserve existing collections.

Each of these three trends relentlessly squeezes existing resources while simultaneously demanding more spending. Since it is unlikely that vast new sums of money will be forthcoming, the years ahead will require refinement of purpose and invention in method for academic research libraries. Choices will have to be made and new ways of accomplishing library objectives will have to be found.
2.3.3 Retrenchment, cutback management, and downsizing in academic research libraries

Retrenchment, cutback management, and downsizing are terms that have become all too familiar in academic libraries in the past two decades. The terms retrenchment and cutback management date back to the 1970s and early 1980s when there was a prevailing belief that the economic slowdown was temporary. The term retrenchment has been defined by Behn (1980, 205) as “the imbalance between the purposes outlined in an organization’s strategy and the resources it can mobilize to achieve them”. Retrenchment connotes a set of short-term emergency measures undertaken by an organization in response to adverse conditions. Therefore, the actions it entails are typically designed to be adopted and implemented rapidly. According to Behn (1980, 205), “cutback management is based on strategies used by managers to accomplish more with less and is a syndrome that develops when organizations experience retrenchment”. Cutback management implies a more thoughtful approach in responding to adverse conditions. Although cutback management may employ both short-term and long-term responses, these responses insulate the organization from the problem and focus on doing better what has normally been done. Thus, cutback management consists of reactive and defensive actions undertaken by the organization to reduce financial pressures and ward off crisis situations. Since the trigger for action is immediate financial and budgetary stringency, the initial phase of retrenchment and cutback management is consumed by the task of gaining control over the current cash position and cash flow. Thus, the traditional methods of cutting costs are squeezing, eliminating, postponing, and shifting.

What distinguishes downsizing quite clearly from retrenchment and cutback management is the focus for action. Retrenchment and cutback management are more narrow in their focus, while downsizing is much broader in scope. For example, downsizing may be an anticipatory strategic response designed to realign the organization and improve performance before environmental factors that create crisis conditions are in evidence (e.g., resource
constraints, loss of market niche, competition). In addition, ineffectiveness or impending failure is not a prerequisite to downsizing; in fact, the intended purpose of downsizing is regenerative (Cameron 1994). Finally, downsizing is a long-term strategy and a way of life rather than a short-term strategy to be completed and abandoned (Cameron 1994). While downsizing, retrenchment, and cutback management are all responses to environmental conditions, the target of organizational activity is the same — cutting expense while at the same time improving productivity. Thus, a change in terms from retrenchment and cutback management to downsizing is more than fad and fashion; it signifies a change in concept and practice. Thus the broader term downsizing updates and incorporates the terms retrenchment and cutback management.

2.3.3.1 First responses to financial stress: Retrenchment and cutback management

Following the golden decade of the 1960s when academic library administrators were sought for their ability to handle growth and expansion, administrators during the 1970s and 1980s were confronted with steady-state or declining budgets (Martin 1993). Under the assumption that the good times would soon return and the reductions would be restored, library administrators put money first and ideas second. In other words, a budget crisis led to decisions about the distribution of money among existing activities, and not to decisions about whether the existing activities served the library's mission. Many libraries pursued a strategy of decrementalism — removing small and proportional amounts of money from everyone's budget while trying to keep some semblance of normal operation. Little attention was paid to the process of planning and the setting of priorities. For example, in a study of retrenchment in Canadian academic research libraries which describes the patterns of management that occurred between 1972-73 and 1982-83 the author concludes:
having analyzed the content of the responses, one cannot help wondering about what is not there, that is, the apparent absence of evidence that would indicate long-term library planning to cope with budget restraints is taking place. Repeatedly, respondents refer to decisions being made on an ad hoc basis that carry with them serious implications for the future. It is not clear whether decision makers simply refused to believe that retrenchment would last as long as it did, or whether they recognized what was happening and chose to ignore it (Auster 1991, 146).

Auster's finding is confirmed in a 1982 study of long-range planning in university library members of the Association of Research Libraries (ARL). Biddle (1992) found that only 57 percent of respondents had either developed a long-range plan or were in the process of doing so. The findings of these two studies strongly suggest that the process of strategic planning had not become a time-honoured part of library operations during the 1970s.

The constrained fiscal climate of the 1970s and 1980s had generally been met with a series of short-term retrenchment strategies aimed at stabilizing the revenue-expenditure balance rather than affecting long-term organizational or structural changes to the library. Auster's (1991) survey identified the following as common strategies used by academic libraries to address the issue of financial restraint: reducing serials and monograph purchases, relying on interlibrary loan, and developing cooperative acquisition policies with other libraries. Staff related strategies included replacing regular full-time positions with part-time, leaving unfilled positions vacant, and hiring temporary staff. Other strategies used included curtailing library hours and services (e.g., bibliographic instruction, continuing education programs), elimination of sub-units (e.g., Audiovisual library, government publications department, periodicals room) and services to faculty (e.g., compiling bibliographies and offering current awareness services). While the response to retrenchment can be characterized as reducing and eliminating, there was one notable exception, automation. Every library reported the introduction of online bibliographic retrieval and most libraries
reported the automation of technical services. However, in general the above strategies are neither creative nor innovative and are characteristic of the retrenchment and cutback management approach of the 1970s and 1980s.

The financial problems pressuring academic libraries during the 1970s and 1980s stemmed from three basic causes (Martin 1989). First, were the budget problems of higher education in general caused primarily by inflation, short-term recessions, and declining enrollments. The other two causes relate specifically to the library and its programs. The first cause relates to the library's budget for materials. Historically, the annual cost increase for library materials has exceeded inflation by a wide margin. However, beginning in the mid-1980s the prices for serials started to climb rapidly. According to the Association of research Libraries' (ARL)\textsuperscript{7} published statistics both total expenditures for serials and the price per serial subscription almost doubled during the period 1985-86 to 1992-93. The price per subscription rose an average of 13 percent per year during this same period -- much higher than the general inflation trends in North America. Second, new developments in information technologies such as automated catalogues, CD-ROMS and on-line links to external databases, forced academic libraries to turn increasingly to automation. Ultimately this required more capital investment and increased operational expenditures. The early claims that automation would result in sufficient internal savings to make up for the added costs proved to be overstated and libraries found themselves having to raise new funds or cut other services (Martin 1989).

In an economic climate shaped first by an unexpected decline in financial resources, followed by a revised expectation for little or no growth for the remainder of the 1980s, the stage was set for most academic libraries to rethink

\textsuperscript{7} ARL member libraries are the largest research libraries in North America, representing 15 Canadian and 107 U.S. research institutions. The academic libraries, which comprise about 91 percent of the membership, include 13 Canadian and 98 U.S. libraries.
their previous responses. Library administrators had finally come to the realization that existing ways of operating were not responsive enough to deal with the rapidly changing environment. Indeed in a 1990-91 update of Biddle's long-range planning study the survey findings revealed that the percentage of libraries actively involved in long-range planning efforts had increased to nearly 90 percent (Biddle 1992).

2.3.3.2 Long-term fundamental change: Restructuring and downsizing

As the 1990s progressed, a new reality dawned on the academic library horizon – libraries must change, fundamentally and irreversibly. Writers in the literature contend that declining budgets coupled with changes in information technology, institutional imperatives, and user expectations require a fundamental rethinking and redesign of library roles, services, and operations in universities which are also undergoing great change (e.g., Martin 1994; Phipps 1993; Stoffle 1995; Sweeney 1994). According to the new philosophy and management style of the 1990s academic libraries should, instead of incremental change undergo a transformational change. Stoffle, for example, maintains that,

> We must rethink and rebuild our libraries from the ground up. The radical restructuring of our libraries must focus on adopting a user (customer) focus, committing to quality service – with quality defined by the user – accepting the need for continual change, creating teams rather than departments or individual-based work units, and empowering front-line staff to make the decisions necessary to meet the missions and goals of the library on a daily basis (Stoffle 1995, 6).

Likewise, Richard Sweeney (1994) envisions a radical redesign of academic libraries that he has dubbed the post-hierarchical library. This post-hierarchical library would be completely focused on user services and characterized by a flattened organizational structure, cross-functional teams, constant learning, and reliance on local and national infrastructures. Although he admits that no library
has achieved this structure to date, he sees this newly redesigned library as the form of the future.

According to the library literature, academic libraries have been subject to restructuring and redesign (e.g., Cargill 1995; Distad 1995; Shapiro and Long 1994; Shaughnessy 1996). Each of these examples describes management strategies that include reducing the number of library staff and forming work teams in order to flatten the organizational structure, reconfiguring library units by eliminating library activities and services, and reducing library materials. While these reports and case studies are all examples of restructuring and change in a single library, they are descriptive rather than analytical and none provides any evidence as to the efficacy of the new library structures. While these reports and case studies suggest that academic libraries are undergoing structural changes, they are instances of restructuring and change in a single library. The following studies provide substantial evidence that restructuring is taking place within and across academic libraries.

The traditional separation of the two major divisions of libraries, public services and technical services, has often been the focus for discussions of library change. The following three studies conducted by Larsen (1991), Buttlar and Garcha (1992), and Hoffman and Bélanger (1999) are an attempt to determine how the work of academic libraries is structured and to what extent there has been a departure from the traditional bifurcated pattern of public and technical services divisions to those of a more integrated nature.

Larsen (1991) conducted a survey of U.S. academic libraries during the time period 1985-90 to assess the extent of library restructuring. The survey focused on the existence of public services and technical services divisions within the libraries and on whether those divisions had undergone changes within the five-year time period. The study concludes that the traditional divisional
structure is alive and well. In the sample of 118 academic libraries, 79 percent of the libraries had a public services division and 81 percent had a technical services division. What the researcher did find was that the responsibilities delegated to both public and technical services are being shifted and their respective roles within the library have changed. Moreover, the driving force for such change is most often rooted in the continuing search for efficient organizational models (Larsen 1991, 91). In general, Larsen found that very few libraries have undertaken a radical restructuring.

Similar to the previous study, Buttlar and Garcha's (1992) survey of 93 U.S. academic libraries found that 60 libraries had both public and technical services divisions and that 30 had partial integration of these services. However, 22 percent of the libraries reported that within the last five years they have reorganized in a way that blurs these two divisions. The researchers also found that approximately nine percent of the libraries surveyed plan this type of reorganization soon.

In a more recent study of Canadian academic libraries, Hoffman and Bélanger (1999) confirm the findings of the two U.S. studies: the traditional divisional structure of public and technical services still predominates. Of the 35 libraries participating in the study, only two did not have a structurally separate technical services and public services division. Although the majority of libraries still have a traditional public services/technical services split, 74 percent of these libraries indicated that at least some of their librarians had cross-divisional assignments.

In the introduction to ARL's Spec Kit entitled Library Reorganization and Restructuring (1996), Eustis and Kenney declare that "change in most research libraries at this time is incremental rather than dramatic." This declaration is based on the results of a 1995 survey that sought to understand how academic
libraries were undergoing organizational redesign. The survey was sent to 108 ARL libraries affiliated with institutions of higher education. Of the 53 libraries that responded only 17 indicated that they had completed, within the last three to five years, or were currently engaged in a library-wide reorganization. However twice as many, 34 libraries, indicated that they were engaged in or planning the reorganization of specific units (e.g., reference, cataloguing, interlibrary loan, and circulation and reserves). As part of library-wide restructuring, the libraries have been combining units, forming new partnerships with other university units, and eliminating and expanding services. They have also placed a greater emphasis on networked information and decreased their emphasis on the collection of print materials.

In a study of the nature of organizational change in Canadian public and academic library workplaces, Harris and Marshall (1998) examined librarians' perceptions of their organization's change attempts. Of the 182 respondents who answered the questionnaire, 31 percent worked in academic libraries and 69 percent in public libraries. When the researchers asked what managerial strategies were used to implement change, 70 percent of the respondents indicated that strategic planning, reengineering, and/or a review of organizational priorities were part of the managerial response to the major problems facing their institutions. In addition, a change in the strategic direction of the library (either contemplated or underway) was reported in 86 percent of the public libraries and 72 percent of the academic libraries. In terms of library restructuring, respondents reported greater centralization and consolidation of activities in their libraries through the amalgamation of public/reference service points and an increase in the deployment of work teams. They also reported a decrease in service levels such as reductions in hours of opening; closure of branch libraries; and closure of units such as children's departments.

Regarding staffing changes, 86 percent of respondents reported that restructuring has resulted, or will result in reduced staffing levels in their libraries.
Consequently, employees remaining in the library had their duties streamlined and merged, and their job descriptions rewritten. They have also had to assume a variety of new tasks which often requires working in more than one department. In addition, the researchers found that work previously performed by professional librarians was now assigned to less expensive nonprofessional staff. In turn, the work of nonprofessional staff was transferred to library users. The transfer of work is due, in part, to the use of new technology that allows for self-service (e.g., automated self-service renewals and automated self-checkout).

In the absence of recent comprehensive Canadian publications on downsizing, librarians must continue to rely on scattered reports and word of mouth. While academic research libraries are aware of their own financial situations, they lack a general overview of what has happened across the academic research community. The few research studies, largely American, that provide a picture of how academic libraries are responding to downsizing are described below.

A 1995 survey of 95 academic and public library directors in North Carolina examined the degree to which their libraries had experienced downsizing and the expectations of these librarians regarding downsizing (Burgin 1997). One third of the respondents represented academic libraries (32), and two-thirds represented public libraries (63). The most frequent result of downsizing was the reduction of library staff followed by budget cuts in non-staff areas, and the redesign of work. When asked how well their libraries were prepared to deal with a major downsizing in the next 12 months, 48 percent of academic library respondents indicated not feeling well prepared, with many of the necessary elements of a downsizing plan not in place, and another 10 percent felt badly prepared, with no plan in place. Only 41 percent of academic library respondents felt well prepared, with all necessary elements in place. Burgin speculated that the reason why preparedness for downsizing was so poor among academic libraries was due to the lack of appreciation of the extent of
downsizing among libraries in general. In other words, few of the respondents in the study expected downsizing to take place in their libraries.

In the most recent and comprehensive study on fiscal restraint in academic libraries, Annette Melville (1994) explores the resource strategies taken by ARL academic library administrators in response to the changing budget environment for the three-year period 1990-92. This study closes a long-standing gap in the library literature on retrenchment practices in academic libraries. The survey captures data from 87 academic members (10 Canadian, 25 U.S. private, and 52 U.S. public) on revenues, adaptive tactics, and budgetary practices. Melville found that all respondents sought outside revenues to supplement their university allocation. In terms of adaptive strategies, every respondent implemented some form of internal restructuring, such as consolidating/eliminating units, abolishing managerial positions thereby flattening the organizational hierarchy, using salary savings to fund other areas, and substituting part-time for full-time professionals. The most frequently used budget strategies reported were cutting acquisitions by subject and/or across-the-board percentage, followed by delaying equipment purchases or automation upgrades, freezing hiring, and cutting travel or conference support.

Melville also found some cost-cutting strategies more common to Canadian and U.S. public academic libraries. For instance, about half of the Canadian and U.S. public academic libraries reduced the number of hours that the library was open whereas only 16 percent of the U.S. private academic libraries followed suit. Cutting expenditures across-the-board was reported by 42 percent of the U.S. public academic libraries, but only 10 percent of the Canadian and 16 percent of the U.S. private academic libraries. Similarly for acquisitions, 69 percent of the U.S. public and 60 percent of the Canadian academic libraries used an across-the-board approach, as opposed to 36 percent of the U.S. private academic libraries.
In general, while the survey is an important step in increasing our knowledge of downsizing in academic libraries, it is difficult to interpret the real impact of the reported changes. Although academic libraries appear to be undergoing reorganization, it is impossible to say if this reorganization accompanies a redefinition of the academic library mission, strategy, and structure. In other words, we do not know if the strategies implemented by the 87 ARL academic library administrators represent a desire to do different things – replace former processes and structures and fundamentally change the library’s mission – or if they are a continuation of older practices – a reinforcement of the library’s current mission and strategy accompanied by incremental fine-tuning of the library’s existing systems and processes.

2.3.3.3 The effects of downsizing

Although in theory downsizing is presumed to have positive outcomes for the organization, the review of the business literature identified its negative impacts, especially for the individuals. Layoffs are perhaps the most ominous change facing employees during a downsizing. In Melville’s (1994) study of 87 ARL academic library members, a total of 716 positions (professional and support staff) were lost between 1990 and 1992. In the study of academic library reorganization and restructuring by Eustis and Kenney (1996), 23 libraries lost an average of 10.5 support staff and 20 libraries lost an average of 5.5 professional staff. Yet surprisingly this topic has not been addressed in the library literature, the sole exception being Leckie and Rogers (1995). Their study represents an initial examination of how academic librarians react to and cope with job loss. Their research consists of personal interviews with 11 librarians who previously worked at six different academic libraries in Ontario. The study was based on the work of Harold Kaufman (1982) that suggests that there are four stages through which people progress in the process of dealing with job loss. The stages are: 1) shock, relief, and relaxation; (2) concerted effort; (3) vacillation, self-doubt, and anger; and (4) resignation and withdrawal. Many of the reactions described by
the four stages were verified in the study of the 11 librarians. The study also reported the absence of support services, referred to in the business literature as caretaking activities, for those laid off. Caretaking activities typically include counseling after the termination notice, lessons in job hunting, career replanning, and so on. While redundancy policies did exist at the academic institutions, the personnel departments handling those laid off were less than helpful. In fact those who were laid off reported feeling ignored, misunderstood, and humiliated by the personnel departments whose very jobs are to help.

In addition to those laid off, are those employees who remain. In contrast to the volumes that have appeared in the business literature on the survivors of downsizing, little has appeared in the library literature on this topic. There is no recent published research on the effects of downsizing on those individuals remaining in the organization. Nor is there any research or advice available to library administrators on how to revitalize their organization after downsizing. Although downsizing is ultimately intended to be regenerative in purpose, there may be a tendency to view downsizing as a negative process. As a result, it may be a subject that library administrators are hesitant to talk about, both to colleagues and to researchers.

The management of academic libraries has become increasingly important over the last 20 years as library budgets have stabilized or declined, the demand for their services has increased, the cost of library materials has exceeded the rate of inflation, and new technological advancements have opened up many new service options. Managing in a time of change requires that library directors think strategically and challenge assumptions about traditional roles academic libraries have played in the past.
2.4 Chapter Summary

The conclusion to be drawn from the existing literature on organizational downsizing is clear: the value of people's knowledge, skills, abilities, and the intellectual capital and productive opportunities they represent has not always been adequately considered as part of the downsizing equation. When downsizing is driven by a strategy of cost reduction and relies mainly on a workforce reduction strategy it is likely to impair the achievement of organizational objectives and organizational performance through the consequential generation of negative survivor reactions. This is problematic for one critical reason only: it is these remaining employees who are instrumental in determining future productivity and quality, and ultimately, organizational growth, profit, and survival (Mone 1997). Therefore, addressing survivor needs, helping them to process their feelings, and educating them in the new organizational vision and structure are essential to organizational success after downsizing.

The conclusion to be drawn from the existing literature on downsizing in academic libraries is that academic libraries are in a ferment of change, and while most changes seem to be incremental in nature, some libraries appear to be preparing themselves for more transformational change by redesigning their work processes and restructuring the organization. Academic libraries, like other organizations, do adapt to new circumstances, and this adaptation is a sign of a healthy organization. However, what is noticeably absent from the literature is any discussion about best practices in implementing downsizing. If in fact library administrators are relying on both short-term and long-term strategies to accomplish downsizing, there has been no evaluation in the literature as to which strategies are most effective. A partial explanation for this gap could be that the long-term strategies library administrators seem to be turning to are difficult to implement quickly because they require some advanced analysis of the areas that should be consolidated or redesigned. Perhaps administrators are still waiting to see the results of their efforts before they speak.
The conceptual framework, the hypotheses to be tested, and the research design are all discussed in the next chapter.
CHAPTER 3

METHODOLOGY

3.1 Chapter Overview

This chapter presents an in-depth discussion of the conceptual framework of the study along with the research hypotheses and the definition and measurement of the variables. Also included is a description of the study population and data collection method.

3.2 Conceptual Framework

This study investigates the patterns of organizational downsizing activities in the academic research libraries in Ontario between 1993 and 1997. The purpose of the present study is to investigate the relationship between the organizational downsizing strategies and processes academic research libraries use to downsize and the impact the downsizing has on organizational outcomes. Specifically, the study addresses two research questions:

(1) How is downsizing implemented in academic research libraries?
(2) What is the impact of downsizing on academic research libraries?

This chapter proposes a framework of organizational downsizing at the organizational level and then specifies links among downsizing strategies, downsizing processes, and downsizing outcomes. The conceptual framework for investigating these research questions is constructed on theoretical foundations in organization theory. In particular, the literatures on organizational downsizing, decline, and change were used to identify the variables that were pertinent to the research questions.
3.2.1 Downsizing approach

The first element in the framework is the organization's overall approach to downsizing. In their model of organizational downsizing Freeman and Cameron (1993) propose that organizations use two generic approaches to downsizing - convergence and reorientation. Organizations engaged in a downsizing as convergence are more focused on making minor adjustments in mission, strategy, structure, and processes. Downsizing as reorientation, on the other hand, is where organizations are more focused on making major modifications in their mission, strategy, structure, and processes. For example, during a downsizing as convergence, managers set as their target for downsizing the maintenance and perpetuation of the current mission, strategy, and systems and focus on adapting to current environmental circumstances. During a downsizing as reorientation, managers attempt to change the organization's mission, strategy, and systems and to pursue new activities. In other words, during a downsizing as convergence the focus is on technique, doing the same things better. During a downsizing as reorientation the focus is on repositioning the organization, doing different things. While the two downsizing approaches are not mutually exclusive one or the other will be the dominant focus during a downsizing. Thus, the downsizing approach will also relate to the packages of downsizing strategies and processes that are part of organizational downsizing. Figure 3.1 shows the classes of variables included in the downsizing framework and the links among them.
3.2.2 Downsizing strategies

Downsizing strategies refer to the specific methods used to accomplish the downsizing. Cameron, Freeman, and Mishra (1991, 1993) identified three types of downsizing strategies utilized by organizations - workforce reduction; work redesign; and systemic change. These strategies are not mutually exclusive, that is, they can be implemented individually or jointly.

3.2.2.1 Workforce reduction

The first and most common strategy used when downsizing is the workforce reduction strategy. Aimed at reducing the number of employees in an organization, a workforce reduction strategy can range from methods that minimize the impacts on employees (e.g., attrition) to more drastic methods that have significant negative effects on both displaced personnel and survivors (e.g., permanent involuntary layoffs) (Greenhalgh, Lawrence, and Sutton 1988; Perry 1986).

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8 The broken arrow in the figure indicates a weak relationship.
3.2.2.2 Work redesign

The second type of downsizing strategy organizations may employ during a downsizing is a work redesign. The primary focus of this strategy is to eliminate or reduce the work rather than the number of workers. The changes are directed at work processes and organizational arrangements and can be subdivided into three types: changes relating to work; changes relating to technology; and changes relating to organizational structure. A work redesign strategy may consist of activities such as eliminating hierarchical levels, functions, departments; redesigning tasks; reducing work hours; and consolidating and merging units.

3.2.2.3 Systemic change

The third downsizing strategy focuses on changing the culture of the organization. The changes are directed at the values and beliefs that govern employee behaviour. It is systemic - that is, focused on systems - in two ways. It focuses on internal systems (e.g., values, communication, and human resource systems) and on external systems (e.g., suppliers and customers) (Cameron 1994). This strategy may consist of activities such as employee development programs that reinforce new career paths and new performance standards; changes in the reward and recognition systems of the organization; and employee training programs.

Freeman and Cameron (1993) found that during downsizing as convergence organizations place a relatively low priority on modifications in mission, strategy, structure, and processes. Instead an emphasis is placed on reducing the personnel in the organization. In contrast, during downsizing as reorientation organizations emphasize a shift in business strategy. A shift in business strategy usually involves a new definition of the organization mission, which in turn calls for adjustments to existing organizational activities. A different
business strategy requires new procedures, work flows, communication networks, and decision-making patterns be established. Therefore, we would expect greater use of a workforce reduction strategy and less reliance on work redesign and systemic change strategies in academic research libraries during a downsizing as convergence compared to academic research libraries during a downsizing as reorientation.

3.2.3 Downsizing processes

Independent of the strategy selected, the way in which downsizing is managed can influence individual and organizational outcomes. Downsizing processes are the series of events involved in a downsizing and which lead to its outcomes. The primary function of the processes by which downsizing is managed is to ameliorate the negative effects of downsizing. Thus, the processes by which downsizing is managed are important for several reasons. First, because people attribute meaning to the events that they perceive, the same downsizing is likely to evoke different reactions among employees. For example, employees are more likely to accept managers' explanations for layoffs when managerial accounts of the reasons for the layoffs are clear than when they are unclear (Brockner, DeWitt, Grover, and Reed 1990). Process also influences the way in which organizational change is understood and accepted. Employees tend to resist changes that are forced on them by management. They tend to understand and accept change when they have had an opportunity to participate in the decision-making that leads to change (Tichy 1983). It is through these processes that ideas are sharpened, perspectives understood, needs identified, values clarified, and goals formulated. There are certain significant processes that occur in organizations as they downsize. According to the literature (Appelbaum, Simpson, and Shapiro 1987; Brockner 1992; Cameron 1994; Cameron, Freeman, and Mishra 1993; Freeman 1992; Hitt, Keats, Harback and Nixon 1994; Sutton 1990), some of the most important are: participation;
communication; leadership. The downsizing approach is hypothesized to influence the downsizing processes.

3.2.3.1 Participation

Organizations have the choice of employing narrow or broad participation in identifying the need for change during downsizing (Freeman and Cameron 1993). Broad participation refers to horizontal and vertical decentralization of decisions about downsizing. Organizational change theory suggests that those who are to be affected by the change should be involved in the decision-making that brings it about. By encouraging participation in decision-making, organizations can increase the probability that change will be accepted and the overall effectiveness of that change (Tichy 1983). During downsizing as reorientation more extensive change is required and more people have reason to be involved (Freeman 1992). For example, changes in structure and the redesign of jobs should move decisions to lower levels of the organization so people make relevant and salient decisions about their work and work lives (Kotter 1996). Lower level involvement is required to design and implement change more effectively (Tomasko 1993). Furthermore, when change is occurring at multiple levels of the organization, more people need to be involved because top managers do not have all the relevant knowledge or details necessary to plan and execute the change. Because different groups of people have a greater quantity and diversity of information, they can identify more alternatives than can an individual (Kotter 1996). Therefore, we would expect to see low levels of participation in academic research libraries during a downsizing as convergence and high levels of participation in academic research libraries during a downsizing as reorientation.
3.2.3.2 Communication

Many authors have emphasized the need for communication when implementing change (Kotter 1996; Smeltzer and Zener 1995; Tichy and Devanna 1986). This is particularly important in a downsizing situation, where potential threat can accompany imminent change (Gilmore and Hirschhorn 1983; Heenan 1989). Resistance and confusion frequently develop because people are unclear about what the future state will be like. In the absence of a clear image of the future, rumours develop, and people may interpret their own situation much worse than the real organizational situation. It is generally agreed that in a downsizing situation it is in the employees' interests if management disclose as much information as they can, when they can, and as often as they can (Feldman and Leana 1994; Smeltzer and Zener 1992). While communication may be important in any downsizing program, it is more important during downsizing as reorientation. Rather than trying to improve what already exists, the organization is implementing broader change, doing new things, and in general altering its present configuration. This situation is likely to lead to increased ambiguity and uncertainty as the organization and its people must unlearn the habits, orientations, assumptions, and routines that have been ingrained over time. Therefore, we would expect low levels of communication in academic research libraries during a downsizing as convergence and high levels of communication in academic research libraries during a downsizing as reorientation.

3.2.3.3 Transformational leadership

A recent development in the leadership area has been the interest in transformational leadership (Avolio and Bass 1988; Bass 1985; Bass and Avolio 1994; Bennis and Nanus 1985; Tichy and Devanna 1986; Seltzer and Bass 1990). Many of these authors examined transformational leadership in the context of system-wide changes. In fact the purpose of transformational
leadership, as its name denotes, is change – change that appeals to the values and needs of both the leader and followers. The previously mentioned authors found that rather than focusing on ways to manage the status quo, transformational leaders try to communicate and maintain a vision of where their group, department, or organization should be heading. They focus themselves on viewing problems as opportunities, and take an active interest in the development of individual employees. Transformational leaders change their organizational culture by first understanding it and then realigning the organization's culture with a new vision and a revision of its shared assumptions, values, and norms (Bass 1985). Bass and his colleagues (e.g., Bass 1985; Bass and Avolio 1994; Seltzer and Bass 1990) developed a theory and measure of transformational leadership. Transformational leaders have been characterized by four factors denoted as the four "I"s of transformational leadership (Avolio, Waldman, and Yammarino 1991; Bass and Avolio 1994). The first is idealized influence, which is based on a follower's respect and admiration for the leader. Next is inspirational motivation, which is based on communication of expectations and followers' confidence in the leader's vision and values. Third is intellectual stimulation, the degree to which the leader provides followers with interesting and challenging tasks and encourages them to solve problems in their own way. Finally, individualized consideration, the extent to which the leader cares about the individual followers' concerns and developmental needs. During downsizing as convergence, change is geared toward achieving greater consistency among the organization's internal activities. While the most senior levels of management may need to encourage, monitor, and support such change, they need not be intimately involved. The leaders work within their organizational cultures following existing rules, norms, and procedures. Downsizing as reorientation, because of its scope and depth, must be led by the leader and senior management. Reorientation demands repositioning of the organization in its environment, which in turn demands redesigning the organization. Given the enormity of the change and inherent internal forces for stability, senior management must exhibit a sense of vision and empower employees to take
greater responsibility for achieving the vision. They must foster a culture of change and growth rather than one that maintains the status quo. Therefore, we would expect senior management to display low levels of transformational leadership behaviours (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) in academic research libraries during a downsizing as convergence and high levels of transformational leadership behaviours (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) in academic research libraries during a downsizing as reorientation.

3.2.4 Downsizing outcomes

As outlined in Figure 3.1, the downsizing approach lead to the choice of particular strategies and processes that in turn lead to downsizing outcomes. At the individual level, there are likely to be changes in employees' attitudes toward the job as their employers cut the number of people they employ, redesign work, or change the culture (Brockner 1988a,b; Cameron, Freeman, and Mishra 1993; Isabella 1989; Noer 1993). At the organizational level, there are climate characteristics that are often associated with downsizing (Cameron, Freeman, and Mishra 1993). Thus, the downsizing strategies and processes are hypothesized to influence downsizing outcomes both at the individual level and organizational level.

3.2.4.1 Employee attitudes toward the job

Changes in the workplace may have implications for employees' attitudes toward their jobs, given the potential for uncertainty that may accompany such changes. Changes resulting from downsizing may be perceived as threats or

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9 Employee attitudes toward the job will be labeled as *Attitudes Toward Job* in all figures and tables.
opportunities (Brockner 1992; Greenhalgh, Lawrence, and Sutton 1988; Noer 1993). For example, a workforce reduction strategy is often viewed as threatening to the remaining employees. The evidence from this research is that survivors “may feel a profound sense of job insecurity - i.e., wondering whether they are the next to go” (Brockner 1988, 227). In addition, a workforce reduction strategy can create job demands that employees are not prepared for or equipped to handle (Cameron, Freeman, and Mishra 1993). With fewer people to do the work, the remaining employees find themselves overburdened with work and unsure as to who should be performing the duties previously performed by those who were let go. Another common workforce reduction strategy is freezing actions on new positions and not filling vacant jobs. Translated into career paths, this means organizational plateauing or limited career advancement opportunities (Feldman 1996; Isabella 1989). In sum, a workforce reduction strategy threatens the very building blocks on which survivors have been constructing their future careers. Cameron, Freeman, and Mishra (1993) found that a workforce reduction strategy is rarely effective, especially if work redesign and systemic change strategies do not accompany it. Therefore, we would expect that downsizings achieved by greater reliance on a workforce reduction strategy; less reliance on a work redesign strategy; and less reliance on a systemic change strategy to have the greatest negative impact on employee attitudes toward the job.

In contrast, a work redesign strategy may be seen as an opportunity for new and different career options. A work redesign strategy examines what work is being done and how the work is being done, which may lead to creative ways to make the work more interesting - a process known as job enrichment. Moreover, when jobs have been altered, the organization may have to provide training to employees to handle their new responsibilities. Opportunities to develop new skills can be seen as providing chances for growth and contribution despite lack of upward mobility (Feldman 1996; Isabella 1989). While the consequences of a work redesign strategy are often better than those of a
workforce reduction strategy, the work redesign strategy’s contributions can be increased if the strategy is broadened to incorporate the systemic change strategy (Cameron 1994). A systemic change strategy focuses on changing the organization’s culture and the attitudes and values of employees. Accumulating evidence suggests that both work redesign and systemic change strategies are more effective than a workforce reduction strategy by itself at leading to long-term improvements in organizational performance and at minimizing survivor problems (Cameron, Freeman, and Mishra 1993; Cascio 1993). Therefore, we would expect that downsizings achieved by less reliance on a workforce reduction strategy; greater reliance on work redesign strategy; and greater reliance on a systemic change strategy to have the least negative impact on employee attitudes toward the job.

During times of organizational change, employees’ need for information increases. The information needs to be timely, complete, accurate, and frequent. To the extent that employees’ attitudes towards the job are dependent on the work setting, a meaningful level of the responsibility for employee attitudes rests with those in positions of leadership. Therefore, we would expect academic research libraries implementing low levels of participation; low levels of communication; and low levels of transformational leadership behaviours to be associated with negative employee attitudes toward the job. In academic research libraries implementing high levels of participation; high levels of communication; and high levels of transformational leadership behaviours we would expect positive employee attitudes toward the job.

3.2.4.2 Organizational climate

Cameron, Freeman, and Mishra (1993) identified 12 characteristics of organizations that emerge during downsizing and characterize the organizational climate as negative. The 12 characteristics that tend to emerge during downsizing are: low morale, loss of trust among organization members, restricted
communication, loss of innovativeness, resistance to change, politicized special interest groups, non-prioritized cutbacks, increasing conflict, lack of teamwork, lack of leadership, centralized decision-making, and short-term mentality. In all, the 12 characteristics describe damaged relations and dysfunctional structures that have long-term consequences for organizational improvement. Cameron, Freeman, and Mishra (1993) found that organizations that scored high on the 12 characteristics and thus exhibited a negative climate were those that used a workforce reduction strategy to downsize. For example, downsizing via attrition and layoffs were associated with the emergence of the characteristics. Organizations that increased their leadership behaviours, communication with and participation by organization members had lower scores on the 12 characteristics or a more positive climate. Therefore, we would expect downsizings achieved by greater reliance on a workforce reduction strategy; less reliance on a work redesign strategy; and less reliance on a systemic change strategy to be associated with negative organizational climate. Downsizings achieved by less reliance on a workforce reduction strategy; greater reliance on a work redesign strategy; and greater reliance on a systemic change strategy will be associated with positive organizational climate. We would also expect academic research libraries implementing low levels of participation; low levels of communication; and low levels of transformational leadership behaviours to be associated with negative organizational climate. In academic research libraries implementing high levels of participation; high levels of communication; and high levels of transformational leadership behaviours we would expect positive organizational climate.

3.3 Research Hypotheses

As the general framework presented in Figure 3.1 suggests, the organization's downsizing approach will influence the specific strategies and processes used to downsize. The downsizing approach can be categorized as convergence or reorientation. Leaders may emphasize the maintenance of
stability, adaptation to current environmental pressures, or reinforcement of the organization's current mission and strategy, accompanied by incremental modifications in the organization's structure, system, and processes. Or they may seek a transformation, a replacement of former structures, systems, and processes, or a reorientation of the organization's mission (Freeman and Cameron 1993). These two fundamental approaches are expected to have associated with them a unique set of relationships with other organizational variables. As such, leaders in organizations undergoing downsizing adopt a downsizing approach, implicitly or explicitly, which influences the downsizing strategies available to them and the kinds of choices and changes they make. The two basic downsizing approaches identified paint a picture of broader and more extensive change contrasted with confined and less extensive change.

As noted above (3.1), downsizings motivated by the desire for convergence requires incremental changes to the organization; it is typified by adjustments to the organization's existing strategy, structure, people, and processes to improve the organization's current mode of operation. Such efforts may include but are not limited to, refining policies, methods, and procedures; shifting the emphasis among products and services; and eliminating work and services. In contrast, a reorientation approach usually requires transformational changes in the organization. As a consequence, leaders end up fundamentally redefining what the organization is or changing the basic framework of organizing, including strategy, structure, people, and processes. For instance, if an organization decides to alter its structure to reflect a more decentralized organization, departmental responsibilities could be combined, vertical layers removed, and spans of control widened to make the organization flatter and less bureaucratic. Policies and procedures may need to be changed as well as existing working relationships. If the structural change is to be effective, it must be reinforced by cultural change. Structure defines the key working and power relationships in an organization while culture defines the key values that support those relationships. In this study, academic research libraries will be categorized
as adopting either a convergence approach to downsizing or a reorientation approach to downsizing based on the changes made to the organization. No hypotheses between the downsizing approach and downsizing strategies will be made.

Hypotheses 1, 2, and 3 predict the different processes academic research libraries will use during a downsizing as convergence versus a downsizing as reorientation. Downsizing as convergence involves minor changes in the organization and thus requires fewer people to be involved. During a downsizing as reorientation, more people have reason to be involved because the changes occurring may be system-wide. Thus, top management may not have all the relevant knowledge or details necessary to plan and execute the change. As hypothesis 1 proposes:

*Hypothesis 1:* Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for participation than academic research libraries categorized as adopting a reorientation approach to downsizing.

During downsizing as convergence change is geared toward achieving internal consistency among the organization's internal activities. Downsizing as reorientation results in major changes in mission, strategy, structure, and processes. Thus, a high level of communication is required for this kind of change to be successful. As hypothesis 2 proposes:
Hypothesis 2: Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for communication than academic research libraries categorized as adopting a reorientation approach to downsizing.

During a downsizing as convergence, leaders make minor adjustments in the organization's mission, strategy, structure, and processes. During a downsizing as reorientation, leaders not only make major changes in these four areas but also evoke fundamental changes in the cultural system of the organization. They must guide the change process by insuring a vision of the future state of the organization, mobilizing the organization toward achieving the new vision, and then institutionalizing the changes that must last over time. As hypothesis 3 proposes:

Hypothesis 3: Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing.

Downsizings achieved by limiting the inflow of new employees; implementing a hiring freeze; or offering early retirement incentives may increase employees' feelings of role overload and stress. When downsizing simply involves a workforce reduction strategy, the content of jobs is not changed and employees gain little, in terms of wider responsibilities or broader skills, to compensate for the increased stress and insecurity. Unlike a workforce reduction strategy, which results in few employees doing more work, the intent behind a redesign strategy is to increase the responsibilities of employees in order to improve organizational efficiency. The job redesign literature suggests that
enriching an employee's job by providing variety or additional responsibilities may make the employee's work more motivating, rewarding and satisfying (Hackman and Oldham 1980). Rather than pile more work on fewer employees, a redesign strategy helps avoid the problem of eliminating workers while maintaining the same amount of work for the organization to perform. In addition, the use of a systemic change strategy helps avoid the need for continual, repetitive workforce reductions. Pursuing an organizational philosophy of continuous improvement throughout the entire system ensures that downsizing is not treated as a target to be completed but rather as a way of life. Thus, the hypotheses regarding downsizing strategy and employee attitudes toward the job are:

Hypothesis 4a: The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.

Hypothesis 4b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.

Hypothesis 4c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.

In the same vein as above, hypothesis 5 proposes that downsizings achieved by primarily relying on workforce reduction strategies will be associated with negative organizational climate while downsizings achieved by increased reliance on work redesign and systemic change strategies will be associated with positive organizational climate. The rational for these hypotheses is that the individual perceptions of employees will aggregate to impact at the organizational level.
Hypothesis 5a: The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.

Hypothesis 5b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.

Hypothesis 5c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.

While participating in decision-making about task goals, plans, and procedures, subordinates learn more about the task and their expected role. Involving employees also helps to reduce feelings of powerlessness and provides a forum in which employees’ interests can be protected (Hardy 1987). As hypothesis 6 proposes:

Hypothesis 6: The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.

There is always some ambiguity, doubt, anxiety, and fear associated with major change (Smeltzer and Zener 1995). In any change initiative employees want to know how the changes affect them. Increased communication between top management and employees helps to clarify what the future holds for the organization, diffuse rumours, and provide opportunities for top management to reassure employees of their value to the organization. As hypothesis 7 proposes:
Hypothesis 7: The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.

The research by Cameron, Freeman, and Mishra (1993) showed that the behaviour essential for change is for top management to demonstrate visible and consistent support for it. Leadership behaviour includes the ability to excite and motivate employees, praise them, use symbolic ways to provide a vision of future possibilities for them, and remain accessible and visible. As hypothesis 8 proposes:

Hypothesis 8: The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.

Cameron, Freeman, and Mishra (1993) found a number of factors that mitigate against the emergence of the 12 characteristics that characterize organizational climate as negative. Among these were increased leadership behaviours and communication and participation among employees. As hypotheses 9, 10, and 11 propose:

Hypothesis 9: The index scores for participation will be positively associated with the index scores for organizational climate.

Hypothesis 10: The index scores for communication will be positively associated with the index scores for organizational climate.
Hypothesis 11: The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.

Table 3.1 provides a complete summary of the hypothesized relationships between the principal variables in the conceptual framework.
Table 3.1. Summary of Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for participation than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
</tr>
<tr>
<td>H2:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for communication than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
</tr>
<tr>
<td>H3:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
</tr>
<tr>
<td>H4a:</td>
<td>The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H4b:</td>
<td>The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H4c:</td>
<td>The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H5a:</td>
<td>The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.</td>
</tr>
<tr>
<td>H5b:</td>
<td>The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.</td>
</tr>
<tr>
<td>H5c:</td>
<td>The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.</td>
</tr>
<tr>
<td>H6:</td>
<td>The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H7:</td>
<td>The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H8:</td>
<td>The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.</td>
</tr>
<tr>
<td>H9:</td>
<td>The index scores for participation will be positively associated with the index scores for organizational climate.</td>
</tr>
<tr>
<td>H10:</td>
<td>The index scores for communication will be positively associated with the index scores for organizational climate.</td>
</tr>
<tr>
<td>H11:</td>
<td>The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.</td>
</tr>
</tbody>
</table>
3.4 Definition and Measurement of Variables

The conceptual framework of the study consists of seven independent variables and two dependent variables, which will be discussed below.

3.4.1 Independent variables

The seven independent variables in the study are: Downsizing Approach, Workforce Reduction, Work Redesign, Systemic Change, Participation, Communication, and Transformational Leadership.

3.4.1.1 Downsizing approach

Downsizing approach is a dichotomous categorical variable (convergence versus reorientation) and is measured using two questions on the survey questionnaire. The first survey question asks participants to what extent their Library has changed each of seven elements, using a rating scale from 1 to 5, where 1 represents "Not at all" and 5 represents "A great deal". Low scores would indicate a convergence approach to downsizing while high scores would indicate a reorientation approach to downsizing. Examples of index items are: "The mission of the Library"; "Policies, procedures, and methods". The second survey question asks participants to assign a total of 100 points between two descriptions of organizational change that were typical of their Library. The first description of change characterizes a convergence approach to downsizing while the second description of change characterizes a reorientation approach to downsizing.
3.4.1.2 Workforce reduction

A workforce reduction strategy is measured with seven items adapted from Freeman's (1992) instrument\(^{10}\) and modified for use in the present study. Participants are asked to what extent their Library has used each of seven tactics to reduce the number of professional staff, using a rating scale from 1 to 5, where 1 represents “Not at all” and 5 represents “A great deal”. Examples of items are: “Layoffs”; “Early retirements”.

3.4.1.3 Work redesign

A work redesign strategy is measured using 13 items adapted from Freeman's (1992) instrument and modified for use in the present study. Participants are asked to what extent their Library has engaged in each of 13 activities, using a rating scale from 1 to 5, where 1 represents “Not at all” and 5 represents “A great deal”. Examples of items are: “Reorganized the senior management team”; “Outsourced tasks formerly done within this Library”.

3.4.1.4 Systemic change

A systemic change strategy is measured using 11 items adapted from Freeman's (1992) instrument and modified for use in the present study. Participants are asked to what extent each of 11 actions has been taken in their Library, using a rating scale from 1 to 5, where 1 represents “Not at all” and 5 represents “A great deal”. Examples of items are: “Mechanisms to increase communication and information sharing have been implemented since downsizing began”; “Training and orientation programs for staff have been implemented in connection with the downsizing effort”.

\(^{10}\) Permission was obtained to use the author's survey instrument.
3.4.1.5 Participation

Participation is measured using 18 items that tap employees’ perceptions of their participation in workplace decisions regarding downsizing. These items were developed for this study and cover a variety of workplace activities in which employees may be involved in some way in the decision process either because they are consulted or share in making the final decision, or they are delegated responsibility for making the decision. Participants are asked to what extent they were involved in each of 18 downsizing decisions in their Library using a rating scale from 1 to 5, where 1 represents “I was not involved” and 5 represents “I made the final decision”. Examples of items are: “The design of new communication methods”; “The implementation of new communication methods”.

3.4.1.6 Communication

Communication is measured using seven items developed for the study that tap employees’ perceptions of the content of the message and the timing of the communication. Participants are asked to describe the communication they received about downsizing using a semantic differential format. The question involves a series of opposite adjectives and an instruction to select a number between 1 and 5 that best describes the communication. Examples of items are: “Untimely - Timely”; “Inaccurate - Accurate”.

3.4.1.7 Transformational leadership

Transformational leadership is measured using 12 items adapted from Bass’ (1985) Leadership Questionnaire. Participants are asked to indicate how frequently they observed senior management behaviours on a rating scale from 1 to 5, where 1 represents “Not at all” and 5 represents “Always”. The four transformational leadership dimensions, the number of items in each, and examples of the items are:
1. Idealized influence (3 items) - “Has been visible and active in leading the way”;

2. Inspirational motivation (3 items) - “Provides a vision of the future that I can get excited about”;

3. Intellectual stimulation (3 items) - “Enables me to think about old problems in new ways”;

4. Individualized consideration (3 items) - “Treats each subordinate individually”.

3.4.2 Dependent variables

The two dependent variables in the study are: Employee Attitudes Toward the Job and Organizational Climate.

3.4.2.1 Employee attitudes toward the job

Employee attitudes toward the job are measured using 13 items developed for the study. The items were selected from the literature (Brockner 1988a,b, 1992; Cameron, Freeman, and Mishra 1993; Isabella 1989) which identifies various attitudes individuals may have toward their job after a downsizing. The total of the 13 items is taken as an index of employee attitudes toward the job. Participants are asked to agree or disagree with each of 13 statements about their job using a five point Likert-type scale where 1 represents “Strongly disagree” and 5 represents “Strongly agree”. Examples of index items are: “I know how my job contributes to the overall goals and objectives of the Library”; “New opportunities for advancement and promotion exist for me in the Library”.

3.4.2.2 Organizational climate

Organizational climate is measured using 24 items adapted from Freeman (1992) and modified for use in the present study. The total of the 24 items is
taken as an index of organizational climate. Participants are asked to agree or disagree with each of 24 statements about organization characteristics using a five point Likert-type scale where 1 represents "Strongly disagree" and 5 represents "Strongly agree". Examples of index items are: "Morale is increasing in this Library"; "A lot of resistance to change exists in this Library".

3.5 Study Population

The study population consists of the professional employees (excluding Chief Librarians) of Ontario academic research libraries that are members of the Canadian Association of Research Libraries (CARL). The list of potential participants was established through the cooperation of the Chief Librarians of the academic research libraries⁵¹ (see Appendix A). Ontario members of CARL were selected because of their number, size, and importance in the Canadian academic library community. Ontario has the largest concentration of CARL member institutions, ten of the twenty-seven members. Moreover, more than fifty percent of the population of CARL library professionals work in the Ontario academic research libraries. Ten CARL member institutions were requested to participate in the study; one institution declined to participate in the study. The nine CARL member institutions included in this study are: Carleton University, University of Guelph, University of Ottawa, Queen's University, University of Toronto, University of Waterloo, University of Western Ontario, University of Windsor, York University.

⁵¹ The Chief Librarians were asked to send their staff list of employees classified as professionals in their library system.
3.6 Data Collection Method

The primary method of data collection is the mail questionnaire survey. The survey is cross-sectional (i.e., the information is collected at one point in time).

3.6.1 Mail questionnaire survey

The mail questionnaire method is selected for three main reasons. First, because there have been no comprehensive studies on downsizing in Ontario academic research libraries, this study collects data in order to examine how academic research libraries go about the task of downsizing and on the effects of those actions. The mail questionnaire allows for a large number of participants to be surveyed in a relatively short period (Mangione 1995). Second, because the study is concerned with a five year time period, the survey questions demand a considered (rather than an immediate) answer. The mail questionnaire is preferable when considered answers are required because the questionnaire allows participants time to think about their answers (Mangione 1995). Third, because downsizing in itself can be quite stressful for individuals and for the organization, gaining access to collect data by interviews may be more difficult (Brockner 1990). People are more likely to give complete and truthful information on sensitive topics if a mail questionnaire rather than interview is used (Bourque and Fielder 1995). Given the sensitive nature of downsizing, the mail questionnaire is probably the best method available to collect sensitive data because it has the advantage of providing greater anonymity (Mangione 1995).

The possibility of high nonresponse rates, failure of participants to answer individual questions, and participants misunderstanding the wording of the questions as presented are the major disadvantages with mail questionnaires (Kerlinger 1986; Mangione 1995). To increase the response rate, several suggestions from Dillman's (1978) total design method (TDM) were employed
(outlined in section 3.6.1.2). TDM involves paying attention to every detail of questionnaire construction and implementation. For example, specific guidelines are provided for questionnaire construction such as the use of typefaces, page layout, sequence of questions, and so on.

The questionnaire is a 16 page, 150 item survey that includes sections on downsizing strategies (workforce reduction, work redesign, systemic change); downsizing processes (participation, communication, transformational leadership); and downsizing outcomes (employee attitudes toward the job, organizational climate) (see Appendix B). Demographic data on participants are also requested.

3.6.1.1 Mail questionnaire pretest

In order to reduce or eliminate the failure of participants to answer individual questions and/or misunderstanding the wording of questions a pretest of the questionnaire was conducted. The aim of the pretest was to improve both the validity and reliability of the instrument.

The pretest was conducted on a sample of fifteen professional librarians of a non-CARL academic research library in Ontario. At the request of the participants, questionnaire packages were distributed to participants to complete on their own time. Two weeks later, participants attended a focus group session conducted by the researcher to go through the questionnaire question by question. The purpose of the focus group was to find out how well the questions and instructions were understood, how comprehensive the response categories were, and the time taken to complete the questionnaire. At the end of the session, questionnaires were collected and carefully scrutinized for further signs that participants may have had difficulty answering or understanding any questions that were not raised during the focus group session.
The questionnaire pretest provided critical feedback on the wording of questions and instructions as well as resolving issues such as whether to use a “don’t know” category and if the recall period (last five years) is a reasonable length of time. Most of the changes incorporated involved the use of more precise wording on particular questions and the addition of two response categories – “don’t know” and “not applicable”.

In addition to the pretest, discussions that emerged during the focus group session also led to changes to the survey questionnaire. For example, based on a discussion of technology and its role in downsizing, four new items were added to the list of answer categories for a particular question in order to create a more comprehensive list.

Based on the pretest, the survey questionnaire takes an average of thirty minutes to complete.

3.6.1.2 Implementation of the mail questionnaire

A four-step implementation process was followed based on Salant and Dillman’s (1994) suggestions. First, a prenotification letter was sent out two weeks in advance of the questionnaires alerting potential participants that a questionnaire was forthcoming (see Appendix C). Next the questionnaire was sent out accompanied by a one-page cover letter that explains the importance of the survey, emphasizes the importance of participants and assures the participants anonymity and confidentiality (see Appendix D). Also included in this mailing was a lottery ballot offering participants a chance to win $500 if they sent their completed surveys back by a particular date (see Appendix E). Third, a postcard follow-up was sent to all participants one week after the questionnaire to thank those who had responded and to serve as a reminder to those who had not yet returned their surveys (see Appendix F). Finally, a second cover letter and
questionnaire were mailed two weeks later to those who did not respond (see Appendix G). The first three mailings were sent to the nine participating academic research libraries for internal distribution as agreed to by the Chief Librarians\textsuperscript{12}. The final mailing was sent directly to those individuals who had not yet responded. Surveys included postage paid return envelopes and all correspondence provided a telephone number and e-mail address for contacting the researcher with any questions\textsuperscript{13}.

3.7 Chapter Summary

This chapter described the conceptual framework for the study; the hypotheses to be tested; the definition and measurement of the variables; and the design of the study. Table 3.2 provides a summary of the hypotheses to be tested, the variables used in the research, the corresponding measures of the variables in the questionnaire, and the associated analysis to be used. In the next chapter, the results of the analyses are presented.

\textsuperscript{12} The Chief Librarians designated a contact person to receive the first three mailings for internal distribution. A letter accompanied each mailing addressed to the designated contact explaining the contents of the mailing.

\textsuperscript{13} Protocol for research was approved by the Faculty of Information Studies Research Committee on the Use of Human Subjects and by the Review Committee on Human Subjects, Office of Research Services, University of Toronto.
### Table 3.2. Summary of Hypotheses, Variables, Measures, and Associated Analyses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Independent Variables And Measures</th>
<th>Dependent Variables and Measures</th>
<th>Analytic Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for participation than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>Downsizing Approach Categorical QA6 + QA16</td>
<td>Participation Interval QC1</td>
<td>t-test</td>
</tr>
<tr>
<td>2: Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for communication than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>Downsizing Approach Categorical QA6 + QA16</td>
<td>Communication Interval QD3</td>
<td>t-test</td>
</tr>
<tr>
<td>3: Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>Downsizing Approach Categorical QA6 + QA16</td>
<td>Transformational Leadership Interval QB1</td>
<td>t-test</td>
</tr>
<tr>
<td>4a: The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.</td>
<td>Workforce Reduction Interval QA3</td>
<td>Attitudes Toward Job Interval QF1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>4b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>Work Redesign Interval QA4</td>
<td>Attitudes Toward Job Interval QF1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>4c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>Systemic Change Interval QA5</td>
<td>Attitudes Toward Job Interval QF1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>5a: The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.</td>
<td>Workforce Reduction Interval QA3</td>
<td>Organizational Climate Interval QE1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>5b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.</td>
<td>Work Redesign Interval QA4</td>
<td>Organizational Climate Interval QE1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>5c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.</td>
<td>Systemic Change Interval QA5</td>
<td>Organizational Climate Interval QE1</td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>6: The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>Participation Interval QC1</td>
<td>Attitudes Toward Job Interval QF1</td>
<td>Regression Analysis</td>
</tr>
</tbody>
</table>
Table 3.2. Summary of Hypotheses, Variables, Measures, and Associated Analyses* (continued)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Measures</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>7: The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>Communication</td>
<td>Interval QD3</td>
<td>Attitudes Toward Job Interval QF1</td>
</tr>
<tr>
<td>8: The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>Transformational Leadership</td>
<td>Interval QB1</td>
<td>Attitudes Toward Job Interval QF1</td>
</tr>
<tr>
<td>9: The index scores for participation will be positively associated with the index scores for organizational climate.</td>
<td>Participation</td>
<td>Interval QC1</td>
<td>Organizational Climate Interval QE1</td>
</tr>
<tr>
<td>10: The index scores for communication will be positively associated with the index scores for organizational climate.</td>
<td>Communication</td>
<td>Interval QD3</td>
<td>Organizational Climate Interval QE1</td>
</tr>
<tr>
<td>11: The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.</td>
<td>Transformational Leadership</td>
<td>Interval QB1</td>
<td>Organizational Climate Interval QE1</td>
</tr>
</tbody>
</table>

*This study is a component of a larger, national study on downsizing in Canadian academic research libraries conducted by Professor Ethel Auster, Faculty of Information Studies, University of Toronto and funded by the Social Sciences and Humanities Research Council of Canada. Several questions (A7 to A15, D1, D2, F2, F3) that appear on the questionnaire (see Appendix B) are not used in the data analysis for this dissertation.

Note: Workforce Reduction (QA3) includes several items (7, 8, 10 to 15) that appear on the questionnaire but are not used to form an index score for a workforce reduction strategy. This reason is that these eight items are aimed at reducing the cost of employees rather than reducing the number of employees.
CHAPTER 4

RESULTS

4.1 Chapter Overview

In this chapter, the profile of the questionnaire respondents is presented; the descriptive statistics and the internal consistency reliabilities of the measures used for each variable are reported; and the tests of hypotheses are presented and discussed.

4.2 Profile of Questionnaire Respondents

A total of 458 mail questionnaires were sent to the professional employees in the nine participating CARL member institutions. The number of questionnaires sent to each institution ranged from 20 to 182. Questionnaires were received from all nine institutions for a 100 percent response rate at the institutional level. The lowest response rate from any one institution was 61 percent, while the highest response rate from any one institution was 84 percent. At the individual level, 328 of the 458 mail questionnaires were returned for a response rate of 72 percent. Nineteen respondents (6 percent of the total returned) indicated that downsizing did not occur in their libraries and thus were excluded from the analyses. The number of usable questionnaires for analyses was 309. Table 4.1 shows the institutional response rate.

The "typical" respondent is female, between the ages of 45 and 54, and has worked in her current library system for more than 20 years. Table 4.2 shows the respondents' profile by gender, age, and years of service.
Table 4.1. Institutional Response Rate

<table>
<thead>
<tr>
<th>University</th>
<th>Number of Questionnaires Sent</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>25</td>
<td>84%</td>
</tr>
<tr>
<td>L2</td>
<td>41</td>
<td>66%</td>
</tr>
<tr>
<td>L3</td>
<td>30</td>
<td>83%</td>
</tr>
<tr>
<td>L4</td>
<td>37</td>
<td>84%</td>
</tr>
<tr>
<td>L5</td>
<td>182</td>
<td>68%</td>
</tr>
<tr>
<td>L6</td>
<td>33</td>
<td>70%</td>
</tr>
<tr>
<td>L7</td>
<td>44</td>
<td>61%</td>
</tr>
<tr>
<td>L8</td>
<td>20</td>
<td>80%</td>
</tr>
<tr>
<td>L9</td>
<td>49</td>
<td>69%</td>
</tr>
</tbody>
</table>

N = 9

Table 4.2. Profile of Questionnaire Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>27.0</td>
</tr>
<tr>
<td>Female</td>
<td>73.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25</td>
<td>0.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>5.2</td>
</tr>
<tr>
<td>35 to 44</td>
<td>24.4</td>
</tr>
<tr>
<td>45 to 54</td>
<td>46.4</td>
</tr>
<tr>
<td>55 to 64</td>
<td>23.7</td>
</tr>
<tr>
<td>65 or older</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years in Current Library System</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1</td>
<td>0.7</td>
</tr>
<tr>
<td>1 to 5</td>
<td>14.0</td>
</tr>
<tr>
<td>6 to 10</td>
<td>20.8</td>
</tr>
<tr>
<td>11 to 15</td>
<td>12.1</td>
</tr>
<tr>
<td>16 to 20</td>
<td>14.0</td>
</tr>
<tr>
<td>&gt; 20</td>
<td>38.4</td>
</tr>
</tbody>
</table>

N = 309
4.3 Descriptive Statistics

This section reports the descriptive statistics and the internal consistency reliabilities of the measures used for the seven independent variables and the two dependent variables.

4.3.1 Independent variables

The seven independent variables in the study are: Downsizing Approach, Workforce Reduction, Work Redesign, Systemic Change, Participation, Communication, and Transformational Leadership. The internal consistency reliability coefficients (Cronbach's alpha) of the measures used for each variable are shown in Table 4.3.

Table 4.3. Reliability Coefficients

<table>
<thead>
<tr>
<th>Measures</th>
<th>Number of Items</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downsizing Approach</td>
<td>8</td>
<td>.82</td>
</tr>
<tr>
<td>Workforce Reduction</td>
<td>7</td>
<td>.74</td>
</tr>
<tr>
<td>Work Redesign</td>
<td>13</td>
<td>.85</td>
</tr>
<tr>
<td>Systemic Change</td>
<td>11</td>
<td>.79</td>
</tr>
<tr>
<td>Participation</td>
<td>18</td>
<td>.94</td>
</tr>
<tr>
<td>Communication</td>
<td>7</td>
<td>.94</td>
</tr>
<tr>
<td>Transformational</td>
<td>12</td>
<td>.95</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reliability was good for each of the measures as assessed by Cronbach's alpha. An alpha greater than .70 is generally accepted as representing good reliability (Litwin, 1995). Each of the measures exceeds this level of reliability.

4.3.1.1 Downsizing approach

Organizations may adopt either one of two generic approaches to downsizing - convergence or reorientation. Organizations engaged in a downsizing as convergence are more focused on making minor adjustments in mission, strategy, structure, and processes. Organizations engaged in downsizing as reorientation are more focused on making major modifications in mission, strategy, structure, and processes. Downsizing approach was measured using two questions on the questionnaire. For the first question, respondents indicated the extent to which their library changed seven elements by answering the question, "Please indicate the extent to which your Library changed these elements during the last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". A mean score was calculated for each respondent on the index. These individual mean index scores were then converted to a score out of 100. For the second question, respondents assigned a total of 100 points between two descriptions of organizational change that were typical of their Library. The two questions (i.e., index scores that were converted to scores out of 100 and the score for the description of change out of 100) were then summed and averaged for each respondent to get an overall score for downsizing approach.

To get an overall downsizing approach score for each of the nine libraries all respondent scores for the downsizing approach within a library were summed and averaged. The mean scores for downsizing approach and their standard deviations for each of the nine libraries are shown in Table 4.4.
Table 4.4. Library Downsizing Approach Score

<table>
<thead>
<tr>
<th>Library</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>63.9</td>
<td>15.8</td>
</tr>
<tr>
<td>L2</td>
<td>51.7</td>
<td>13.9</td>
</tr>
<tr>
<td>L3</td>
<td>70.9</td>
<td>11.6</td>
</tr>
<tr>
<td>L4</td>
<td>69.2</td>
<td>16.1</td>
</tr>
<tr>
<td>L5</td>
<td>66.6</td>
<td>14.1</td>
</tr>
<tr>
<td>L6</td>
<td>66.5</td>
<td>16.9</td>
</tr>
<tr>
<td>L7</td>
<td>64.4</td>
<td>15.2</td>
</tr>
<tr>
<td>L8</td>
<td>70.5</td>
<td>13.9</td>
</tr>
<tr>
<td>L9</td>
<td>55.6</td>
<td>13.3</td>
</tr>
</tbody>
</table>

N=9

The library scores for downsizing approach range from 51.7 to 70.9. It would make sense, on a scale from 0 to 100, to categorize libraries into two groups: libraries scoring 50 and below and libraries scoring above 50. Libraries scoring 50 and below would be categorized as adopting a convergence approach to downsizing and libraries scoring above 50 would be categorized as adopting a reorientation approach to downsizing. Based on this criterion for categorization, the nine libraries in this study fall into one group - reorientation - rather than two distinct groups as proposed in the downsizing model. No one library scored 50 or below. Given that all nine libraries can be categorized as adopting a reorientation approach to downsizing, Hypotheses 1 to 3 cannot be tested.

4.3.1.2 Workforce reduction

A workforce reduction strategy is aimed at reducing the number of employees in an organization. Respondents indicated the extent of use of seven workforce reduction tactics by answering the question, "Please indicate the extent to which your Library engaged in these tactics regarding staff during the
last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". The mean responses and their standard deviations are shown in Table 4.5. They are presented in descending order of mean score. The overall index mean score for a workforce reduction strategy is 2.9.

As a group, the respondents indicated that "Attrition" was used to a great extent to reduce the number of employees in their libraries as were "Early retirements" and "Regular retirements". "Buyouts" were used to some extent to reduce the number of employees while "Transfers to a new job within the University"; "Layoffs"; and "Firings" were the least used workforce reduction tactics.

<table>
<thead>
<tr>
<th>Workforce Reduction Tactics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attrition</td>
<td>303</td>
<td>4.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Early retirements (providing incentives for senior employees</td>
<td>302</td>
<td>4.0</td>
<td>1.1</td>
</tr>
<tr>
<td>before their normal retirement date)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular retirements</td>
<td>294</td>
<td>3.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Buyouts (providing incentives for those not eligible for early</td>
<td>265</td>
<td>3.0</td>
<td>1.6</td>
</tr>
<tr>
<td>retirements)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfers to a new job within the University</td>
<td>231</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Layoffs</td>
<td>275</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Firings</td>
<td>261</td>
<td>1.3</td>
<td>.8</td>
</tr>
</tbody>
</table>
4.3.1.3 Work redesign

A work redesign strategy focuses on changing work processes and organizational arrangements. Respondents indicated the extent of use of 13 work redesign activities by answering the question, "Please indicate the extent to which your Library engaged in these activities during the last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". The mean responses and standard deviations are shown in Table 4.6. They are presented in descending order of mean score. The overall index mean score for a work redesign strategy is 3.2.

As a group, respondents indicated that "Redesigned tasks and jobs"; "Automated work processes wherever possible"; "Merged or reorganized departments"; "Improved technologies"; "Redesigned work to take advantage of technological improvements"; and "Decreased the number of individuals doing the same tasks or work" were all redesign activities used to a great extent by their libraries. Activities used to some extent by libraries to redesign were: "Implemented new technologies to reduce the number of staff required"; "Eliminated specific tasks"; "Reduced the number of hierarchical levels"; "Reorganized the senior management team"; and "Formed work teams". Finally, "Reduced interaction with users" and "Outsourced tasks formerly done within this Library" were two redesign activities least used by libraries.
Table 4.6. Extent of Use of a Work Redesign Strategy

<table>
<thead>
<tr>
<th>Work Redesign Activities</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesigned tasks and jobs</td>
<td>305</td>
<td>4.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Automated work processes wherever possible</td>
<td>297</td>
<td>3.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Merged or reorganized departments</td>
<td>304</td>
<td>3.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Improved technologies</td>
<td>304</td>
<td>3.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Redesigned work to take advantage of technological improvements</td>
<td>298</td>
<td>3.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Decreased the number of individuals doing the same tasks or work</td>
<td>286</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Implemented new technologies to reduce the number of staff required</td>
<td>295</td>
<td>3.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Eliminated specific tasks</td>
<td>288</td>
<td>3.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Reduced the number of hierarchical levels</td>
<td>291</td>
<td>3.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Reorganized the senior management team</td>
<td>285</td>
<td>2.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Formed work teams</td>
<td>270</td>
<td>2.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Reduced interaction with users</td>
<td>288</td>
<td>2.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Outsourced tasks formerly done within this Library</td>
<td>272</td>
<td>2.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

These 13 redesign activities can be categorized into three types of changes: changes relating to work; changes relating to technology; and changes relating to organizational structure. Figure 4.1 shows the mean frequency of use of the five work redesign activities that can be categorized as changes relating to work. In this bar chart, the five work redesign activities are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of use of the activities. The five activities are presented in descending order of mean frequency. The mean score for the five activities is 3.1.
Figure 4.1. Extent of Use of a Work Redesign Strategy: Work Changes

- Redesigned tasks and jobs [Bar]
- Decreased the number of individuals doing the same tasks or work [Bar]
- Eliminated specific tasks [Bar]
- Reduced interaction with users [Bar]
- Outsourced tasks formerly done within this Library [Bar]

Not at all | Some | A great deal
---|---|---
1 | 2 | 3 | 4 | 5

Figure 4.2 shows the mean frequency of use of the four work redesign activities that can be categorized as changes relating to technology. In this bar chart, the four work redesign activities are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of use of the activities. The four activities are presented in descending order of mean frequency. The mean score for the four activities is 3.7.
Figure 4.2. Extent of Use of a Work Redesign Strategy: Technology Changes

Figure 4.3 shows the mean frequency of use of the four work redesign activities that can be categorized as changes relating to organizational structure. In this bar chart, the four work redesign activities are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of use of the activities. The four activities are presented in descending order of mean frequency. The mean score for the four activities is 3.2.

Overall, libraries more frequently engaged in work redesign activities relating to technology changes than to organizational structure and work changes.

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4.3.1.4 Systemic change

A systemic change strategy focuses on changing the culture of an organization. Respondents indicated the extent of use of 11 systemic change actions by answering the question, "Please indicate the extent to which your Library engaged in these actions during the last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". The mean responses and standard deviations are shown in Table 4.7. They are presented in descending order of mean score. The overall index mean score for a systemic change strategy is 2.4.

As a group, respondents indicated that "Technology has been used to improve the efficiency and effectiveness of library work" was the most frequently used systemic change action. Systemic change actions used to some extent by libraries were: "A new direction for the library has been developed"; "Downsizing activities have been closely coordinated with the union(s)"; "Training and orientation programs for staff have been implemented in connection with the
downsizing effort"; "Mechanisms to increase communication and information sharing have been implemented"; and "A systematic analysis of jobs and tasks was conducted in order to determine the downsizing strategy". Least used systemic change actions were: "A systematic analysis of personnel was conducted in order to determine the downsizing strategy"; "A continuous improvement philosophy has been adopted"; "Input regarding downsizing activities has been sought from library users"; "Changes in employee appraisal systems have been implemented"; and "Changes in reward and recognition systems have been implemented".

The majority of mean scores for the 11 systemic change actions lie between 1.5 and 3.5 indicating a relatively small range and an overall low level of use of a systemic change strategy when implementing downsizing in libraries. Compared to the overall index mean scores for a workforce reduction strategy (2.9) and a work redesign strategy (3.2) the overall mean index score for a systemic change strategy is 2.4.
Table 4.7. Extent of Use of a Systemic Change Strategy

<table>
<thead>
<tr>
<th>Systemic Change Actions</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology has been used to improve the efficiency and effectiveness of library work</td>
<td>303</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>A new direction for the Library has been developed</td>
<td>294</td>
<td>3.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Downsizing activities have been closely coordinated with the union(s)</td>
<td>254</td>
<td>2.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Training and orientation programs for staff have been implemented in connection with the downsizing effort</td>
<td>297</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Mechanisms to increase communication and information sharing have been implemented</td>
<td>297</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>A systemic analysis of jobs and tasks was conducted in order to determine the downsizing strategy</td>
<td>267</td>
<td>2.5</td>
<td>1.3</td>
</tr>
<tr>
<td>A systemic analysis of personnel was conducted in order to determine the downsizing strategy</td>
<td>257</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>A continuous improvement philosophy has been adopted</td>
<td>272</td>
<td>2.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Input regarding downsizing activities has been sought from library users</td>
<td>275</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Changes in employee performance appraisal systems have been implemented</td>
<td>290</td>
<td>1.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Changes in reward and recognition systems have been implemented</td>
<td>284</td>
<td>1.5</td>
<td>.8</td>
</tr>
</tbody>
</table>

4.3.1.5 Participation

Respondents indicated their extent of involvement in 18 downsizing decisions by answering the question, "To what extent were you involved in the following downsizing decisions regarding your Library during the last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". The mean responses and standard deviations are shown in Table 4.8. They are presented in descending order of mean score.
As a group, respondents indicated that, "Implementation of new work processes"; "Implementation of new services for users"; "Redesign of work processes"; "Design of new services for users"; "Implementation of new training programs"; and the "Restructuring of work units" were all downsizing decisions they were involved with to some extent. For the following nine downsizing decisions respondents indicated they were marginally involved: "Design of new training programs"; "Reallocation of resources"; "Development of an overall downsizing plan"; "Implementation of downsizing strategies regarding staff"; "Implementation of new communication methods"; "Design of new communication methods"; "Design of downsizing strategies regarding staff"; "Initial decision that downsizing would be necessary"; and "Implementation of new performance measurement criteria". There were three decisions for which respondents indicated they were not involved: "Development of new performance measurement criteria"; "Implementation of new reward structures"; and the "Development of new reward structures". However, these three decisions represent key components of an organization's human resource management process typically done by specialists in personnel or human resource development. Therefore, it is quite conceivable that these types of decisions would be made by only a small group of library professionals.

The range of mean scores for respondents' participation in downsizing decisions is between 1.1 and 2.8 indicating a relatively low level of involvement in the downsizing decisions in their libraries. The majority of mean scores for the downsizing decisions are between 1 and 2 and the overall mean score for the index is 2.1.
Table 4.8. Extent of Involvement in Downsizing Decisions

<table>
<thead>
<tr>
<th>Downsizing Decisions</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of new work processes</td>
<td>292</td>
<td>2.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Implementation of new services for users</td>
<td>280</td>
<td>2.8</td>
<td>1.5</td>
</tr>
<tr>
<td>Redesign of work processes</td>
<td>291</td>
<td>2.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Design of new services for users</td>
<td>281</td>
<td>2.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Implementation of new training programs</td>
<td>278</td>
<td>2.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Redesign of work processes</td>
<td>287</td>
<td>2.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Design of new training programs</td>
<td>279</td>
<td>2.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Reallocation of resources</td>
<td>286</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Restructuring of work units</td>
<td>285</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Implementation of downsizing strategies regarding staff</td>
<td>272</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Implementation of new communication methods</td>
<td>258</td>
<td>2.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Design of new communication methods</td>
<td>259</td>
<td>1.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Design of downsizing strategies regarding staff</td>
<td>271</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Initial decision that downsizing would be necessary</td>
<td>283</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Implementation of new performance measurement criteria</td>
<td>219</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Development of new performance measurement criteria</td>
<td>219</td>
<td>1.4</td>
<td>.9</td>
</tr>
<tr>
<td>Implementation of new reward structures</td>
<td>208</td>
<td>1.2</td>
<td>.6</td>
</tr>
<tr>
<td>Development of new reward structures</td>
<td>207</td>
<td>1.1</td>
<td>.5</td>
</tr>
</tbody>
</table>

4.3.1.6 Communication

Respondents indicated their perceptions of seven pairs of opposite adjectives that describe the content of the message and the timing of the communication by answering the question, "Circle the number between each pair of opposites that best represents how you feel about the communication you received regarding downsizing in your Library during the last five years". The format of the question was a semantic differential scale where 1 and 2 represent
the negative adjective; 3 represents the middle point; and 4 and 5 represent the positive adjective. The mean responses and standard deviations are shown in Table 4.9.

As a group, respondents indicated that for two pairs of opposite adjectives - "Inaccurate/Accurate" and "Unreliable/Reliable" - the communication they received regarding downsizing in their library was more accurate than inaccurate and more reliable than unreliable. For the other five pairs of opposite adjectives - "Untimely/Timely", "Minimal details/Sufficient details", "Infrequent/Frequent", "Partial/Complete", and "Sporadic/Ongoing" - respondents' perceptions were in the middle. That is, their perceptions of the communication they received regarding downsizing were neither positive nor negative.

The range of the mean scores for the seven pairs of adjectives is fairly small, between 2.8 and 3.5.

Table 4.9. Perceptions Regarding Communication

<table>
<thead>
<tr>
<th>Opposite Adjectives</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaccurate/Accurate</td>
<td>295</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Unreliable/Reliable</td>
<td>294</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Untimely/Timely</td>
<td>294</td>
<td>3.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Minimal details/Sufficient details</td>
<td>296</td>
<td>2.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Infrequent/Frequent</td>
<td>294</td>
<td>2.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Partial/Complete</td>
<td>297</td>
<td>2.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Sporadic/Ongoing</td>
<td>296</td>
<td>2.8</td>
<td>1.2</td>
</tr>
</tbody>
</table>
4.3.1.7 Transformational leadership

Respondents indicated how frequently the senior management team displayed the 12 transformational leadership behaviours by answering the question, "For each statement we would like you to judge how frequently the senior management team displayed the behaviour described during the last five years" using a rating scale where 1 represents "Never" and 5 represents "Always". The mean responses and standard deviations are shown in Table 4.10.

As a group, respondents indicated that the senior management team sometimes displayed all 12 behaviours. The transformational leadership behaviours are listed in order of descending mean score: "Encourage me to express my ideas and opinions"; "Treat each subordinate individually"; "Have been visible and active in leading the way"; "Enable me to think about old problems in new ways"; "Have provided me with new ways of looking at things"; "Find out what I want and try to help me get it"; "Command respect from everyone"; "Have a clear direction or vision for the future of the Library which they transmit to me"; "Provide a vision of the future that I can get excited about"; "Inspire loyalty"; "Continually value and praise organization members"; and "Make everyone around them enthusiastic about assignments".

The range of mean scores for the frequency of displayed leadership behaviours is between 2.4 and 3.1 indicating a fairly low level of transformational leadership behaviours by the senior management team.
Table 4.10. Frequency of Transformational Leadership Behaviours

<table>
<thead>
<tr>
<th>Transformational Leadership Behaviours</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage me to express my ideas and opinions</td>
<td>296</td>
<td>3.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Treat each subordinate individually</td>
<td>279</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Have been visible and active in leading the way</td>
<td>299</td>
<td>2.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Enable me to think about old problems in new ways</td>
<td>297</td>
<td>2.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Have provided me with new ways of looking at things</td>
<td>299</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Find out what I want and try to help me get it</td>
<td>297</td>
<td>2.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Command respect from everyone</td>
<td>290</td>
<td>2.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Have a clear vision or direction for the future of the Library which they transmit to me</td>
<td>294</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Provide a vision of the future that I can get excited about</td>
<td>301</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Inspire loyalty</td>
<td>297</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Continually value and praise organization members</td>
<td>294</td>
<td>2.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Make everyone around them enthusiastic about assignments</td>
<td>292</td>
<td>2.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

These 12 transformational leadership behaviours can be subdivided into four dimensions relating to: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Figure 4.4 shows the mean frequency of the displayed transformational leadership behaviours for the dimension idealized influence. In this bar chart, the three leadership behaviours are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of displayed behaviours. The three leadership behaviours are presented in descending order of mean frequency. The mean score for transformational leadership behaviours relating to idealized influence is 2.7.
Figure 4.4. Extent of Use of Transformational Leadership Behaviours: Idealized Influence

Figure 4.5 shows the mean frequency of use of the three transformational leadership behaviours for the inspirational motivation dimension. In this bar chart, the three leadership behaviours are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of displayed behaviours. The three leadership behaviours are presented in descending order of mean frequency. The mean score for the transformational leadership behaviours relating to inspirational motivation is 2.5.
Figure 4.5. Extent of Use of Transformational Leadership Behaviours: Inspirational Motivation

Figure 4.6 shows the mean frequency of use of the three transformational leadership behaviours for the intellectual stimulation dimension. In this bar chart, the three leadership behaviours are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of displayed behaviours. The three leadership behaviours are presented in descending order of mean frequency. The mean score for transformational leadership behaviours relating to intellectual stimulation is 2.9.
Figure 4.6. Extent of Use of Transformational Leadership Behaviours: Intellectual Stimulation

Figure 4.7 shows the mean frequency of use of the three transformational leadership behaviours for the individualized consideration dimension. In this bar chart, the three leadership behaviours are listed down the side and the rating scale of 1 to 5 is listed across the bottom. The bars represent the mean frequency of displayed behaviours. The three leadership behaviours are presented in descending order of mean frequency. The mean score for transformational leadership behaviours relating to individualized consideration is 2.7.

Overall, the senior management team more frequently displayed transformational leadership behaviours relating to intellectual stimulation closely followed by leadership behaviours relating to idealized influence, individualized consideration, and inspirational motivation. However, the differences between the mean scores for the four dimensions are extremely small.
4.3.2 Dependent variables

The two dependent variables in the study are: Employee Attitudes Toward the Job and Organizational Climate. The internal consistency reliability coefficients (Cronbach's alpha) of the measures used for each variable are shown in Table 4.11. Reliability was good for each of the measures as assessed by Cronbach's alpha.

<table>
<thead>
<tr>
<th>Table 4.11. Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Attitudes Toward Job</td>
</tr>
<tr>
<td>Organizational Climate</td>
</tr>
</tbody>
</table>
4.3.2.1 Employee attitudes toward the job

Respondents indicated their extent of agreement with 13 descriptive statements about attitudes towards one's job by answering the question, "Please indicate the extent to which you agree or disagree that the statement describes how you feel about your job right now" using a rating scale where 1 represents "Strongly disagree", 3 represents "Neutral" and 5 represents "Strongly agree". The mean responses and standard deviations are shown in Table 4.1.2. Low mean scores represent negative employee attitudes toward the job while high mean scores represent positive employee attitudes toward the job. Five of the thirteen statements about attitudes toward the job are stated in the negative. For these statements, reversed scoring was applied to calculate the mean scores shown in Table 4.12. For example, if a respondent disagreed with the negative statement by selecting either 1 or 2 they would be scored 5 or 4 for the item. The five negative statements are: "I have so much to do, I can no longer do everything as well as I used to"; "I have so much to do, some things are not getting done"; "My workload has increased significantly"; "The security of my job is a source of anxiety to me"; and "I am unclear about the scope and responsibilities of my job".

The 13 descriptive statements about attitudes toward the job can be subdivided into five specific areas relating to role ambiguity; job enrichment; work compensation; job security; and workload. As a group, respondents indicated that regarding role ambiguity they agreed with the two statements, "I know how my job contributes to the overall goals and objectives of the Library", and "My work objectives are well defined". They disagreed with the statement, "I am unclear on the scope and responsibilities of my job". In terms of job enrichment respondents agreed with the two statements, "Opportunities to develop new skills exist for me in this Library" and "Opportunities for personal growth and development exist for me in this Library". They disagreed with the statement; "Opportunities for advancement and promotion exist for me in this Library".
Regarding work compensation respondents agreed with the statement, "I am fairly paid for the work I do in this Library", and were neutral with the statement, "My financial future will continue to improve". Regarding job security respondents disagreed with the statement, "The security of my job is a source of anxiety to me". They agreed with the statement, "My future in this Library looks secure". In terms of workload they agreed with the following statements: "I have so much to do, I can no longer do everything as well as I used to"; "I have so much to do, some things are not getting done"; and "My workload has increased significantly".

Table 4.12. Extent of Agreement with Attitudes Toward the Job

<table>
<thead>
<tr>
<th>Employee Attitudes Toward Job</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role Ambiguity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know how my job contributes to the overall goals and objectives of this Library</td>
<td>306</td>
<td>4.0</td>
<td>1.0</td>
</tr>
<tr>
<td>I am unclear about the scope and responsibilities of my job *</td>
<td>307</td>
<td>4.0</td>
<td>1.2</td>
</tr>
<tr>
<td>My work objectives are well defined</td>
<td>308</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Job Enrichment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities to develop new skills exist for me in this Library</td>
<td>307</td>
<td>3.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Opportunities for personal growth and development exist for me in this Library</td>
<td>306</td>
<td>3.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Opportunities for advancement and promotion exist for me in this Library</td>
<td>304</td>
<td>2.3</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Work Compensation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am fairly paid for the work I do in this Library</td>
<td>308</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>My financial future will continue to improve</td>
<td>308</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Job Security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The security of my job is a source of anxiety to me *</td>
<td>307</td>
<td>3.5</td>
<td>1.4</td>
</tr>
<tr>
<td>My future in this Library looks secure</td>
<td>308</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Workload</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have so much to do, I can no longer do everything as well as I used to *</td>
<td>307</td>
<td>2.3</td>
<td>1.3</td>
</tr>
<tr>
<td>I have so much to do, some things are not getting done *</td>
<td>308</td>
<td>2.0</td>
<td>1.2</td>
</tr>
<tr>
<td>My workload has increased significantly *</td>
<td>308</td>
<td>1.7</td>
<td>.9</td>
</tr>
</tbody>
</table>

*Reversed scoring for items in the index.
4.3.2.2 Organizational climate

Respondents indicated their extent of agreement with 24 descriptive statements about organizational characteristics by answering the question, "Please indicate the extent to which you agree or disagree that the statement describes your Library as it is right now" using a rating scale where 1 represents "Strongly disagree", 3 represents "Neutral" and 5 represents "Strongly agree". The mean responses and standard deviations are shown in Table 4.13. Low mean scores represent negative perceptions of organizational characteristics while high mean scores represent positive perceptions of organizational characteristics. Fifteen of the 24 statements about organizational characteristics are stated in the negative. For these statements, reversed scoring was applied to calculate the mean scores shown in Table 4.13. For example, if a respondent disagreed with the negative statement by selecting either 1 or 2 they would be scored 5 or 4 for the item. The 15 negative statements are: "A lot of resistance to change exists in this Library"; "Creativity has decreased in this Library"; "Special interest groups within the Library are becoming more vocal"; "Demands from special interest groups are increasing"; "Conflict is increasing in this Library"; "Staff share little information with others in this Library"; "Only good news is passed upwards in this Library"; "The senior management team have a short-term orientation"; "Long-term planning is neglected in this Library"; "Most major decisions are made by the senior management team in this Library"; "Major decisions are very centralized in this Library"; "Trust levels in this Library are low"; "Grievances are common in this Library"; "Lack of commitment is common in this Library"; and "Downsizing has been applied to all units in this Library".

The 24 descriptive statements about organizational characteristics can be subdivided into 12 dimensions relating to cutbacks; communication; morale; orientation; leadership; change; innovation; factionalization; conflict; teamwork; trust; and decision-making. As a group, respondents indicated that regarding cutbacks they agreed with the statement, "Downsizing has been done in
selected areas in this Library" and were neutral with the statement, "Downsizing has been applied to all units in this Library". In terms of communication respondents disagreed with the statement, "Only good news is passed upwards in this Library" and were neutral with the statement, "Staff share little information with others in this Library". Regarding the morale dimension respondents were neutral with the statement, "Lack of commitment is common in this Library" and they disagreed with the statement, "Morale is increasing in this Library". In terms of orientation respondents were neutral with the statements, "Long-term planning is neglected in this Library" and "The senior management team have a short-term orientation". Regarding the two statements about leadership, "Our Library has a long-term purpose and direction" and "We have a shared vision of what our Library will be like in the future", respondents were neutral with the first statement and disagreed with the second statement. For the change dimension respondents indicated they were neutral with the two statements, "Our Library is very responsive to change" and "A lot of resistance to change exists in this Library". Again respondents were neutral regarding the two statements related to the innovation dimension – "Innovation activity in this Library is increasing" and "Creativity has decreased in this Library". For the factionalization dimension respondents indicated neutrality with the two statements, "Special interest groups within the Library are becoming more vocal" and "Demands from special interest groups are increasing". In terms of conflict respondents indicated they were neutral with the two statements, "Grievances are common in this Library" and "Conflict is increasing in this Library". Regarding the teamwork dimension respondents were neutral with the statement, "Working in this Library is like being part of a team" and disagreed with the statement, "There is extensive use of problem-solving teams in this Library". Regarding the two statements about trust, "Trust levels in this Library are low" and "The senior management team have high credibility in this Library", respondents were neutral with the first statement and disagreed with the second. Regarding decision-making respondents agreed with the two statements, "Major decisions are very
centralized in this Library" and "Most major decisions are made by the senior management team".

Table 4.13. Extent of Agreement with Organizational Characteristics

<table>
<thead>
<tr>
<th>Organizational Climate</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cutbacks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downsizing has been done in selected areas in this Library</td>
<td>305</td>
<td>3.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Downsizing has been applied to all units in this Library *</td>
<td>305</td>
<td>3.3</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only good news is passed upwards in this Library *</td>
<td>304</td>
<td>3.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Staff share little information with others in this Library *</td>
<td>302</td>
<td>3.4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of commitment is common in this Library *</td>
<td>306</td>
<td>3.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Morale is increasing in this Library</td>
<td>304</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Orientation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term planning is neglected in this Library *</td>
<td>306</td>
<td>3.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Senior management team have a short-term orientation *</td>
<td>304</td>
<td>3.1</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Leadership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our Library has a long-term purpose and direction</td>
<td>306</td>
<td>3.2</td>
<td>1.2</td>
</tr>
<tr>
<td>We have a shared vision of what our Library will be like in the future</td>
<td>305</td>
<td>2.4</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Change</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our Library is very responsive to change</td>
<td>304</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>A lot of resistance to change exists in this Library *</td>
<td>305</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation activity in this Library is increasing</td>
<td>304</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Creativity has decreased in this Library *</td>
<td>303</td>
<td>3.0</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Factionalization</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special interest groups within the Library are becoming more vocal *</td>
<td>302</td>
<td>3.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Demands from special interest groups within the Library are increasing *</td>
<td>300</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Conflict</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grievances are common in this Library *</td>
<td>303</td>
<td>3.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Conflict is increasing in this Library *</td>
<td>304</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Teamwork</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working in this Library is like being part of a team</td>
<td>306</td>
<td>2.8</td>
<td>1.2</td>
</tr>
<tr>
<td>There is extensive use of problem-solving teams in this Library</td>
<td>305</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust levels in this Library are low *</td>
<td>305</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Senior management team have high credibility in this Library</td>
<td>302</td>
<td>2.4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Decision-making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major decisions are very centralized in this Library *</td>
<td>306</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Most major decisions are made by the senior management team in this Library *</td>
<td>305</td>
<td>1.8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Reversed scoring for items in the index.
4.4 Tests of Hypotheses

The analysis described below investigates the hypotheses relating to downsizing approach, strategies, processes, and outcomes. Specifically, Hypothesis 1, 2, and 3 investigate the differences among libraries categorized as adopting a convergent or reorientation approach to downsizing on downsizing processes. Hypotheses 4 and 5 investigate the relationships between downsizing strategies and downsizing outcomes. Hypotheses 6 through 11 investigate the relationships between downsizing processes and downsizing outcomes. The results of each of these sets of analyses will be discussed in turn. All of the data analyses were performed using SPSS 8.0.

4.4.1 Downsizing approach and downsizing processes

An underlying assumption of this research was that academic research libraries could be categorized as adopting either a convergence approach to downsizing or a reorientation approach to downsizing based on the type and degree of changes made to the organization. Hypotheses 1, 2, and 3 predicted that academic research libraries categorized as adopting a convergence approach to downsizing would have a significantly lower mean index score for participation, communication, and transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing. However, we found that all nine libraries in the study adopted a reorientation approach to downsizing (see 4.3.1.1) and thus could not test hypotheses 1 to 3.
4.4.2 Downsizing strategies and downsizing outcomes

**Hypothesis 4a:** The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.

Workforce reduction was measured with a seven-item index (see 3.4.1.2). Descriptive statistics for this variable were discussed in 4.3.1.2. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 4a, the following regression model is computed:

\[ \text{ATJ} = \beta_0 + \beta_1 \text{WFR} + \beta_2 L_1 + \ldots + \beta_8 L_8 \]

where \( \text{ATJ} \) is the index scores for Employee Attitudes Toward the Job, \( \text{WFR} \) is the index scores for Workforce Reduction, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Library can be divided into nine categories - each category representing one of the nine university libraries. Thus in the nine categories on Library, eight different dummy variables can be constructed. All but one of the categories of the independent variable Library is used as a dummy variable. This ninth category is excluded and serves as a reference category against which comparisons can be made. The use of the eight dummy variables in the regression model is to control for Library effect\(^{14}\). Although we have entered the dummy variables into our regression model above, we are not interested in using

---

\(^{14}\) Library effect refers to the fact that individuals from within a Library may not be independent of one another regarding their beliefs, opinions, and attitudes regarding downsizing in their library. One would expect answers to the survey questions, on average, to be more similar within libraries than between libraries. To correct for this effect we created dummy variables.
these variables as independent variables per se but rather as controlling for the effect Library may have on the dependent variable. Therefore we are not using the dummy variables to explain the model only to control for their effect. Results of the regression analysis are presented in Table 4.14.

Table 4.14. Results of Regression Analysis for Hypothesis 4a

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient β</th>
<th>Adjusted R²</th>
<th>F value for model R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Workforce Reduction Library², 4</td>
<td>-.22***</td>
<td>.07</td>
<td>3.73***</td>
</tr>
</tbody>
</table>

*8 Dummy variables entered as independent variables into the regression model to control for Library effect.
***p<.001

The regression results indicate that the use of a workforce reduction strategy is negatively and significantly associated with employee attitudes toward the job. Therefore, Hypothesis 4a is supported. The standardized regression coefficient β is statistically significant with a value of -.22 but trivially small, meaning that the impact of the independent variable workforce reduction is genuine (it can be reliably distinguished from zero) but that the impact on employee attitudes toward the job is small. To measure the strength of the linear relationship between workforce reduction and employee attitudes toward job while "controlling for" or keeping constant the effects of Library, a partial correlation coefficient is computed. While there do not seem to be any universal instructions on interpreting the strength of a linear relationship, there is general advice on what levels correlation coefficient values should be in order to interpret the strength of a linear relationship. We adopt Kurtz's (1999, 282) level of association scale, where a correlation coefficient between .00 to .24 (or -.24) implies a low association, .25 to .49 (or -.25 to -.49) implies a moderate association, .50 to .74 (or -.50 to -.74) implies a high association, and .75 to 1 (or
- .75 to -1) implies a very high association. This scale is close to that suggested by Fink (1995, 36) where a correlation coefficient between .00 to .25 (or -.25) implies little or no relationship, .26 to 0.50 (or -.26 to -.50) implies a fair degree of relationship, .51 to .75 (or -.51 to -.75) implies a moderate to good relationship, and over .76 (or -.76) implies a very good to excellent relationship. In Hypothesis 4a the strength of association is low with a partial correlation coefficient of -.22 as shown in Table 4.15.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Workforce Reduction</td>
<td>- .22***</td>
</tr>
</tbody>
</table>

***p < .001 (two-tailed test)

Hypothesis 4b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.

Work redesign was measured with a 13-item index (see 3.4.1.3). Descriptive statistics for this variable were discussed in 4.3.1.3. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 4b, the following regression model is computed:

\[
ATJ = \beta_0 + \beta_1WR + \beta_2L1 + ... + \beta_9L8
\]
where \( ATJ \) is the index scores for Employee Attitudes Toward the Job, \( WR \) is the index scores for Work Redesign, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.16. The regression results indicate that the use of a work redesign strategy is not significantly associated with employee attitudes toward the job. Therefore, Hypothesis 4b is not supported.

### Table 4.16. Results of Regression Analysis for Hypothesis 4b

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Coefficient ( \beta )</th>
<th>Adjusted ( R^2 )</th>
<th>( F ) value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Work Redesign</td>
<td>-.08**</td>
<td>.03</td>
<td>2.09*</td>
</tr>
<tr>
<td></td>
<td>Library(^1-8)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( \star \) Dummy variables entered as independent variables into the regression model to control for Library effect.  
\(^*\) Not significant  
\(^{**}\) \( p < .05 \)

**Hypothesis 4c:** The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.

Systemic change was measured with an 11-item index (see 3.4.1.4). Descriptive statistics for this variable were discussed in 4.3.1.4. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 4c, the following regression model is computed:
where $\text{ATJ}$ is the index scores for Employee Attitudes Toward the Job, $\text{SC}$ is the index scores for Systemic Change, and $\text{L}$ represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.17.

**Table 4.17. Results of Regression Analysis for Hypothesis 4c**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>F value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Systemic Change Library$^2$-$^8$</td>
<td>.18**</td>
<td>.06</td>
<td>2.85**</td>
</tr>
</tbody>
</table>

| $^8$ Dummy variables entered as independent variables into the regression model to control for Library effect. |
| **$^*$**p<.01 |

The regression results indicate that the use of a systemic change strategy is positively and significantly associated with employee attitudes toward the job. Therefore, Hypothesis 4c is supported. The standardized regression coefficient $\beta$ is statistically significant with a value of .18 but trivially small, meaning that the impact of the independent variable systemic change is genuine (it can be reliably distinguished from zero) but that the impact on employee attitudes toward the job is small. In terms of interpreting the strength of the linear relationship between systemic change and employee attitudes toward the job, the strength of the association is low with a partial correlation coefficient of .18 as shown in Table 4.18.
The previous three regression analyses (H4a, H4b, H4c) focused on the nature of the relationship between two variables, that is, the independent variable (excluding the control variable Library) and the dependent variable. Next we consider the influence of all three independent variables (workforce reduction, work redesign, systemic change) on the dependent variable (employee attitudes toward the job). Thus, the following multiple regression model is computed:

\[
ATJ = \beta_0 + \beta_1WFR + \beta_2WR + \beta_3SC + \beta_{11L1} + \ldots + \beta_{18L8}
\]

where \(ATJ\) is the index scores for Employee Attitudes Toward the Job, \(WFR\) is the index scores for Workforce Reduction, \(WR\) is the index scores for Work Redesign, \(SC\) is the index scores for Systemic Change, and \(L\) represents the eight dummy variables created to discriminate between categories of the independent variable Library. The strength of multiple regression lies primarily in its use as a means of establishing the relative importance of the independent variables to the dependent variable. Results of the regression analysis are presented in Table 4.19.
Table 4.19. Results of Multiple Regression Analysis for Hypotheses 4a,b,c

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient β</th>
<th>sR²</th>
<th>Adjusted R²</th>
<th>F value for model R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Workforce Reduction</td>
<td>-.18**</td>
<td>.03</td>
<td>.12</td>
<td>4.49 ***</td>
</tr>
<tr>
<td></td>
<td>Work Redesign</td>
<td>-.15*</td>
<td>.01*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Systemic Change</td>
<td>.28***</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Library²:α</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Dummy variables entered as independent variables into the regression model to control for Library effect.
* Not significant
** p<.01    *** p<.001

The regression results indicate that the use of a workforce reduction strategy is negatively and significantly associated with employee attitudes toward the job while the use of a systemic change strategy is positively and significantly associated with employee attitudes toward the job. No significant association between the use of a work redesign strategy and employee attitudes toward the job is found. These results are similar to those found in the regression models for Hypotheses 4a, 4b, and 4c in that the direction and magnitude of the relationships between the independent and dependent variables have been maintained. For example, the standardized regression coefficient β for workforce reduction is -.18. This finding is similar to Hypothesis 4a where we found a regression coefficient β of -.22. The standardized regression coefficient β for systemic change is .28, which is stronger than that found in Hypothesis 4c (.18). Regarding work redesign, no significant findings were found in either regression model. What is interesting is that in both models the sign of the regression coefficient for work redesign is in the reverse direction than what was hypothesized. When comparing the two standardized regression coefficients systemic change is marginally a stronger predictor of employee attitudes toward the job than workforce reduction.
In terms of interpreting the strength of the linear relationship between workforce reduction and employee attitudes toward the job while controlling for all other independent variables, the strength of the association is low with a partial correlation coefficient of -.17 as shown in Table 4.20. The strength of association is also low between systemic change and employee attitudes toward the job while controlling for all other independent variables; it has a partial correlation coefficient of .24.

Table 4.20. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Workforce Reduction</td>
<td>-.17**</td>
</tr>
<tr>
<td></td>
<td>Work Redesign</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Systemic Change</td>
<td>.24***</td>
</tr>
</tbody>
</table>

**Not significant
**p<.01  ***p<.001 (two-tailed test)

The proportions of variance of ATJ explained by the model (adjusted \( R^2 \)) is .12 indicating that the independent variables collectively account for about 12 percent of the variance in ATJ. The squared semipartial correlation (\( sR^2 \)) of the independent variables are calculated to compare their unique contributions to the total ATJ variance accounted for by the regressions. The \( sR^2 \) of each independent variable equals the proportion of the ATJ variance accounted for by the independent variable beyond that accounted for the other independent variables. The contribution of WFR to \( R^2 \) is small, the \( sR^2 \) value is .03. In contrast, the contribution of SC to \( R^2 \) is slightly larger with a value of .05. The variable WR does not significantly contribute to the \( R^2 \) in the model. Thus, much of the total ATJ variance accounted for by the regression is due to the SC variable.
In multiple regression it is important to ensure that the independent variables are not too highly correlated to each other. A high correlation among independent variables is called multicollinearity. Multicollinearity is usually regarded as a problem because it means instability of the regression coefficients which in turn reduces the trustworthiness of the explanatory capability of the regression model (Pedhazur 1982). To check for multicollinearity in the regression model, this study employs two tests to detect multicollinearity in its regression models. First, Pearson's product moment correlation coefficients among the independent variables are computed. A Pearson's r between each pair of independent variables should not exceed .80 otherwise they may be suspect of exhibiting multicollinearity (Bryman and Cramer 1997). Second, a statistic called the tolerance is computed for each independent variable. The tolerance is the proportion of variability of the variable that is not explained by its linear relationships with the other independent variables in the model (Norusis 1998, 467). Since tolerance is a proportion, its values range from 0 to 1. A very close value to 1 indicates that an independent variable has little of its variability explained by the other independent variables. A value close to zero indicates that a variable is almost a linear combination of the other independent variables and would thus be considered multicollinear.

For the regression model computed for downsizing strategies, the two tests for multicollinearity yielded these results:

1. Among the independent variables in the regression model, none of the Pearson's product moment correlation coefficients between each pair of independent variables exceeds .80. The highest correlation obtained is .55.

2. In the tolerance test, none of the independent variables in the model has a tolerance value close to zero. The lowest value computed was .46.
Based on the above, we conclude that multicollinearity is not a serious problem among the independent variables used in our regression analysis.

**Hypothesis 5a:** The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.

Workforce reduction was measured with a seven-item index (see 3.4.1.2). Descriptive statistics for this variable were discussed in 4.3.1.2. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 5a, the following regression model is computed:

\[ OC = \beta_0 + \beta_1 WFR + \beta_2 L_1 + \ldots + \beta_8 L_8 \]

where \( OC \) is the index scores for Organizational Climate, \( WFR \) is the index scores for Workforce Reduction, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.21.
Table 4.21. Results of Regression Analysis for Hypothesis 5a

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>F value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Workforce Reduction</td>
<td>$-0.38^{***}$</td>
<td>0.23</td>
<td>16.91***</td>
</tr>
</tbody>
</table>

*Dummy variables entered as independent variables into the regression model to control for Library effect.

The regression results indicate that the use of a workforce reduction strategy is negatively and significantly associated with organizational climate. Therefore, Hypothesis 5a is supported with a standardized regression coefficient $\beta$ that is statistically significant with a value of $-0.38$ at less than $0.001$. In terms of interpreting the strength of the linear relationship between workforce reduction and organizational climate, the strength of the association is moderate with a partial correlation coefficient of $-0.39$ as shown in Table 4.22.

Table 4.22. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Workforce Reduction</td>
<td>$-0.39^{***}$</td>
</tr>
</tbody>
</table>

$^{***}p<0.001$ (two-tailed test)
Hypothesis 5b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.

Work redesign was measured with a 13-item index (see 3.4.1.3). Descriptive statistics for this variable were discussed in 4.3.1.3. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 5b, the following regression model is computed:

\[ OC = \beta_0 + \beta_1 WR + \beta_2 L_1 + \ldots + \beta_9 L_8 \]

where \( OC \) is the index scores for Organizational Climate, \( WR \) is the index scores for Work Redesign, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.23. The regression results indicate that the use of a work redesign strategy is not significantly associated with organizational climate. Therefore, Hypothesis 5b is not supported.

Table 4.23. Results of Regression Analysis for Hypothesis 5b

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient ( \beta )</th>
<th>Adjusted ( R^2 )</th>
<th>F value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Work Redesign</td>
<td>-.05*</td>
<td>.08</td>
<td>3.86***</td>
</tr>
<tr>
<td></td>
<td>Library(^{1,8} )</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{1,8}\) Dummy variables entered as independent variables into the regression model to control for Library effect.

*Not significant

**p<.001

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Hypothesis 5c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.

Systemic change was measured with an 11-item index (see 3.4.1.4). Descriptive statistics for this variable were discussed in 4.3.1.4. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 5c, the following regression model is computed:

\[ OC = \beta_0 + \beta_1 SC + \beta_2 L_1 + \ldots + \beta_8 L_8 \]

where \( OC \) is the index scores for Organizational Climate, \( SC \) is the index scores for Systemic Change, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.24.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient</th>
<th>Adjusted ( R^2 )</th>
<th>F value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Systemic Change</td>
<td>.36***</td>
<td>.21</td>
<td>9.43***</td>
</tr>
<tr>
<td>Library(^1,8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^8\) Dummy variables entered as independent variables into the regression model to control for Library effect.

\(^{***}p<.001\)

The regression results indicate that the use of a systemic change strategy is positively and significantly associated with organizational climate. Therefore,
Hypothesis 5c is supported with a standardized regression coefficient \( \beta \) that is statistically significant with a value of .36 at less than .001. In terms of interpreting the strength of the linear relationship between systemic change and organizational climate, the strength of the association is moderate with a partial correlation coefficient of .38 as shown in Table 4.25.

Table 4.25. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Systemic Change</td>
<td>.38***</td>
</tr>
</tbody>
</table>

***p<.001 (two-tailed test)

The previous three regression analyses (H5a, H5b, H5c) focused on the nature of the relationship between two variables (excluding the control variable Library), that is, the independent variable and the dependent variable. Next we consider the influence of all three independent variables (workforce reduction, work redesign, systemic change) on the dependent variable (organizational climate). Thus, the following multiple regression model is computed:

\[
OC = \beta_0 + \beta_1WFR + \beta_2WR + \beta_3SC + \beta_4L_1 + \ldots + \beta_{12}L_8
\]

where \( OC \) is the index scores for Organizational Climate, \( WFR \) is the index scores for Workforce Reduction, \( WR \) is the index scores for Work Redesign, \( SC \) is the index scores for Systemic Change, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.26.
Table 4.26. Results of Multiple Regression Analysis for Hypotheses 5a,b,c

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>$F$ value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Workforce Reduction</td>
<td>-.36***</td>
<td>.09</td>
<td>.39</td>
<td>16.91***</td>
</tr>
<tr>
<td></td>
<td>Work Redesign</td>
<td>-.16*</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Systemic Change</td>
<td>.48***</td>
<td>.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Library$^{1,4}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Dummy variables entered as independent variables into the regression model to control for library effect.

$^{*}p<.05$  $^{**}p<.001$

The regression results indicate that the use of a workforce reduction strategy is negatively and significantly associated with organizational climate while the use of a systemic change strategy is positively and significantly associated with organizational climate. These results are similar to those found in the regression models for Hypotheses 5a and 5c in that the direction and magnitude of the relationships between the independent and dependent variables have been maintained. For example, the standardized regression coefficient $\beta$ for workforce reduction is -.36. This finding is similar to Hypothesis 5a where we found a regression coefficient $\beta$ of -.38. The standardized regression coefficient $\beta$ for systemic change is .48, which is stronger than that found in Hypothesis 5c (.36). Contrary to that found in Hypothesis 5b (no support), the results indicate that the use of a work redesign strategy is negatively and significantly associated with organizational climate. This finding contradicts Hypothesis 5b where it was predicted that the use of a work redesign strategy would be positively associated with organizational climate. When comparing the three standardized regression coefficients systemic change is a slightly stronger predictor of organizational climate than workforce reduction. Both are much stronger predictors of organizational climate than work redesign.
In terms of interpreting the strength of the linear relationship between workforce reduction and organizational climate while controlling for all other independent variables, the strength of the association is moderate with a partial correlation coefficient of -.36 as shown in Table 4.27. The strength of the linear relationship between work redesign and organizational climate while controlling for all other independent variables is low with a partial correlation coefficient of -.14. The strength of the linear relationship between systemic change and organizational climate while controlling for all other independent variables is moderate with a partial correlation coefficient of .45.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Workforce Reduction</td>
<td>-.36***</td>
</tr>
<tr>
<td></td>
<td>Work Redesign</td>
<td>-.14*</td>
</tr>
<tr>
<td></td>
<td>Systemic Change</td>
<td>.45***</td>
</tr>
</tbody>
</table>

* p<.05  *** p<.001 (two-tailed test)

The proportions of variance of OC explained by the model (adjusted R²) is .39 indicating that the independent variables collectively account for about 39 percent of the variance in OC. In comparing the squared semipartial correlation coefficients (sR²) of the independent variables to determine their unique contributions to the total OC variance we find that the contributions of WFR and SC to R² are relatively large with sR² values of .09 and .15, respectively. In contrast, the contribution of WR to R² is much lower with a value of .01. Thus, much of the total OC variance accounted for by the regression is due to the SC variable.
To check for multicollinearity in the regression model, Pearson's product moment correlation coefficients among the independent variables were computed, as were the tolerance values for each independent variable. As previously stated, none of the Pearson's product moment correlation coefficients between each pair of independent variables exceeds .80 and none of the independent variables in the model has a tolerance value close to zero.

4.4.3 Downsizing processes and downsizing outcomes

Hypothesis 6: The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.

Participation was measured with an 18-item index (see 3.4.1.5). Descriptive statistics for this variable were discussed in 4.3.1.5. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 6, the following regression model is computed:

\[ \text{ATJ} = \beta_0 + \beta_1P + \beta_2L_1 + \ldots + \beta_8L_8 \]

where \( \text{ATJ} \) is the index scores for Employee Attitudes Toward the Job, \( P \) is the index scores for Participation, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.28.
Table 4.28. Results of Regression Analysis for Hypothesis 6

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>$F$ value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Participation</td>
<td>.26***</td>
<td>.09</td>
<td>4.41***</td>
</tr>
<tr>
<td></td>
<td>Library$^{7,8}$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^{7,8}$ Dummy variables entered as independent variables into the regression model to control for Library effect.

$^{***p<.001}$

The regression results indicate that participation is positively and significantly associated with employee attitudes toward the job. Thus, Hypothesis 6 is supported. The standardized regression coefficient $\beta$ is statistically significant with a value of .26 but trivially small, meaning that the impact of the independent variable participation is genuine (it can be reliably distinguished from zero) but that the impact on employee attitudes toward the job is small. In terms of interpreting the strength of the linear relationship between participation and employee attitudes toward the job, the strength of the association is moderate with a partial correlation coefficient of .27 as shown in Table 4.29.

Table 4.29. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Participation</td>
<td>.27***</td>
</tr>
</tbody>
</table>

$^{***p<.001}$ (two-tailed test)
Hypothesis 7: The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.

Communication was measured with a seven-item index (see 3.4.1.6). Descriptive statistics for this variable were discussed in 4.3.1.6. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 7, the following regression model is computed:

\[ ATJ = \beta_0 + \beta_1 C + \beta_2 L_1 + \ldots + \beta_9 L_8 \]

where \( ATJ \) is the index scores for Employee Attitudes Toward the Job, \( C \) is the index scores for Communication, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.30.

Table 4.30. Results of Regression Analysis for Hypothesis 7

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Standardized Regression Coefficient ( \beta )</th>
<th>Adjusted ( R^2 )</th>
<th>( F ) value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Communication</td>
<td>.35***</td>
<td>.14</td>
<td>6.24***</td>
</tr>
<tr>
<td>Library(^{1,8})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{1,8}\) Dummy variables entered as independent variables into the regression model to control for Library effect.

\(^{***}\) \( p < .001 \)
The regression results indicate that communication is positively and significantly associated with employee attitudes toward the job. Thus, Hypothesis 7 is supported. The standardized regression coefficient $\beta$ is statistically significant with a value of .35 at less than .001. In terms of interpreting the strength of the linear relationship between communication and employee attitudes toward the job, the strength of the association is moderate with a partial correlation coefficient of .34 as shown in Table 4.31.

Table 4.31. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Communication</td>
<td>.34***</td>
</tr>
</tbody>
</table>

***p<.001 (two-tailed test)

Hypothesis 8: The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.

Transformational Leadership was measured with a 12-item index (see 3.4.1.7). Descriptive statistics for this variable were discussed in 4.3.1.7. Employee attitudes toward the job were measured with a 13-item index (see 3.4.2.1). Descriptive statistics for this variable were discussed in section 4.3.2.1.

To test Hypothesis 8, the following regression model is computed:

$$A_{TJ} = \beta_0 + \beta_1 TL + \beta_2 L_1 + \ldots + \beta_8 L_8$$
where \( \text{ATJ} \) is the index scores for Employee Attitudes Toward the Job, \( \text{TL} \) is the index scores for Transformational Leadership, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.32.

Table 4.32. Results of Regression Analysis for Hypothesis 8

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient ( \beta )</th>
<th>Adjusted ( R^2 )</th>
<th>F value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Transformational Leadership</td>
<td>.47***</td>
<td>.22</td>
<td>10.26***</td>
</tr>
</tbody>
</table>

\( ^8 \text{ Dummy variables entered as independent variables into the regression model to control for Library effect.} \)

\( ^{***}p<.001 \)

The regression results indicate that transformational leadership is positively and significantly associated with employee attitudes toward the job. Thus, Hypothesis 8 is supported with a standardized regression coefficient \( \beta \) that is statistically significant with a value of .47 at less than .001. In terms of interpreting the strength of the linear relationship between transformational leadership and employee attitudes toward the job, the strength of the association is moderate with a partial correlation coefficient of .45 as shown in Table 4.33.

Table 4.33. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Transformational Leadership</td>
<td>.45***</td>
</tr>
</tbody>
</table>

\( ^{***}p<.001 \) (two-tailed test)
The previous three regression analyses (H6, H7, H8) focused on the nature of the relationship between two variables (excluding the control variable Library), that is, the independent variable and the dependent variable. Next we consider the influence of all three independent variables (participation, communication, transformational leadership) on the dependent variable (employee attitudes toward the job). Thus, the following multiple regression model is computed:

\[
\text{ATJ} = \beta_0 + \beta_1 P + \beta_2 C + \beta_3 TL + \beta_4 L_1 + \ldots + \beta_{12} L_8
\]

where \( \text{ATJ} \) is the index scores for Employee Attitudes Toward the Job, \( P \) is the index scores for Participation, \( C \) is the index scores for Communication, \( TL \) is the index scores for Transformational Leadership, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.34.

Table 4.34. Results of Multiple Regression Analysis for Hypotheses 6, 7, 8

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient ( \beta )</th>
<th>( \text{R}^2 )</th>
<th>Adjusted ( \text{R}^2 )</th>
<th>F value for model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Participation</td>
<td>.05( ^{**} )</td>
<td>.002( ^{**} )</td>
<td>.23</td>
<td>8.63***</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>.12( ^{**} )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transformational Leadership</td>
<td>.37( ^{**} )</td>
<td></td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Library( ^{7,8} )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( ^{7} \) Dummy variables entered as independent variables into the regression model to control for Library effect.

\( ^{*} \) Not significant

\( ^{***} p < .001 \)
The regression results indicate that participation and communication are not significantly associated with employee attitudes toward the job, and that transformational leadership is positively and significantly associated with employee attitudes toward the job. We know from previous analyses (Hypotheses 7 and 8) that singularly each of these two variables is linearly associated with employee attitudes toward the job. When a correlation matrix (a matrix of Pearson correlation coefficients for all variables in the model) is computed (Table 4.35) we find the correlation coefficient between employee attitudes toward the job and participation is .27 at less than .001 significance level indicating support for a linear relationship between the two variables. Similarly, we find the correlation coefficient between employee attitudes and communication is .32 at less than .001 significance level indicating support for a linear relationship between the two variables. Thus, these two variables, participation and communication, are individually related to employee attitudes toward the job but in the multiple regression model their coefficients are not significantly different from zero.

Table 4.35. Correlation Matrix

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>ATJ</th>
<th>TL</th>
<th>P</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATJ</td>
<td>1.000</td>
<td>.436</td>
<td>.270</td>
<td>.322</td>
</tr>
<tr>
<td>TL</td>
<td>.436</td>
<td>1.000</td>
<td>.503</td>
<td>.582</td>
</tr>
<tr>
<td>P</td>
<td>.270</td>
<td>.503</td>
<td>1.000</td>
<td>.320</td>
</tr>
<tr>
<td>C</td>
<td>.322</td>
<td>.582</td>
<td>.320</td>
<td>1.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sig. (1-tailed)</th>
<th>ATJ</th>
<th>TL</th>
<th>P</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATJ</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>TL</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>P</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
</tr>
<tr>
<td>C</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>ATJ</th>
<th>TL</th>
<th>P</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATJ</td>
<td>284</td>
<td>284</td>
<td>284</td>
<td>284</td>
</tr>
<tr>
<td>TL</td>
<td>284</td>
<td>284</td>
<td>284</td>
<td>284</td>
</tr>
<tr>
<td>P</td>
<td>284</td>
<td>284</td>
<td>284</td>
<td>284</td>
</tr>
<tr>
<td>C</td>
<td>284</td>
<td>284</td>
<td>284</td>
<td>284</td>
</tr>
</tbody>
</table>
In terms of interpreting the strength of the linear relationship between transformational leadership and employee attitudes toward the job while controlling for all other independent variables, the strength of the association is moderate with a partial correlation coefficient of .29 as shown in Table 4.36.

Table 4.36. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>Participation</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Transformational Leadership</td>
<td>.29</td>
</tr>
</tbody>
</table>

*ns Not significant  
***p<.001 (two-tailed test)

The proportions of variance of ATJ explained by the model (adjusted R²) is .23 indicating that the independent variables collectively account for about 23 percent of the variance in ATJ. In comparing the squared semipartial correlation coefficients (sR²) of the independent variables to determine their unique contributions to the total ATJ variance we find that P and C do not significantly contribute to R² in the regression model. Thus, most of the total OC variance accounted for by the regression is due to the TL variable with a sR² value of .07.

To check for multicollinearity in the regression model, Pearson’s product moment correlation coefficients among the independent variables were computed, as were the tolerance values for each independent variable. None of the Pearson’s product moment correlation coefficients between each pair of independent variables exceeds .80 (the highest correlation obtained is .58) and none of the independent variables in the model has a tolerance value close to zero. The lowest value computed was .49. Therefore, we conclude that
multicollinearity is not a serious problem among the independent variables used in our regression analysis.

**Hypothesis 9:** The index scores for participation will be positively associated with the index scores for organizational climate.

Participation was measured with an 18-item index (see 3.4.1.5). Descriptive statistics for this variable were discussed in 4.3.1.5. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 9, the following regression model is computed:

$$\text{OC} = \beta_0 + \beta_1 P + \beta_2 L_1 + \ldots + \beta_8 L_8$$

where OC is the index scores for Organizational Climate, P is the index scores for Participation, and $L_i$ represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.37.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>$F$ value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Participation</td>
<td>.44***</td>
<td>.28</td>
<td>13.55***</td>
</tr>
<tr>
<td></td>
<td>Library$^*_{1-8}$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^*$8 Dummy variables entered as independent variables into the regression model to control for Library effect.

***p<.001
The regression results indicate that participation is positively and significantly associated with organizational climate. Thus, Hypothesis 9 is supported with a standardized regression coefficient $\beta$ that is statistically significant with a value of .44 at less than .001. In terms of interpreting the strength of the linear relationship between participation and organizational climate, the strength of the association is moderate with a partial correlation coefficient of .46 as shown in Table 4.38.

Table 4.38. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Participation</td>
<td>.46***</td>
</tr>
</tbody>
</table>

***p<.001 (two-tailed test)

Hypothesis 10: The index scores for communication will be positively associated with the index scores for organizational climate.

Communication was measured with a seven-item index (see 3.4.1.6). Descriptive statistics for this variable were discussed in 4.3.1.6. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 10, the following regression model is computed:

$$OC = \beta_0 + \beta_1C + \beta_2L_1 + \ldots + \beta_8L_8$$

where $OC$ is the index scores for Organizational Climate, $C$ is the index scores for Communication, and $L_i$ represents the eight dummy variables created to
discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.39.

Table 4.39. Results of Regression Analysis for Hypothesis 10

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>F value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Communication</td>
<td>.51***</td>
<td>.33</td>
<td>17.29***</td>
</tr>
<tr>
<td>Library$^5,a$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Dummy variables entered as independent variables into the regression model to control for Library effect.

***p < .001

The regression results indicate that communication is positively and significantly associated with organizational climate. Thus, Hypothesis 10 is supported with a standardized regression coefficient $\beta$ that is statistically significant with a value of .51 at less than .001. In terms of interpreting the strength of the linear relationship between communication and organizational climate, the strength of the association is high with a partial correlation coefficient of .52 as shown in Table 4.40.

Table 4.40. Partial Correlation Coefficients

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Communication</td>
<td>.52***</td>
</tr>
</tbody>
</table>

***p < .001 (two-tailed test)
**Hypothesis 11:** The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.

Transformational Leadership was measured with a 12-item index (see 3.4.1.7). Descriptive statistics for this variable were discussed in 4.3.1.7. Organizational climate was measured with a 24-item index (see 3.4.2.2). Descriptive statistics for this variable were discussed in section 4.3.2.2.

To test Hypothesis 11, the following regression model is computed:

\[ QC = \beta_0 + \beta_1 TL + \beta_2 L_1 + \ldots + \beta_8 L_8 \]

where \( QC \) is the index scores for Organizational Climate, \( TL \) is the index scores for Transformational Leadership, and \( L \) represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.41.

**Table 4.41. Results of Regression Analysis for Hypothesis 11**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient ( \beta )</th>
<th>Adjusted ( R^2 )</th>
<th>F value for model ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Transformational Leadership</td>
<td>.58***</td>
<td>.51</td>
<td>34.36***</td>
</tr>
<tr>
<td>Library(^*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*8 Dummy variables entered as independent variables into the regression model to control for Library effect.

**p < .001

The regression results indicate that transformational leadership is positively and significantly associated with organizational climate. Thus,
Hypothesis 11 is supported with a standardized regression coefficient $\beta$ that is statistically significant with a value of .68 at less than .001. In terms of interpreting the strength of the linear relationship between transformational leadership and organizational climate, the strength of the association is high with a partial correlation coefficient of .68 as shown in Table 4.42.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Transformational Leadership</td>
<td>.68***</td>
</tr>
</tbody>
</table>

***p<.001 (two-tailed test)

The previous three regression analyses (H9, H10, H11) focused on the nature of the relationship between two variables (excluding the control variable Library), that is, the independent variable and the dependent variable. Next we consider the influence of all three independent variables (participation, communication, transformational leadership) on the dependent variable (organizational climate). Thus, the following multiple regression model is computed:

$$OC = \beta_0 + \beta_1P + \beta_2C + \beta_3TL + \beta_4L_1 + ... + \beta_8L_8$$

where $OC$ is the index scores for Organizational Climate, $P$ is the index scores for Participation, $C$ is the index scores for Communication, $TL$ is the index scores for Transformational Leadership, and $L$ represents the eight dummy variables created to discriminate between categories of the independent variable Library. Results of the regression analysis are presented in Table 4.43.
Table 4.43. Results of Multiple Regression Analysis for Hypotheses 9, 10, 11

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>$sR^2$</th>
<th>Adjusted $R^2$</th>
<th>$F$ value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Participation</td>
<td>.14**</td>
<td>.01</td>
<td>.56</td>
<td>33.26***</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>.18***</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transformational Leadership</td>
<td>.52***</td>
<td>.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library 1-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9 Dummy variables entered as independent variables into the regression model to control for Library effect.

**p<.01  ***p<.001

The regression results indicate that participation, communication, and transformational leadership are all positively and significantly associated with organizational climate. These results are similar to those found in the regression models for Hypotheses 9, 10, and 11 in that the direction of the relationships between the independent and dependent variables have been maintained. For example, the standardized regression coefficient $\beta$ for participation is .14 compared to .44 found in Hypothesis 9. The standardized regression coefficient $\beta$ for communication is .18 compared to .51 found in Hypothesis 10. The standardized regression coefficient $\beta$ for transformational leadership is .52 compared to .68 found in Hypothesis 11. When considered alone, participation and communication are fairly good predictors of organizational climate; however, when all three independent variables are in the model together participation and communication do not contribute as strongly to the model. Transformational leadership appears to be the strongest predictor of the three independent variables. Once transformational leadership is in the model participation and communication do not contribute much unique information; transformational leadership is supplying much of the information they convey. When comparing the three standardized regression coefficients transformational leadership is
substantially more important than either participation or communication in relation to the effects of each on organizational climate.

In terms of interpreting the strength of the linear relationship between participation and organizational climate while controlling for all other independent variables, the strength of the association is low with a partial correlation coefficient of .18 as shown in Table 4.44. The strength of association is also low between communication and organizational climate while controlling for all other independent variables; it has a partial correlation coefficient of .21. The strength of association is moderate between transformational leadership and organizational climate while controlling for all other independent variables; it has a partial correlation coefficient of .49.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Partial Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Participation</td>
<td>.18**</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>.21***</td>
</tr>
<tr>
<td></td>
<td>Transformational Leadership</td>
<td>.49***</td>
</tr>
</tbody>
</table>

**p<.01  ***p<.001 (two-tailed test)

The proportions of variance of OC explained by the model (adjusted R^2) is .56 indicating that the independent variables collectively account for about 56 percent of the variance in OC. In comparing the squared semipartial correlation coefficients (sR^2) of the independent variables to determine their unique contributions to the total OC variance we find that the contributions of P and C to R^2 are relatively small with sR^2 values of .01 and .02, respectively. In contrast, the contribution of TL to R^2 is much higher with a value of .13. Thus, much of the total OC variance accounted for by the regression is due to the TL variable.
To check for multicollinearity in the regression model, Pearson's product moment correlation coefficients among the independent variables were computed, as were the tolerance values for each independent variable. As previously stated, none of the Pearson's product moment correlation coefficients between each pair of independent variables exceeds .80 and none of the independent variables in the model has a tolerance value close to zero.

4.5 Chapter Summary

This chapter reports the results of analyzing data collected by the mail questionnaire survey. Of the 458 library professionals in the study population, 328 returned questionnaires, thus giving a response rate of 72 percent. The questionnaire data are used to describe respondent's perceptions of downsizing in their libraries, and to test eleven research hypotheses. Table 4.45 summarizes the results of the hypotheses testing. In the Table, a zero indicates the hypothesis could not be tested, a check mark indicates that the hypothesis is supported by the questionnaire data while an "X" indicates that the hypothesis is not supported. In the next chapter, results of the analyses are discussed.
Table 4.45. Summary of Results of Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for participation than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>0</td>
</tr>
<tr>
<td>H2:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for communication than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>0</td>
</tr>
<tr>
<td>H3:</td>
<td>Academic research libraries categorized as adopting a convergence approach to downsizing will have a significantly lower mean index score for transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing.</td>
<td>0</td>
</tr>
<tr>
<td>H4a:</td>
<td>The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.</td>
<td>✓</td>
</tr>
<tr>
<td>H4b:</td>
<td>The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>✗</td>
</tr>
<tr>
<td>H4c:</td>
<td>The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>✓</td>
</tr>
<tr>
<td>H5a:</td>
<td>The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.</td>
<td>✓</td>
</tr>
<tr>
<td>H5b:</td>
<td>The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.</td>
<td>✗</td>
</tr>
<tr>
<td>H5c:</td>
<td>The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.</td>
<td>✓</td>
</tr>
<tr>
<td>H6:</td>
<td>The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>✓</td>
</tr>
<tr>
<td>H7:</td>
<td>The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>✓</td>
</tr>
<tr>
<td>H8:</td>
<td>The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.</td>
<td>✓</td>
</tr>
<tr>
<td>H9:</td>
<td>The index scores for participation will be positively associated with the index scores for organizational climate.</td>
<td>✓</td>
</tr>
<tr>
<td>H10:</td>
<td>The index scores for communication will be positively associated with the index scores for organizational climate.</td>
<td>✓</td>
</tr>
<tr>
<td>H11:</td>
<td>The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.</td>
<td>✓</td>
</tr>
</tbody>
</table>

0 Unable to test
✓ Supported
✗ Not supported
CHAPTER 5
DISCUSSION OF THE FINDINGS

5.1 Chapter Overview

In this chapter, the results of the test of hypotheses are discussed with respect to the theoretical framework that proposed relationships among downsizing strategies, downsizing processes, and downsizing outcomes. Implications for practice and theory are given, limitations of the study are noted, and recommendations for further research are suggested.

5.2 Downsizing Approach

An underlying assumption of this research was that academic research libraries could be categorized as adopting either a convergence approach to downsizing or a reorientation approach to downsizing based on the type and degree of changes made in the organization. This assumption was based on the Freeman and Cameron (1993) model of organizational downsizing. In their model the authors proposed that organizations use two generic approaches to downsizing - convergence and reorientation. Organizations engaged in downsizing as convergence are more focused on making minor adjustments in mission, strategy, structure, and processes while organizations engaged in downsizing as reorientation are more focused on making major modifications in mission, strategy, structure, and processes. In this study, it was found that all nine libraries adopted a reorientation approach to downsizing. This is the most surprising finding of the study because it was expected that some libraries would be categorized as adopting a convergence approach to downsizing. Because our findings contradict expectations, we look for plausible explanations to account for all libraries being categorized as adopting a reorientation approach to downsizing.

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One possible explanation may be related to the measurement of the variable downsizing approach. It is quite possible that our measurement of the variable downsizing approach was not as "sensitive" to the changes taking place during downsizing as was Cameron, Freeman, and Mishra's (1993) measurement of the variable where the model of downsizing originated. By sensitive we refer to the fact that our study is based on the retrospective accounts of professional employees and for any number of reasons, they may have been unable to complete the two questions regarding downsizing approach accurately.

In our study, the variable downsizing approach was measured using two questions on a questionnaire mailed to library professionals. For the first question, respondents indicated the extent to which their library changed seven elements by answering the question, "Please indicate the extent to which your Library changed these elements during the last five years" using a rating scale where 1 represents "Not at all" and 5 represents "A great deal". A mean score was calculated for each respondent on the index. These individual mean index scores were then converted to a score out of 100. For the second question, respondents assigned a total of 100 points between two descriptions of organizational change that were typical of their Library. The first description of change characterizes a convergence approach to downsizing while the second description of change characterizes a reorientation approach to downsizing. The two questions (i.e., index scores that were converted to scores out of 100 and the score for the description of change out of 100) were then summed and averaged for each respondent to get an overall score for downsizing approach.

To get an overall downsizing approach score for each of the nine libraries all respondent scores for the downsizing approach within a library were summed and averaged. A library was judged to be convergent if its average score was 50 or less. A library was judged to be reorienting if its average score was greater
than 50. No library scored 50 or below. Each of the two questions on the survey (i.e., the index and the description of change) were equally weighted. When we plot the two questions together, we find them to be highly correlated as shown in Figure 5.1 below with a Pearson's correlation coefficient of .887 at the .01 level. In other words, participants' scores on the index were very similar to their scores on the description of change.

Figure 5.1. Scatter Diagram of Two Questions Measuring Downsizing Approach

In the Cameron, Freeman, and Mishra study, five interviews with the CEO or top manager at each site were regularly conducted over a four-year period thus providing the researchers with an up-to-date account of the ongoing changes taking place during the downsizing. The interviews used a semi-structured, open-ended format. The variable downsizing approach was rated on a 1 to 5 bipolar scale, where 1 indicated strong evidence of downsizing as convergence and 5 indicated strong evidence of downsizing as reorientation. Raters made this judgement based on discussions with the CEOs of the organization's approach to downsizing. Based on the interview analysis, seven organizations were categorized as convergence and nine organizations were categorized as reorientation.
However, our approach to measurement is similar to that used in a recent study that also adopted the Freeman and Cameron (1993) model of organizational downsizing. In her doctoral dissertation, Byers' (1995) sample consisted of top executives from 77 firms that were undergoing downsizing in the computer industry. The variable downsizing approach was measured by multiple items on a questionnaire survey. A firm was judged to be convergent if its top executives rated it, on average, less than 3.5 on a seven-point scale measuring efforts to reinforce the firm's mission and maintain stability. A firm was judged to be reorienting if its executives rated it, on average, greater than 3.5 on a seven-point scale measuring efforts to change the firm's mission and strategies. Based on this criterion, Byers categorized 31 firms as convergent and 46 as reorientation.

A second possible explanation may be related to the survey sample. In the studies by Cameron, Freeman, and Mishra15 (1993) and Byers (1995), their respective samples were restricted to the CEOs and top executives of the organizations. In other words, those directly responsible for planning, organizing, leading, and controlling the downsizing in their organizations. The objectives of the researchers' data collection were to get participants' interpretations of their own behaviours during downsizing as well as their specific actions taken during downsizing. In our study, the sample consisted of all library professionals within the organization excluding the Chief Librarians. Specifically, our sample included all levels of management16 and non-management professionals. Thus, the library professionals were both participants in and observers of downsizing. The objective of the data collection was to get participants' perceptions of how downsizing was implemented in their organizations. The difference between our study and the two above is that in our study participants assessed the behaviour

---

15 In the Cameron, Freeman, and Mishra (1993) study additional data were collected from a sample of white-collar employees in these 30 organizations but these data were not used in the analysis of downsizing approach.

16 First-line managers, middle managers, and top managers.
of the organization (i.e., those responsible for decisions) while in the other two studies participants assessed their own behaviours. Since our sample consisted of both management and non-management participants, it would seem logical that the perceptions and perspectives of each of these groups may be quite different regarding downsizing.

Therefore, we checked if there was any difference between the two groups regarding their perceptions of downsizing approach. A two-tailed t-test was performed to compare the means of downsizing approach of management and non-management participants. No significant difference between the means of the two groups was found (t = 0.07, p = .94).

In addition, the sample size for both studies mentioned above were 30 organizations in the automotive industry and 77 firms in the computer industry. In this study, the sample size was nine organizations. It is quite conceivable that with a larger sample size, we may have found some academic research libraries that adopted a convergence approach to downsizing.

A further possibility is that some libraries may have started out by adopting a convergence approach to downsizing but changed part way through to a reorientation approach or vice versa. In the doctoral dissertation of Freeman (1992), where the model of organizational downsizing was developed and tested, she found that some organizations shifted back and forth between the two downsizing approaches. Freeman found four groups of “consistent” types of approaches to downsizing. There were those organizations that followed one downsizing approach or the other during the course of the study (e.g., convergence or reorientation) and those that shifted from one approach to the other during the course of the study (e.g., convergence to reorientation or reorientation to convergence). In her study of 30 organizations, 12 were classified as “shifters”.
This finding clearly indicates that when investigating organizational downsizing, what is found may depend on the particular time period during which an organization is observed. Freeman was able to detect the “shifters” because of the longitudinal nature of her study. Data collection took place over a two-year period during which time she conducted three separate sets of interviews. This method of data collection produced a chronology of the organizational changes taking place over time, and it helped to uncover ongoing or new strategies that were being implemented in connection with the downsizing. In this way, Freeman was able to judge the progression of organizational downsizing in each organization. In the present study, data collection was conducted at a single juncture in time thus preventing a chronology of downsizing over time. In addition, the survey instrument was not designed to detect changes in downsizing over time. It is quite possible that some of the libraries may have started out downsizing as convergence and shifted their approach to reorientation.

A final explanation, and one that we think is strongest, is that all nine libraries did adopt a reorientation approach to downsizing during the 1993-1998 timeframe. Figure 5.2 shows the distribution of downsizing approach graphically. From the boxplot, you see that the variability of the nine libraries is fairly similar. Since most of the medians for the nine libraries are in the middle of the boxes, the distribution values for the group are more or less symmetric. In addition, all nine means and medians are above 50. This indicates that all nine libraries fall into one grouping (reorientation). The only two libraries that are slightly different from the group are Library 2 and Library 9. However, they are not different enough from the rest of the libraries to be categorized in the convergence group. The range of downsizing approach scores for the nine libraries is small (from 52 to 71). Basically, all libraries followed the same approach to downsizing.
The distinction between downsizing as convergence and downsizing as reorientation rests upon differences in the basic types of change that the organizations undergo. When organizations adopt a convergence approach to downsizing, they implement less change (i.e., they rely mainly on changes in work and much less on changes in technology and structure). Whereas when a reorientation approach to downsizing is adopted, they implement more changes in structure and technology rather than relying on just work changes. Cameron and Freeman (1993) provide a useful hierarchy of these three types of changes common in organizational downsizing, each of which varies in scope and depth. This is shown in Figure 5.3 below. Changes in work (e.g., eliminating tasks, decreasing the number of people doing the same task or work) require less change than changes in technology (e.g., automating work processes, redesigning work to take advantage of technological improvements). In turn, changes in technology require less change than changes in structure (e.g., merging or reorganization departments, reducing the number of hierarchical levels). Each type of change builds on the one before as the hierarchy
progresses from less extensive change on the individual or task level to more extensive change on the organizational level. When organizations adopt a convergence approach to downsizing, getting smaller tends to be the primary target of change. Thus, they tend to rely on low-level changes (i.e., changes in work). Organizations adopting a reorientation approach to downsizing tend to make greater use of higher-level changes (i.e., changes in technology and structure) although they may also make many low-level changes as well. The primary target of the change effort is organizational redesign.

Figure 5.3. Types of Changes (Adapted from Freeman 1992, 36)

Changes in Work

Low-level changes
- Focus is on reducing size without redesigning the work, e.g., eliminating tasks, decreasing the number of people doing the same task or work.
- Change is at the individual level.

High-level changes
- Focus is on reducing size as well as redesigning the work and organizational structure, e.g., merging or reorganization departments, reducing the number of hierarchical levels, forming work teams.
- Change is primarily at the organizational level.

Convergence Approach to Downsizing

Changes in Technology
- Focus is on reducing size as well as redesigning the work, e.g., automating work processes, redesigning work to take advantage of technological improvements, implementing new technologies to reduce the number of staff required.
- Change is at the individual level and organizational level.

Reorientation Approach to Downsizing

Changes in Structure
Figure 5.4 shows a bar chart comparing the types of changes made by the nine libraries. The grouped bars represent the mean extent of changes in work, technology, and structure for each library. As we can see, the libraries implemented both low-level and high-level changes, where they differ is in the extent of changes that were made. While all libraries undertook low-level changes aimed at reducing the organization size (e.g., eliminating tasks, decreasing the number of people doing the same task or work), they did not solely rely on these types of changes when downsizing. Not a single library in the study relied exclusively on implementing changes in work. In fact, most of the libraries, with the exceptions of Libraries 3 and 6, implemented more changes in technology than any other type of change. Library 3 implemented more changes in structure, the highest level of change, while Library 6 implemented changes in technology and structure equally. In other words, all of the libraries undertook higher-level changes that require more restructuring (e.g., automating work process, redesigning work to take advantage of technological improvements, merging or reorganizing departments) when downsizing.

Figure 5.4. Changes to Work, Technology, and Structure in Nine Libraries
In summary, we find that all nine libraries conform to the reorientation approach to downsizing. Figures 5.4 clearly shows that all libraries undertook more extensive restructuring and organizational redesign as part of their downsizing and change efforts.

5.3 Downsizing Approach and Downsizing Processes

The first set of hypotheses (H1 to H3) suggested that academic research libraries categorized as adopting a convergence approach to downsizing would have a significantly lower mean index score for participation, communication, and transformational leadership behaviours than academic research libraries categorized as adopting a reorientation approach to downsizing. However, as was previously mentioned all nine libraries in the study were categorized as adopting a reorientation approach to downsizing and so we could not test these hypotheses.

5.4 Downsizing Strategies and Downsizing Outcomes

The next set of hypotheses (4a to 4c) predicted that the strategies used to downsize would influence employee attitudes toward the job. Specifically, it was hypothesized that a workforce reduction strategy would be negatively associated with employee attitudes toward the job while both a work redesign strategy and a systemic change strategy would be positively associated with employee attitudes toward the job. We found that:

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17 Since our initial decision to split the libraries into two groups based on downsizing approach was arbitrary, we explored whether the split could be made on some other basis. See Appendix J for additional details.
H4a. The data support Hypothesis 4a, in that the use of a workforce reduction strategy is negatively and significantly associated with employee attitudes toward the job (beta = -0.22, p < .001). The strength of the association is low.

H4b. The data do not support Hypothesis 4b, in that the use of a work redesign strategy is not associated with employee attitudes toward the job. It should also be noted that the coefficient beta (-0.08, p = .16) was in the reverse direction of the hypothesis.

H4c. The data support Hypothesis 4c, in that the use of a systemic change strategy is positively and significantly associated with employee attitudes toward the job (beta = 0.18, p < .01). The strength of the association is low.

When we considered the influence of all three independent variables (workforce reduction, work redesign, and systemic change) on the dependent variable (employee attitudes toward the job), the results of the multiple regression are similar to those found in Hypotheses 4a to 4c in that the direction and magnitude of the relationships have been maintained (see 4.4.2).

Next we discuss each hypothesis in more detail.

Hypothesis 4a: The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for employee attitudes toward the job.

Our findings suggest that those employees who remain in the organization after a workforce reduction strategy has been implemented are likely to
experience more negative attitudes toward their job. These negative employee attitudes toward the job encompass role ambiguity, job security, workload, compensation, and job enrichment. Thus, remaining employees experienced more negative attitudes towards the security of their job and their future in the library, the scope and responsibilities associated with their work, the amount of work they have to do and the compensation they receive for that work, as well as the existence of opportunities for career development and advancement. These findings corroborate the results of previous research that reports individuals remaining after a downsizing (i.e., survivors) experience a decline in their job attitudes due to the uncertainty surrounding the change effort (Brockner and Wiesenfeld 1993; Kozlowski, Chao, Smith, and Hedlund 1993). In general, this research suggests that downsizings which rely primarily on workforce reductions generate doubts throughout the entire organization regarding job security because employees feel that have lost their ability to control the continuity of their employment. In addition, the workload rarely gets smaller when the workforce does and those who return to work following a workforce reduction have seen their workload increase but no commensurate increase in compensation has been offered (Cameron, Freeman, and Mishra 1993; Sutton 1990). Moreover, when they set their sights on the future, people become further dismayed; reductions in the number and layers of positions have reduced opportunities for career progression. Research conducted by Isabella (1989) found that individuals remaining after a downsizing have key concerns regarding their careers. Most employees are not informed about many issues, such as their place in the newly structured organization, expected performance standards, and the existence or lack of opportunities for advancement.

Our findings extend previous research examining survivor’s attitudes following a layoff. Research examining survivors’ attitudes and work behaviours following a layoff consistently shows that survivors’ job attitudes become less favourable after coworkers are laid off (Allen, Freeman, Reizenstein, and Rentz 1995; Brockner 1988; Brockner, Davy, and Carter 1995; Brockner, Konovsky, 158
Cooper-Schneider, Folger, Martin and Bies 1994; Feldman and Leana 1994; Leana and Feldman 1992; Mishra and Mishra 1992). This research suggests that, more often than not, remaining employees trust the organization and their managers less, experience lower morale and increased stress due to job insecurity and increased workloads, lack of concentration, and reduced satisfaction. Likewise, those who have interviewed the surviving employees of layoffs find that survivors are often insecure, angry, and confused (Clark and Koonce 1995; Noer 1993; O’Neill, Lenn, and Caimano 1995). These researchers found that employees worry they will not possess the skills necessary to meet the job requirements of their new job descriptions. Moreover, these same employees felt they no longer had any influence over their career paths.

Our findings extend this previous research in that we were able to show that surviving individuals' attitudes toward their jobs are negatively associated with workforce reduction strategies that do not involve the layoff of coworkers. Attrition (freezing or limiting the influx of new employees), early retirement (providing incentives for senior employees before their normal retirement date), and regular retirements were the primary strategies used to reduce the number of professional employees in academic research libraries. Thus, we find similar employee attitudinal responses to a workforce reduction accomplished by attrition and retirements as those found with layoffs. These findings are important because negative employee attitudes toward the job may affect the level of subsequent work effort that the remaining employees invest in their organizational roles and duties. For example, employees may perceive reduced or limited career development and advancement opportunities as a breach in the "psychological contract" between the organization and themselves. The psychological contract defines what employees are prepared to give by way of effort and contribution in exchange for something they value from their employer, such as job security, pay and benefits, or continuing training. It is an individual's beliefs regarding reciprocal obligations between themselves and their employer, and has traditionally been based on loyalty and commitment to the organization.
in exchange for employment security and career progression, linked to increases in status and rewards (Newell and Dopson 1996). Therefore, if employees are left after a downsizing feeling that the scope and responsibilities of their work have increased while opportunities for career development or advancement have decreased, they may respond with reduced work effort and/or organizational commitment.

Hypothesis 4b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for employee attitudes toward the job.

Our findings indicate that the use of a work redesign strategy is not associated with employee attitudes toward the job. We conducted two types of additional analyses to rule out alternative explanations for the results found in Hypothesis 4b. One explanation for the failure of a work redesign strategy to be related to employee attitudes toward the job may be that the effects of a work redesign strategy are moderated by the stage of downsizing (e.g., early stages, well underway, nearing completion). In other words, we consider the possibility that the association between a work redesign strategy and employee attitudes toward the job is affected by the stage of downsizing employees perceive the library to be at.

A work redesign strategy involves changes that impact people, work, and organizational structure. For individuals this could be new roles, relationships, and behaviours; in terms of work, new operating procedures or standards; in terms of structure it could include new spans of control, hierarchical delayering, or an increase in decentralization to speed up the decision-making process. Whatever the changes may be, they are not instantaneous. The progress from ending the old to accepting the new is not immediate and the time period between the old way of doing things and the new is uncomfortable and
disorienting for many individuals. Over time though, as people move through the transition from the old to the new, forces for accepting the new strengthen: resistance to change gives way to adaptation. Employees have learned more about their personal fate and have grown more familiar with the situation within which they are working. Thus, it would make sense that during the early stages of a downsizing, a work redesign strategy may have a negative effect on employee attitudes toward the job. After having had time to assimilate and adjust to the changes, their attitudes toward the job may become more positive as the downsizing nears completion. This possible explanation was tested with the interaction effect between a work redesign strategy and stage of downsizing entered into the regression model. However, we did not find the interaction to be statistically significant indicating that the relationship between a work redesign strategy and employee attitudes toward the job is not moderated by stage of downsizing. The results of the regression analysis are provided in Appendix H.

A second explanation for the failure of a work redesign strategy to be related to employee attitudes toward the job may be that the processes used during downsizing (e.g., participation, communication, and leadership) moderate the effects of a work redesign strategy. A work redesign strategy can be threatening to many employees because it usually involves abandoning established routines and learning new ones. For example, some employees may have new duties to master, new reporting relationships to adjust to, and new policies and procedures that alter established ways of working. Kanter (1984) suggests that, in order to build commitment to change, managers should: allow employees to participate; provide a clear picture or vision of the future; share information; demonstrate commitment to change; tell people exactly what is expected of them, and offer positive reinforcement. These suggestions are typical of those provided by other researchers and practitioners offering guidelines for the management of large-scale change. Thus, we consider the possibility that the interaction between a work redesign strategy and participation, communication, and transformational leadership will influence employee attitudes
toward the job. Specifically, if during downsizing employees perceive the levels of participation, communication, and transformational leadership to be low, then a negative relationship between work redesign strategy and employee attitudes toward the job will be found. Conversely, if during downsizing employees perceive high levels of participation, communication, and transformational leadership, then a positive relationship between a work redesign strategy and employee attitudes toward the job will be found. This prospect was not borne out by the regressions run with the interaction effects between a work redesign strategy and participation; a work redesign strategy and communication; and a work redesign strategy and transformational leadership entered into the model. None of the interactions reported are statistically significant which suggests that participation, communication, and transformational leadership did not moderate the relationship between a work redesign strategy and employee attitudes toward the job. The results of the regression analysis are provided in Appendix 1.

Finally, although a work redesign strategy may produce desirable effects in the long run, it may not in the short run. The rational for this explanation is similar to our first explanation: employee attitudes toward the job may be more positive after having time to assimilate and adjust to the work redesign changes made during downsizing. To test this explanation a longitudinal study that examines employee attitudes one to three years after a work redesign strategy has been implemented would be needed to accurately assess any changes in employee attitudes. It is quite possible that employee reactions to downsizing do not remain stable but change over time.
Hypothesis 4c: **The index scores for the use of a systemic change strategy will be positively associated with the index scores for employee attitudes toward the job.**

Our findings suggest that the implementation of a systemic change strategy is associated with more positive employee attitudes toward the job. A systemic change strategy is aimed at changing the culture of an organization by fostering a philosophy of continuous improvement. The changes are directed at the values and beliefs that govern employee behaviour. Libraries implementing systemic change strategies generally experienced more positive employee attitudes related to role ambiguity, job security, workload, compensation, and job enrichment. Although we are not aware of any downsizing studies linking a systemic change strategy with employee attitudes toward the job that we can compare our results with, the normative literature on organizational downsizing suggests a systemic change strategy is most likely to produce positive employee attitudes. This is because employees are recognized as an organization's most valuable assets and thus require organizational behaviour modification in order to accept and implement new work processes (Appelbaum, Everard, and Hung 1999; Cameron, Freeman, and Mishra 1991; 1993). Behavioural modification happens through the appraisal, reward and development systems for employees (Freeman 1994), the design of effective educational programs for employees (De Meuse, Vanderheiden, and Bergmann 1994), and the identification and evaluation of employee skills, knowledge and abilities (Mone 1994). To illustrate this point, Mishra and Mishra (1994) propose that training or retraining of employees boosts employees' confidence to work in a new environment, and as a result they are more competent to deal with any uncertainty they may face. Similarly, Doherty and Horstead (1995) suggested that survivors need professional advice, training, counselling and support if they are to manage change successfully and counteract the effect of "survivor syndrome".
We find the same thinking in the literature on organizational change. This literature suggests that culture change (Nadler, Shaw, and Walton 1995; Tichy 1983) cannot occur without employees learning new ways of behaving and thinking. This is accomplished through a combination of information (e.g., where the organization is headed and how great a gap exists between reality and the goal), communication (e.g., the what, the why and the how), and education (e.g., training and retraining programs). As a result, organizations that equip their employees with the skills, strategies and resources to adjust to changes report much greater employee commitment to the changes, and by implication, more positive employee attitudes toward their working environment. Our findings are important because they suggest that implementing a systemic change strategy when downsizing may minimize negative employee attitudes toward the job.

In the multiple regression model where we considered the influence of all three independent variables (workforce reduction, work redesign, and systemic change) on the dependent variable (employee attitudes toward the job), we found that the use of a workforce reduction strategy was negatively and significantly associated with employee attitudes toward the job, a systemic change strategy was positively and significantly associated with employee attitudes toward the job, and a work redesign strategy was not associated with employee attitudes toward the job. When comparing the standardized regression coefficients, systemic change (.28) is more important than workforce reduction (-.18) in relation to the effects of each on employee attitudes toward the job. The proportion of variance in employee attitudes toward the job that was explained by the variations in the independent variables was 12 percent. When comparing the squared semipartial correlation coefficients (sR²) of the independent variables to determine their unique contributions to the total variance in employee attitudes toward the job we found that the contribution of systemic change (.05) was slightly larger than the contribution of workforce reduction (.03).
The third set of hypotheses (5a to 5c) predicted that the strategies used to downsize would influence the organizational climate. Specifically, it was hypothesized that a workforce reduction strategy would be negatively associated with organizational climate while both a work redesign strategy and a systemic change strategy would be positively associated with organizational climate. We found that:

H5a. The data support Hypothesis 5a, in that the use of a workforce reduction strategy is negatively and significantly associated with organizational climate (beta = -.38, p < .001). The strength of the association is moderate.

H5b. The data do not support Hypothesis 5b, in that the use of a work redesign strategy is not significantly associated with organizational climate (beta = -.05, p = .40).

H5c. The data support Hypothesis 5c, in that the use of a systemic change strategy is positively and significantly associated with organizational climate (beta = .36, p < .001). The strength of the association is moderate.

When we considered the influence of all three independent variables (workforce reduction, work redesign, and systemic change) on the dependent variable (organizational climate), the results of the multiple regression were similar to those found in Hypotheses 5a and 5c in that the direction and magnitude of the relationships have been maintained (see 4.4.2). Contrary to that found in Hypothesis 5b (no support), the multiple regression results indicate that the use of a work redesign strategy is negatively and significantly associated with
organizational climate (beta = -.16, p < .05). This finding contradicts Hypothesis 5b.

Next we discuss each hypothesis in more detail.

**Hypothesis 5a:** The index scores for the use of a workforce reduction strategy will be negatively associated with the index scores for organizational climate.

Our findings suggest that the use of a workforce reduction strategy is associated with more negative organizational climate. Organizational climate encompasses 12 characteristics: decision-making, orientation, innovation, trust, morale, conflict, factionalization, teamwork, leadership, change, cutbacks, and communication. These findings suggest that the presence of negative organizational climate (e.g., centralized decision-making, short-term orientation, loss of innovation, etc.) is more likely to occur when libraries implement a workforce reduction strategy to downsize. Our findings are consistent with those of Cameron, Freeman, and Mishra (1993) who found workforce reduction strategies such as layoffs, attrition, and retirements to be associated with the presence of negative organizational climate. These findings are important because negative organizational climate may affect the level of subsequent work effort that the remaining employees invest in their organizational roles and duties. For example, if the organizational climate is characterized by mistrust of management, centralized decision-making, and lower morale, employees may experience a loss of commitment to the organization that may affect their level of work productivity.
Hypothesis 5b: The index scores for the use of a work redesign strategy will be positively associated with the index scores for organizational climate.

Initially we were surprised at the contradiction in Hypothesis 5b; however, this contradiction can be explained using insights gained from the organizational change literature. An organization may be viewed as consisting of four major components: the work, the people, the formal arrangements, and the informal organization (Nadler and Tushman 1995). The first component is the organization's work – the specific work activities or functions that need to be done by the organization. A second component of organizations involves the people who perform tasks. The third component is the formal organizational arrangements. These are the structures, systems, processes, methods, and procedures that are explicitly and formally developed to get individuals to perform tasks. The final component is the informal organization, also known as the organizational culture. The informal organization consists of arrangements that tend to emerge over time in any organization and are usually implicit and unwritten. They are the common values, beliefs, and relationships that develop within and between groups and can exert considerable influence on individual behaviour. These four components affect and are affected by each other. No one component can be considered in isolation from the others. Congruence between components is the degree to which the needs, demands, goals, objectives, or structures of one component are consistent with and complementary to the needs, demands, goals, objectives, or structures of another component.

To maintain congruence between organizational components, changes in one component necessarily demand changes in the others to improve overall fit among the components of the organization. Many of the structural, technological and process changes taking place as a result of a work redesign strategy have
the potential to change each of the organizational components. Lasting changes in redesigning work require multiple leverage points to modify more than a single component. Otherwise, the changes run the risk of creating poor fits among organizational components. The changes must be structured so that they are consistent; the training of individuals, for example, should dovetail with new job descriptions, or reporting relationships. Pay systems, promotions, recognition, job assignments, and so forth need to be carefully examined during major organizational changes, and then restructured to support the direction of the transition. Changes in all four components are needed to bring about significant and lasting changes in organizational behaviour. Thus, if an organization makes changes to the work it does, it must also change the capabilities and attitudes of its people, the formal structures and processes, and ultimately its culture.

We propose that the libraries in our study did not make the necessary changes to other organizational components when implementing a work redesign strategy. For example, from the results of this study it was found that 63 percent of participants indicated that changes in reward and recognition systems had not been implemented in connection with the downsizing effort (Figure 5.5). In terms of training and orientation programs, 58 percent indicated that these programs were implemented to some extent while 18 percent indicated they were not implemented at all (Figure 5.6). So although libraries are implementing work redesign strategies, they may be undermining the potential benefits of these strategies by not making consistent and supportive changes in the other organizational components. This rationale may explain why we found a work redesign strategy to be negatively associated with organizational climate. It also helps explain, in part, why we found a negative, although not significant, relationship regarding a work redesign strategy and employee attitudes toward the job in Hypothesis 4b. Additional support for our rationale can be found in Cameron, Freeman, and Mishra’s (1993) study where performance deterioration was associated with organizations that did not make the reward and appraisal systems more congruent with the downsizing goals.
Figure 5.5. Extent to which changes in reward and recognition systems have been implemented in connection with the downsizing effort.

Figure 5.6. Extent to which training and orientation programs for staff have been implemented in connection with the downsizing effort.
Hypothesis 5c: The index scores for the use of a systemic change strategy will be positively associated with the index scores for organizational climate.

Our findings suggest that the use of a systemic change strategy is associated with more positive organizational climate. Thus, libraries implementing systemic change strategies generally experienced more positive organizational climate related to decision-making, orientation, innovation, trust, morale, conflict, factionalization, teamwork, leadership, change, cutbacks, and communication. These findings are consistent with Cameron, Freeman, and Mishra (1993) who found that systemic change strategies (e.g., systemic analysis of tasks and personnel done in advance of downsizing) were associated with the presence of positive organizational climate. These findings are important because organizational climate is an important contextual component for shaping employee actions including employee change-related behaviour (Burke and Litwin 1992). For example, the changes made during downsizing may involve some employees abandoning established routines and learning new ones. Discomfort in departing from established routines may squash change opportunities or attempts. Since change does involve deviation and a certain amount of risk taking, employees would most likely avoid change behaviours unless they operated in a situation in which they felt secure. Therefore, the presence of a positive climate (i.e., decentralized decision-making, high levels of trust, etc.) represents a necessary condition for change attempts and acceptance.

In the multiple regression model where we considered the influence of all three independent variables (workforce reduction, work redesign, and systemic change) on the dependent variable (organizational climate), we found that workforce reduction and work redesign were negatively and significantly associated with organizational climate while systemic change was positively and
significantly associated with organizational climate. In addition, the proportion of variance in organizational climate that was explained by the variations in the independent variables was 39 percent. When comparing the squared semipartial correlation coefficients ($sR^2$) of the three independent variables to determine their unique contributions to the total variance in organizational climate, we found that the contributions of workforce reduction (.09) and systemic change (.15) were much larger than the contribution of work redesign (.01). In other words, much of the total variance in organizational climate accounted for by the multiple regression was due to the two independent variables workforce reduction and systemic change. It is interesting that we found a negative and significant relationship between work redesign and organizational climate. This finding suggests that the use of a work redesign strategy is associated with more negative organizational climate. Perhaps one explanation is that a work redesign strategy produces desirable effects in the long run but not in the short run. The rational for this explanation is that over time the organizational climate may become more positive after employees have had time to assimilate and adjust to the work redesign changes made during downsizing. Additional research is needed to test this explanation. Our survey was cross-sectional rather than longitudinal. It would be useful to compare our findings regarding the relationship between a work redesign strategy and organizational climate with the findings of longitudinal studies that examine this same relationship one to three years after downsizing has taken place.

A general conclusion from this study is that the strategies used to downsize affect employee attitudes toward their jobs as well as the organizational climate, a finding strongly endorsed by the literature on organizational downsizing. In addition, it appears that a workforce reduction strategy and a systemic change strategy are relatively more critical to the determination of organizational climate than they are to employee attitudes toward the job as indicated by their higher beta weights in the regression models with organizational climate as the dependent variable. However, the above results
need to be considered with caution given the small amount of variance in employee attitudes toward the job accounted for by both independent variables (see 4.4.2).

5.5 Downsizing Processes and Downsizing Outcomes

The fourth set of hypotheses (H6 to H8) predicted that the processes used during a downsizing would influence employee attitudes toward the job. Specifically, it was hypothesized that participation, communication, and transformational leadership would be positively associated with employee attitudes toward the job. We found that:

H6. The data support Hypothesis 6, in that participation is positively and significantly associated with employee attitudes toward the job (beta = .26, p < .001). The strength of the association is moderate.

H7. The data support Hypothesis 7, in that communication is positively and significantly associated with employee attitudes toward the job (beta = .35, p < .001). The strength of the association is moderate.

H8. The data support Hypothesis 8, in that transformational leadership is positively and significantly associated with employee attitudes toward the job (beta = .47, p < .001). The strength of the association is moderate.

When we considered the influence of all three independent variables (participation, communication, and transformational leadership) on the dependent variable (employee attitudes toward the job), we find that participation and communication are not significantly associated with employee attitudes toward
the job while transformational leadership is positively and significantly associated with employee attitudes toward the job (see 4.4.3).

Next we discuss each hypothesis in more detail.

**Hypothesis 6:** The index scores for participation will be positively associated with the index scores for employee attitudes toward the job.

Our findings suggest that employees who participated in the decision-making regarding downsizing experienced more positive attitudes toward the job. That is, employees involved in the design and implementation of downsizing experienced more positive attitudes towards the security of their job and future in the library, the scope and responsibilities associated with their work, the amount of work they have to do and the compensation they receive for that work, as well as the existence of opportunities for career development and advancement. This finding is in accordance with the literature on organizational downsizing that strongly encourages employee participation in the decision-making regarding downsizing (Appelbaum, Simpson, and Shapiro 1987; Cameron, Freeman, and Mishra 1991, 1993; Cascio 1993; Freeman 1994). Cameron, Freeman, and Mishra (1991) suggest that the most effective downsizing strategies are those that are recommended and designed by the employees of the organization. Cameron (1994) suggests that employees should be consulted when identifying what needs to be changed and that by actively including all employees in the planning stage of downsizing, it is possible to avoid the negative consequences felt by survivors. Similarly, Cascio (1993) also associates survivors’ syndrome with a lack of employee involvement. Our findings are important because they suggest that by involving employees in the design and implementation of downsizing, an organization may be able to avoid or minimize negative employee attitudes toward the job.
Hypothesis 7: The index scores for communication will be positively associated with the index scores for employee attitudes toward the job.

Our findings suggest that a high level of communication during downsizing is associated with more positive employee attitudes toward the job. That is, employees who perceived the information they received regarding downsizing as timely, accurate, and complete generally experienced more positive attitudes regarding role ambiguity, job security, workload, compensation, and job enrichment. This finding is in accordance with the literature on organizational downsizing that strongly suggests in a downsizing situation it is in the employees' interests if management disclose as much information as they can, when they can, and as often as they can (Cameron, Freeman, and Mishra 1993; Feldman and Leana 1994; Smeltzer and Zener 1992). Otherwise, the absence of information regarding downsizing can possibly lead to an increase in the amount of ambiguity and uncertainty felt by employees in an organization. Increased ambiguity and uncertainty within an organization's environment contributes heavily toward negative employee attitudes (Noer 1993). If ambiguity and uncertainty grow, employees may value less and less their stake in the organization which may negatively impact their subsequent behaviour. Thus, increased communication during downsizing helps employees understand the difference between where they were and where they are now (i.e., with respect to tasks, responsibilities, reporting relationships, etc.) and also to ensure that they have the appropriate organizational support to develop the necessary competencies to meet these objectives. Thus, our findings are important because they suggest that high levels of communication during downsizing can play a key role in mitigating against negative employee attitudes toward the job.
Hypothesis 8: The index scores for transformational leadership behaviours will be positively associated with the index scores for employee attitudes toward the job.

Our findings suggest that a high level of transformational leadership behaviours during downsizing is associated with more positive employee attitudes toward the job. Transformational leadership behaviours are characterized by the ability to stimulate interest among subordinates to view their work from new perspectives; generate awareness of the mission or vision of the organization; develop subordinates to higher levels of ability and potential; and motivate subordinates to look beyond their own interests towards those that will benefit the organization. Our finding is in accordance with the literature on organizational downsizing that suggests the senior management team should exhibit a sense of vision and foster a culture of change and growth (Appelbaum, Simpson, and Shapiro 1987; Hitt, Keats, Harback, and Nixon 1994). When the organization has a widely shared, clear sense of its purpose, direction, and desired future state, people in the organization are able to define their roles in that organization. We also find that the leadership behaviours of the senior management team are relatively more critical to the determination of employee attitudes toward the job than are participation and communication as indicated by the higher beta weight for transformational leadership. Our findings are important because they suggest that the transformational leadership behaviours by the senior management team during organizational downsizing can play an integral role in minimizing or alleviating negative employee attitudes toward the job.

In the multiple regression model where we considered the influence of all three independent variables (participation, communication, and transformational leadership) on the dependent variable (employee attitudes toward the job), our findings indicated that participation and communication were not significantly associated with employee attitudes toward the job while transformational
leadership was positively and significantly associated with employee attitudes toward the job. We know from our analyses of hypotheses 7 and 8 that singularly participation and communication are linearly associated with employee attitudes toward the job. We also examined the correlation coefficients among the independent variables and the tolerance values for each independent variable and concluded that multicollinearity was not a serious problem among the independent variables used in our multiple regression analysis. However, according to Schroeder, Sjoquist, and Stephen (1986),

*Multicollinearity is probably present in all regression analysis, since the independent variables are unlikely to be totally uncorrelated. Thus, whether or not multicollinearity is a problem depends on the degree of collinearity* (Schroeder, Sjoquist, and Stephen 1986, 72).

Thus, even though our independent variables did not exhibit a high degree of collinearity, they may still be interrelated.

The correlation coefficient between participation and transformational leadership is .50. The correlation coefficient between communication and transformational leadership is .58. These correlations are moderately strong and indicate that our independent variables are interrelated. Therefore, with participation, communication, and transformational leadership in the model, one would expect a certain degree of redundancy in the direction of the independent variables. Consequently, when we have a regression model that includes transformational leadership as an independent variable and employee attitudes toward the job as a dependent variable, participation and communication do not contribute much unique information to the model. Much of the information that participation and communication convey is already being supplied by the independent variable transformational leadership. In other words, transformational leadership provides all the explanatory power in the multiple regression model.
To recap, our explanation for finding participation and communication not significant in the multiple regression model is due to the fact that the three independent variables are correlated (not high enough to suspect multicollinearity but high enough to explain the dominance of the transformational leadership variable).

The fifth set of hypotheses (H9 to H11) suggested that the processes used during a downsizing might influence the organizational climate. Specifically, it was hypothesized that participation, communication, and transformational leadership would be positively associated with organizational climate. We found that:

H9. The data support Hypothesis 9, in that participation is positively and significantly associated with organizational climate (beta = .44, p < .001). The strength of the association is moderate.

H10. The data support Hypothesis 10, in that communication is positively and significantly associated with organizational climate (beta = .51, p < .001). The strength of the association is high.

H11. The data support Hypothesis 11, in that transformational leadership is positively and significantly associated with organizational climate (beta = .68, p < .001). The strength of the association is high.

When we considered the influence of all three independent variables (participation, communication, and transformational leadership) on the dependent variable (organizational climate), the results were similar to those found in Hypotheses 9 to 11. However, we found transformational leadership to be
substantially more important than either participation or communication in relation to the effects of each on organizational climate (see 4.4.3).

Next we discuss each hypothesis in more detail.

**Hypothesis 9:** The index scores for participation will be positively associated with the index scores for organizational climate.

Our findings suggest that a high level of employee participation in the decision-making regarding downsizing is associated with more positive organizational climate. That is, employees involved in the design and implementation of downsizing perceived the organizational climate more positively in terms of decision-making, orientation, innovation, trust, morale, conflict, factionalization, teamwork, leadership, change, cutbacks, and communication. These findings are consistent with those of Freeman (1992) and Cameron, Freeman, and Mishra (1993) who found that increased participation by organization members was positively associated with organizational climate. Similarly, in research conducted by Cameron (1998) of a downsizing initiative in the U.S. army, he found the involvement of employees in the planning and implementation of downsizing to be an important predictor of organizational effectiveness, performance, and improvement. Thus, our findings suggest that involving employees in the design and implementation of downsizing can play a key role in minimizing negative organizational climate while at the same time mobilizing and motivating employees toward change.
Hypothesis 10: The index scores for communication will be positively associated with the index scores for organizational climate.

Our findings suggest that a high level of communication regarding downsizing is associated with more positive organizational climate. That is, employees who perceived the information they received regarding downsizing as timely, accurate, and complete also perceived the organizational climate more positively in terms of decision-making, orientation, innovation, trust, morale, conflict, factionalization, teamwork, leadership, change, cutbacks, and communication. These findings are consistent with those of Freeman (1992) and Cameron, Freeman, and Mishra (1993) who found that increased communication with organizational members during downsizing was positively associated with organizational climate. In addition, Cameron (1998) also found increased communication during downsizing to be an important predictor of organizational effectiveness, performance, and improvement. The normative literature on organizational downsizing also strongly proposes the need for management to over-communicate pertinent information related to the downsizing (Feldman and Leana 1994; Smeltzer and Zener 1992). In order for senior management to maintain the credibility and trust of employees, they must communicate all information related to the downsizing, constantly, and in full detail. Our findings are important because they suggest that high levels of communication during downsizing can play a key role in minimizing negative organizational climate while at the same time mobilizing and motivating employees toward change.

Hypothesis 11: The index scores for transformational leadership behaviours will be positively associated with the index scores for organizational climate.

Our findings suggest that a high level of transformational leadership behaviours during downsizing is associated with more positive organizational
climate. In other words, the ability of senior management to: stimulate interest among subordinates to view their work from new perspectives; generate awareness of the mission or vision of the organization; develop subordinates to higher levels of ability and potential; and motivate subordinates to look beyond their own interests towards those that will benefit the organization, is associated with presence of a positive climate (i.e., decentralized decision-making, high levels of trust, etc.). In fact, we found transformational leadership to be substantially more important than either participation or communication in relation to the effects of each on organizational climate. This observation is in accordance with previous research findings on organizational downsizing. For example, the research conducted by Freeman (1992) and Cameron, Freeman, and Mishra (1993) found that the most important predictor of “success” (i.e., positive organizational climate and organizational performance) was the personal behaviours of top management. The behaviours of top managers were characterized by the extent to which he/she 1) excited and motivated employees, 2) praised them, 3) used symbolic means to provide a vision of future possibilities for them, and 4) remained accessible and visible to them. This finding was duplicated in another study by Cameron (1998) where he found leadership of the organization to be an important predictor of organizational performance, effectiveness, and improvement. Our findings are important because they suggest that transformational leadership behaviours by the senior management team during organizational downsizing can play an integral role in minimizing negative organizational climate while at the same time mobilizing and motivating employees toward change.

In the multiple regression model where we considered the influence of all three independent variables (participation, communication, and transformational leadership) on the dependent variable (organizational climate), our findings indicated that participation, communication, and transformational leadership were all positively and significantly associated with organizational climate. When comparing the three standardized regression coefficients, transformational
leadership (.52) is substantially more important than either participation (.14) or communication (.18) in relation to the effects of each on organizational climate. The proportion of variance in organizational climate that was explained by the variations in the independent variables was 56 percent. When comparing the squared semipartial correlation coefficients ($sR^2$) of the three independent variables to determine their unique contributions to the total variance in organizational climate, we found that the contributions of participation (.01) and communication (.02) were much smaller than the contribution of transformational leadership (.13). In other words, much of the total variance in organizational climate accounted for by the multiple regression was due to the independent variable transformational leadership. The results of our two multiple regression models regarding the downsizing processes and downsizing outcomes imply that transformational leadership is the strongest predictor of the three independent variables.

A general conclusion from this study is that the factors that account for positive individual and organizational effects of downsizing are the processes used to implement organizational downsizing. The senior management team who are accessible, motivational, and visionary, who communicate broadly and consistently with everyone affected by the downsizing, and involve employees in the decision-making process related to downsizing have a positive impact on employee attitudes toward the job and organizational climate. This would suggest that the implementation processes used during downsizing are key to the success of any downsizing effort, a finding consistent with the research of Freeman (1992), Cameron, Freeman, and Mishra (1993), and Cameron (1998).

5.6 Implications for Practice

Given that there is much consistency within our results and between these results and previous research, it is possible to identify several implications that
may help improve the practice of management during an organizational downsizing. The practical implications of the present study are noteworthy for management in general, and library managers specifically, who wish to minimize the negative effects of downsizing on employees' attitudes because negative attitudes may well translate into poor job behaviour, which will ultimately incur costs both for the individual and the organization. Being aware of the likelihood of, and the problems accompanying, negative employee attitudes toward the job can assist those involved in the decision-making process to plan accordingly. In other words, there is scope for the management of library organizations to intervene in order to reduce or alleviate the negative effects of downsizing on employees, and ultimately on the organization. The implications of our research findings listed below are congruent with many of the “best practices” outlined in the organizational literature on downsizing (e.g., Appelbaum, Everard, and Hung 1999; Burke and Nelson 1998; Cameron, Freeman, and Mishra 1991).

The first and most important implication of this study involves the power of transformational leadership behaviours during organizational downsizing. Our findings suggest that those in leadership positions can influence employee attitudes toward the job and the organizational climate during downsizing. It would certainly be appropriate for senior management in organizations undergoing downsizing to model the four “I”s of transformational leadership (e.g., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration). By modelling these behaviours, senior management can create an awareness of the need for change, clarify the focus of the organization, and provide the necessary resources and support for change. Senior management need to be sensitive to the fact that they play an integral role in mobilizing and motivating employees toward change and that their actions and statements will be scrutinized by employees. Therefore, they must be seen to act in accordance with the stated mission, goals and values of the organization. The senior management team need to demonstrate a wide variety of change management skills that include: the ability to lead and motivate their employees
behind the goals of the organization; the ability to inspire trust by acting openly and fairly; an attitude, which they can inspire in others, of positive change acceptance; and the ability to facilitate open and honest communication of the facts.

The second implication involves the power of participation. The organizational change literature has long discussed the importance of decisional participation by employees in determining the acceptance of organizational change (Coch and French 1948). By encouraging participation in decision-making, organizations can increase both the probability that change will be accepted and the overall effectiveness of that change. The process of helping to shape a decision creates employee identification with the decision. For example, it is difficult for individuals to resist a change decision in which they have participated. Moreover, if employees are involved in the change decision, they tend to see it as their decision, rather than one imposed upon them. Their involvement can reduce resistance as well as secure their commitment, which is required to design and implement change more effectively.

The third implication involves the power of communication for facilitating effective change. Employees do not resist change, they resist being changed (Woodward and Buchholz 1987). The reason behind this resistance is related to the fear of the unknown. It stands to reason that employees cannot support the changes the organization is making if they do not know what is taking place, when it is taking place, and how it affects them. Employees can only benefit from information about the reasons for the changes, how they will be affected, what will be required of them following the changes and the expectations associated with this requirement, and what help they will be given to adapt to new demands placed on them.
The fourth implication involves the organization's commitment to its human resources. To get the most from employees before, during, and after downsizing, management must pay attention to their employees. Employees' reactions to the downsizing depend upon their perceptions of how the library will change as a result of the downsizing. Many employees worry about long-term job security, even when management assures them their jobs are not in jeopardy. Employees also worry about their ability to function in a new environment, especially if their jobs have been redesigned. Additionally, employees are concerned about future chances for promotion and advancement. Although downsizing may eliminate opportunities that used to exist in the organization, it may also open up new and different options. Management needs to clearly articulate employees' new roles within the organization, including new career paths and potential opportunities. Employees should be able to see how their individual role fits with the objectives of the organization and how they can contribute to ensuring future success. In fact, it may well be that part of understanding the future is an acceptance that the traditional notion of progression up the organizational hierarchy is no longer a valid expectation. In that case, management should be prepared to address this issue and give consideration as to what can be offered to employees as a replacement. Otherwise, this threat to career progression may represent a breach of the psychological contract, what employees are prepared to give by way of effort and contribution in exchange for career progression. If employees view this contract as null and void, the result could be a negative impact on the effectiveness of the organization not only in performance outputs but also in the areas of employee job satisfaction and organization commitment. Consequently, this situation presents employers with the particular challenge of continuing to motivate and retain key employees in the context of downsizing.

Downsizing does not have to end with adverse effects on employees. Our research has shown that when management implements a downsizing using high levels of transformational leadership behaviours this results in employees having more positive attitudes toward their jobs. Additionally, when management
implements a downsizing using high levels of participation, communication, and transformational leadership behaviours this results in employees having a more positive organizational climate. Subsequently, the implications for management are that organizations that understand the importance of these management processes when downsizing will be able to eliminate or reduce the negative effects of downsizing. Thus, the way managerial processes are implemented have an impact on employee attitudes toward the job and on the climate of the organization, and in the long-run, quite likely on the overall effectiveness of the organization.

5.7 Implications for Theory Development

Several aspects of this study provide an opportunity to strengthen our understanding of organizational downsizing. First, this study is one of the few empirical investigations found in the literature to test the Freeman and Cameron (1993) model of organizational downsizing. By adapting the Freeman and Cameron (1993) research design, modifying their instrument and using a different audience, the generalization of the findings was extended, providing additional validation of the instrument and support for the interactions proposed in the model. Replicating their study design with several modifications for an educational organization adds to the emerging theory that seeks to describe and explain the effects of downsizing both at the individual level and organizational level of analysis. Predicting survivors’ reactions to organizational downsizing and how they impact the organizational climate can help decision-makers decide how to plan and implement downsizing strategies while minimizing survivors’ negative reactions to downsizing.

Second, this study represents an initial attempt to integrate extant literature related to participation, communication, transformational leadership and organizational downsizing. The results presented here demonstrate that participation, communication, and especially transformational leadership do
impact organizational climate during downsizing. In addition, the results demonstrate that the transformational leadership behaviours of the senior management team also impact employee attitudes toward their job. These findings strongly suggest that leadership should be an important consideration in the planning of downsizing. Thus, this study serves as a representation of empirical knowledge regarding the management of the downsizing process.

Third, the study contributes by testing the theoretical propositions that the strategies (i.e., workforce reduction and systemic change) and processes (i.e., participation, communication, and transformational leadership) used to downsize do influence employees' attitudes toward their jobs and the organizational climate. The results presented here demonstrate that a systemic change strategy, participation, communication and transformational leadership all have value in ameliorating the negative effects of downsizing. Our empirical knowledge regarding the strategies and processes used to downsize provides a foundation to guide further development of theory and research related to organizational downsizing.

5.8 Limitations of Present Study

Some limitations of the current study must be noted. First, the generalizability of the results may be limited by the sample and setting. Data were obtained from a single type of organization – academic research libraries. Studies examining other types of organizations should be conducted. Consistent results from multiple research could strengthen the generalizability of the findings from this research.

Second, the study used a cross-sectional survey making it difficult to evaluate whether the relationships between the independent and dependent
variables were truly causal. A longitudinal study would be needed to accurately assess the causal nature of the relationships detected in this study.

Third, the data for the independent and dependent variables were collected from the same source (self-report measures) and consequently may be influenced by common method variance. Common method variance refers to the tendency to derive measures of different concepts from a single source, and then to examine relationships among the subsequent measures (Bryman 1989). Thus, there is a possibility that because two measures derive from the same source the likelihood of a relationship between them is enhanced.

Fourth, a number of nonspecified intervening variables may influence the relationship between the strategies used to downsize and employee attitudes toward the job. For example, employee’s self esteem, their need for security, their tolerance of ambiguity, locus of control, optimism/pessimism, and so forth may attenuate or exacerbate employees’ attitudes toward their jobs. These variables are all related to individuals’ personality characteristics and were not included in the study.

Fifth, all of the measures used were subjective. Although multiple items were used to increase the reliability of the measures used in the study, the results are based on employee perceptions of downsizing strategies, processes, and outcomes, and any conclusions drawn must be tempered by the possibility of bias particularly because of the potentially emotional nature of the topic. In addition, the measurement of all variables required participants to report on events that transpired approximately five years earlier. For any number of reasons, participants may have been unable to complete the self-report measures accurately.
Finally, if attitudes toward the job are transitional over time, longitudinal designs should be used to assess whether this study is an artifact of the recency of the organizational downsizing rather than lasting effects (Allen, Freeman, Reizenstein, and Rentz 1995). It is quite possible that employee reactions to downsizing do not remain stable but change over time. A longitudinal study that examines employee attitudes one to three years after downsizing has been implemented would more accurately assess any changes in employee attitudes. However, it is also useful to understand the immediate effects of downsizing in order to address the short-term repercussions of the downsizing.

5.9 Recommendations for Further Research

First, while downsizing remains a very important topic, there is a wide gap in the theory and research that addresses the implementation processes of downsizing and the impact these have on the organization. For instance, past research has primarily focused on the relationship between layoffs and the negative impact these have on survivors. Yet the reactions of individuals involved in a downsizing that does not involve the layoffs of coworkers have not been that well researched. Our research has shown that less harsh workforce reduction tactics (e.g., early retirement, buyouts, and attrition) may also have a negative impact on survivors. Subsequent research also needs to be conducted to determine whether or not the downsizing framework and relationships tested in this research are applicable in other types of organizations.

In addition, future research should investigate a broader range of outcome variables such as measures of performance, job effort, and organizational commitment. Negative employee attitudes toward the job and negative organizational climate are likely to have performance-related counterparts that this study was not designed to investigate and identify. For example, the survivors’ perceptions of how the organization managed the downsizing can
shape their motivation and job performance. The collective motivation and performance of survivors will affect the ability of the organization to address the environmental conditions that prompted the downsizing in the first place.

Finally, insightful information could also be provided by further research on organizational career development systems in slow growth or no growth environments (Feldman 1996). Evans, Gunz, and Jalland (1999) strongly emphasize the need to consider the career consequences of downsizing. In particular, how can new opportunities be built into organizations with fewer promotional opportunities? What types of career information and career systems make sense in downsizing organizations? This situation presents organizations with the particular challenge of continuing to motivate and retain employees in the context of downsizing.

5.10 Conclusion

The purpose of the present study was to investigate the relationship between the organizational downsizing strategies and processes academic research libraries in Ontario use to downsize and the impact the downsizing has on organizational outcomes. Our conceptual framework was constructed on theoretical foundations in organization theory. In particular, the literatures on organizational downsizing, decline, and change were used to identify the variables that were pertinent to our research. We examined the relationships among seven independent variables and two dependent variables. The seven independent variables in the study were: Downsizing Approach, Workforce Reduction, Work Redesign, Systemic Change, Participation, Communication, and Transformational Leadership. The two independent variables were Employee Attitudes Toward the Job and Organizational Climate. There were several key factors in predicting positive employee attitudes toward the job and positive organizational climate. Our analysis of the data revealed the following
findings. We found that a workforce reduction strategy that relied primarily on attrition, early retirements, and regular retirements had a negative impact on both employee attitudes toward the job and organizational climate. In contrast, a systemic change strategy had a positive impact on both employee attitudes toward the job and organizational climate. Independent of the strategy selected, the management processes used to downsize also influenced individual and organizational outcomes. Much of what management does during the downsizing process itself has profound implications for how successful the efforts to minimize the negative effects for survivors, and ultimately the organization, will be. We found that participation, communication, and transformational leadership behaviours had a positive impact on both employee attitudes toward the job and organizational climate. These processes involve the critical participation of all employees in the design and implementation of the changes relating to downsizing, the presence of timely, accurate, and complete communication during all phases of the downsizing, and the demonstration of senior management commitment and support of the changes made during the downsizing.

In conclusion, the present findings contribute to a more complete understanding of organizational downsizing in that they advance our understanding of the strategies and processes surrounding downsizing and offer the possibility for expanding our predictive capabilities of the consequences of downsizing. As more is learned about the factors that affect survivors' reactions, an important gap in the literature on downsizing will be filled. Thus, this study is a systematic, empirical contribution to the theory and practice of organizational downsizing.
APPENDIX A

LETTER TO CHIEF LIBRARIANS

Date
Address

Dear

University libraries have undergone numerous and far-reaching changes in recent years. Among the most pervasive and dramatic have been those associated with downsizing. Yet this phenomenon which has had such major repercussions has received practically no research attention in this country. Our nation-wide, bilingual survey will correct that oversight. Our study will provide a comprehensive, in-depth picture of the downsizing strategies and processes that Canadian research libraries have used and the outcomes these have had for the organizations and the professional employees that work in them.

In order for our results to be as accurate and representative as possible and of maximum value to you and the professional community, we need our questionnaires to reach every professional currently employed in each of the 27 university-based CARL libraries. To accomplish this we need your help. We ask that you do three things, please:

1. Send us a complete list of the professional staff currently employed in your library system. Indicate with an "F" those Francophone employees to whom we should send a French version of our questionnaire.

2. Send us one set of mailing labels addressed to your library’s professional employees. We will use these labels as a master set to generate more that will be used to mail the preliminary survey notification, survey questionnaire, the reminder, and 2 follow-ups to each professional.

OR

Send us an electronic file on a 3.5" diskette containing a list of the library’s professional employees. Any of the following file formats are acceptable: CSV(comma delimited ASCII file format), MS Excel, Lotus 123, MS Access, Lotus Approach, DBF, MS Word, Lotus Amipro, Lotus Word Pro, Wordperfect. We will use the file to generate the mailing list for your library.

3. When they arrive, distribute through your internal mail system individually addressed envelopes that we send you containing the questionnaire, covering letter, and return envelope to every professional employee. Respondents will return their completed questionnaires directly to us and follow-ups will be mailed directly to the respondents, as necessary, using the labels you provide.
You may rest assured of total confidentiality and anonymity. Neither your library nor any employee will be identified by name. The data will be reported as aggregated totals, by geographic region, and so on. Names are used for mailing and follow-up purposes only.

The results of the research will be disseminated at the conclusion of the study through the professional literature, at conferences, and in reports. The Ontario portion of the data will form the backbone of a doctoral dissertation by Ms. Shauna Taylor who is also the Research Assistant for the Canada-wide survey. The study is financially supported by a grant from the Social Sciences and Humanities Research Council of Canada and has the endorsement of the Canadian Association of Research Libraries.

If you would like any further information, please do not hesitate to get in touch with either of us. Ethel Auster is available by telephone at (416) 978-7098; by fax at (416) 978-5762; and by e-mail at auster@fis.utoronto.ca. Shauna Taylor is available by e-mail at taylor@fis.utoronto.ca.

Thank you for your help.

Sincerely,

Ethel Auster
Professor and Principal Investigator

Shauna Taylor
Doctoral Candidate and Research Assistant
APPENDIX B

QUESTIONNAIRE

SURVEY OF ORGANIZATIONAL DOWNSIZING
IN CANADIAN ACADEMIC RESEARCH LIBRARIES

FACULTY OF INFORMATION STUDIES
UNIVERSITY OF TORONTO
1998
SURVEY OF ORGANIZATIONAL DOWNSIZING
IN CANADIAN ACADEMIC RESEARCH LIBRARIES

Purpose of the Survey

University libraries have undergone numerous and far-reaching changes in recent years. Among the most pervasive and dramatic have been those associated with downsizing. Yet this phenomenon which has had such major repercussions has received practically no research attention in this country. Our nation-wide, bilingual survey will correct that oversight. Our aim is to provide a comprehensive, in-depth picture of the downsizing strategies and processes that Canadian research libraries have used and the outcomes these have had for the organizations and the professional employees (i.e., librarians and others in professional positions) that work in them.

What Is Organizational Downsizing?

Downsizing has been defined in a variety of ways. In this study, we define organizational downsizing as a planned organizational change made in response to declining resources. It is a set of strategies undertaken on the part of management that has wide-ranging implications for many aspects of the organization including the personnel, processes, structure, and climate. Organizational downsizing may involve workforce reduction, changes to programs and services, and simplifying processes.

Completing the Survey

There are seven sections to the survey, which takes about 30 minutes to answer. For most questions in each section, you evaluate items by circling the numbers. If you have any questions, please contact Professor Ethel Auster collect at (416) 978-7098, by e-mail at auster@fis.utoronto.ca; or Shauna Taylor, Doctoral Candidate, by e-mail at taylor@fis.utoronto.ca.

Confidentiality

We respect and will protect the confidentiality of every respondent. Neither you nor your Library will be identified by name. The ID number on the booklet will be used for follow-up purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire itself. The list of names and ID numbers will be destroyed after the data have been collected. The data will be reported as aggregated totals, by geographic region or other broad categories only. Participation in the survey is completely voluntary.
Section A: Organizational Downsizing Strategies

Downsizing has been defined in a variety of ways. In this study, we define downsizing as a planned organizational change made in response to declining resources. It is a set of strategies undertaken on the part of management that has wide-ranging implications for many aspects of the organization including the personnel, processes, structure, and climate. Organizational downsizing may involve workforce reduction, changes to programs and services, and simplifying processes.

The questions in this survey refer to changes in your Library. In all cases, the word “Library” refers to your Library System.

A1 - Given the above definition of downsizing, has your Library engaged in downsizing activities during the last 5 years? Please check one box.

☐ Yes
☐ No

GO TO SECTION G: BACKGROUND INFORMATION

A2 - In your opinion, at what stage is your Library in its downsizing activities? Please check one box.

☐ Early stages
☐ Well under way
☐ Near completion
☐ Don’t know

A3 - The following tactics are frequently undertaken during downsizing. Please indicate the extent to which your Library engaged in these tactics regarding staff during the last 5 years. Circle the appropriate number for each tactic.

<table>
<thead>
<tr>
<th>Tactic</th>
<th>Not at all</th>
<th>Some</th>
<th>A great deal</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Layoffs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Firings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Regular retirements</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Early retirements (providing incentives for senior employees before their normal retirement date)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Buyouts (providing incentives for those not eligible for early retirement)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Attrition (not filling openings created by voluntary resignations or regular retirements)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Filling job openings with contract staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8) Transfers to a new job within the Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9) Transfers to a new job within the University</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10) Job sharing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11) Leaves of absence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12) Salary cuts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13) Salary freezes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14) Rehiring selected former staff as consultants</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15) Other (please specify)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
### A4 - The following activities are frequently undertaken during downsizing. Please indicate the extent to which your Library engaged in these activities during the last 5 years. Circle the appropriate number for each activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not at all</th>
<th>Some</th>
<th>A great deal</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Outsourced tasks formerly done within this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Redesigned tasks and jobs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Formed work teams</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Automated work processes wherever possible</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Merged or reorganized departments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Reduced the number of hierarchical levels</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Reduced interaction with users</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8) Redesigned work to take advantage of technological improvements</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9) Implemented new technologies to reduce the number of staff required</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10) Reorganized the senior management team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11) Decreased the number of individuals doing the same tasks or work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12) Eliminated specific tasks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13) Improved technologies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### A5 - The following actions are frequently undertaken during downsizing. Please indicate the extent to which your Library engaged in these actions during the last 5 years. Circle the appropriate number for each action.

<table>
<thead>
<tr>
<th>Action</th>
<th>Not at all</th>
<th>Some</th>
<th>A great deal</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) A new direction for the Library has been developed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) A systematic analysis of personnel (skills, seniority, etc.) was conducted in order to determine the downsizing strategy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Mechanisms to increase communication and information sharing have been implemented since downsizing began</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Changes in reward and recognition systems have been implemented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Input regarding downsizing activities has been sought from library users</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Downsizing activities have been closely coordinated with the union(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Training and orientation programs for staff have been implemented in connection with the downsizing effort</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8) A continuous improvement philosophy has been adopted</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9) A systematic analysis of jobs and tasks was conducted in order to determine the downsizing strategy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10) Changes in employee performance appraisal systems have been implemented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11) Technology has been used to improve the efficiency and effectiveness of library work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

196
A6 - The following elements are frequently changed during downsizing. Please indicate the extent to which your Library changed these elements during the last 5 years. Circle the appropriate number for each element.

<table>
<thead>
<tr>
<th>Element</th>
<th>Not at all</th>
<th>Some</th>
<th>A great deal</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) The mission of the Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Policies, procedures, and methods</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Organizational structure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Senior management's vision for the future of the Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Programs and services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Technologies and systems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Organizational strategies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

A7 - Have any programs, services or activities in the Library been eliminated in the last 5 years? Please check one box.

☐ Yes
☐ No — GO TO QUESTION A10

A8 - Have any of the eliminated programs, services or activities affected you? Please check one box.

☐ Yes
☐ No — GO TO QUESTION A10

A9 - If YES, please explain which eliminated programs, services or activities affected you and how.
A10 - Have any programs, services or activities in the Library been reduced noticeably in the last 5 years? Please check one box.

☐ Yes
☐ No ➔ GO TO QUESTION A13

A11 - Have any of these reductions in programs, services or activities affected you? Please check one box.

☐ Yes
☐ No ➔ GO TO QUESTION A13

A12 - If YES, please explain which reductions in programs, services or activities affected you and how.
A13 - Have any new programs, services or activities been added to the Library in the last 5 years? Please check one box.

☐ Yes
☐ No ➔ GO TO QUESTION A16

A14 - Have any of the new programs, services or activities affected you? Please check one box.

☐ Yes
☐ No ➔ GO TO QUESTION A16

A15 - If YES, please explain which new programs, services or activities affected you and how.
A16 - Please rate the extent to which the following descriptions of organizational change were typical of your Library during the past 5 years by dividing 100 points between the two alternatives. For example, if description A seems very similar to your Library and B seems somewhat similar, you might give 70 points to A and 30 points to B. Be sure to use all 100 points.

A. The changes that took place in the Library may be described as minor. The emphasis was on specific work activities or functions that needed to be improved, for example, improved policies, methods, and procedures. Our focus is on doing better or more of what already existed. The Library engaged in making minor adjustments in mission, strategy, structure, and processes.

B. The changes that took place in the Library may be described as major. Our former ways of doing things were replaced by something new, for example, we introduced new services, processes, technologies. This transformation involved a change in the way staff thought about their work and the organization, a change in the way work was done, and a change in the vision of the future of the Library. The Library engaged in making major modifications in mission, strategy, structure, and processes.

100 Points Total

Section B: Leadership

B1 - Listed below are descriptive statements about the leadership behaviour of the senior management team. For each statement we would like you to judge how frequently the senior management team displayed the behaviour described during the last 5 years. Please circle the appropriate number for each statement.

<table>
<thead>
<tr>
<th>The senior management team . . .</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Find out what I want and try to help me to get it</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Have provided me with new ways of looking at things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Have been visible and active in leading the way</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Continually value and praise organization members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Command respect from everyone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Provide a vision of the future that I can get excited about</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Treat each subordinate individually</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8) Make everyone around them enthusiastic about assignments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9) Encourage me to express my ideas and opinions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10) Enable me to think about old problems in new ways</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11) Inspire loyalty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12) Have a clear vision or direction for the future of the library which they transmit to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not at all</td>
<td>Some</td>
<td>A great deal</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------</td>
<td>------------</td>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>1</td>
<td>The initial decision that downsizing would be necessary</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>The development of an overall downsizing plan</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>The reallocation of resources</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>The restructuring of work units</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>The redesign of work processes</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>The implementation of new work processes</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>The development of new performance measurement criteria for staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>The implementation of new performance measurement criteria for staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>The development of new reward structures</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>The implementation of new reward structures</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>The design of downsizing strategies regarding staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>The implementation of downsizing strategies regarding staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>The design of new communication methods</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>The implementation of new communication methods</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>The design of new training programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>The implementation of new training programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>The design of new services for users</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>The implementation of new services for users</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
## Section D: Communication

### D1 - How frequently did you receive information regarding downsizing in your Library from the following sources during the last 5 years? Please circle the appropriate number for each source.

<table>
<thead>
<tr>
<th>Source</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Senior management</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Immediate supervisor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Chief Librarian</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Other University administrators</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Other University employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Other (please specify)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### D2 - How frequently did the senior management team use the following methods to communicate to staff about downsizing during the last 5 years? Please circle the appropriate number for each method.

<table>
<thead>
<tr>
<th>Method</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Letters or memos</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) Group meetings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) Telephone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) Voice mail</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) Individual meetings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) Electronic mail</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) Newsletters</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8) Other (please specify)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### D3 - Circle the number between each pair of opposites that best represents how you feel about the communication you received regarding downsizing in your Library during the last 5 years. Please complete all scales.

<table>
<thead>
<tr>
<th>Feeling</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Untimely</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>2) Unreliable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>3) Sporadic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>4) Inaccurate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>5) Partial</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6) Minimal details</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>7) Infrequent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>8) Don’t know</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
## Section E: Organizational Characteristics

**E1 - Listed below are descriptive statements about organizational characteristics. Please indicate the extent to which you agree or disagree that the statement describes your Library as it is right now. Circle the appropriate number for each statement.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) A lot of resistance to change exists in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2) Creativity has decreased in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3) Morale is increasing in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4) Downsizing has been done in selected areas in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5) The senior management team have high credibility in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6) Special interest groups within the Library are becoming more vocal</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7) We have a shared vision of what our Library will be like in the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8) There is extensive use of problem-solving teams in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9) Conflict is increasing in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10) Staff share little information with each other in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11) The senior management team have a short-term orientation</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12) Demands from special interest groups are increasing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13) Our Library is very responsive to change</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14) Most major decisions are made by the senior management team in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15) Trust levels in this Library are low</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16) Our Library has a long-term purpose and direction</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17) Major decisions are very centralized in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18) Grievances are common in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19) Long-term planning is neglected in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20) Working in this Library is like being a part of a team</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21) Only good news is passed upwards in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22) Lack of commitment is common in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23) Downsizing has been applied to all units in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24) Innovation activity in this Library is increasing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Section F: Attitudes Toward Job

F1 - Listed below are descriptive statements about attitudes towards one's job. Please indicate the extent to which you agree or disagree that the statement describes how you feel about your job right now. Circle the appropriate number for each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) The security of my job is a source of anxiety to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2) I know how my job contributes to the overall goals and objectives of this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3) My work load has increased significantly</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4) I am paid fairly for the work I do in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5) My work objectives are well defined</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6) Opportunities for advancement and promotion exist for me in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7) I am unclear on the scope and responsibilities of my job</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8) I have so much to do, some things are not getting done</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9) My financial future will continue to improve</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10) My future in this Library looks secure</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11) I have so much to do, I can no longer do everything as well as I used to</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12) Opportunities to develop new skills exist for me in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13) Opportunities for personal growth and development exist for me in this Library</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

F2 - In your opinion, what have been the most positive outcomes of downsizing in your Library?
F3 - In your opinion, what have been the most negative outcomes of downsizing in your Library?
Section G: Background Information

G1 - What is your specific job title? ____________________________

G2 - Is this a management position? (check one box)

☐ Yes
☐ No Go to question G4

G3 - How many staff report to you? Please fill in an approximate number.

1) Number of Professionals ______  
2) Number of Nonprofessionals ______

G4 - Type of Library work: (check one box)

☐ Administration
☐ Public Services
☐ Systems
☐ Technical Services
☐ Other (please name) ____________________________

G5 - Status of your position: (check one box)

☐ Full-time Permanent
☐ Part-time Permanent
☐ Full-time Contract
☐ Part-time Contract
☐ Other (please specify) ____________________________

G6 - Age group: (check one box)

☐ Under 25
☐ 25 to 34 years
☐ 35 to 44 years
☐ 45 to 54 years
☐ 55 to 64 years
☐ 65 or older

G7 - Gender: (check one box)

☐ Male
☐ Female
G8 - Years of service in your current position: (check one box)

- Less than 12 months
- 1 to 5 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- More than 20 years

G9 - Years of service in this Library system: (check one box)

- Less than 12 months
- 1 to 5 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- More than 20 years

G10 - Years of service as a professional: (check one box)

- Less than 12 months
- 1 to 5 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- More than 20 years

G11 - Salary range: (check one box)

- Under $30,000 per year
- $30,000 to $39,999
- $40,000 to $49,999
- $50,000 to $59,999
- $60,000 to $69,999
- $70,000 to $79,999
- $80,000 to $89,999
- $90,000 and over per year
- I prefer not to answer

G12 - Graduate degrees: (list all graduate degrees including MLS or its equivalent)

________________________________________
________________________________________
________________________________________

G13 - Are you willing to be interviewed for this study? (check one box)

- Yes
- No
General Comments

Please use the space provided below to address areas of concern that were not included in the survey. We appreciate the time and effort you have taken to answer our questions.
Please mail your questionnaire in the postage-paid envelope provided. The return address is:

Professor Ethel Auster  
Faculty of Information Studies  
University of Toronto  
140 St. George Street  
Toronto, Ontario  
M5S 3G6

Shauna Taylor, Doctoral Candidate  
Faculty of Information Studies  
University of Toronto  
140 St. George Street  
Toronto, Ontario  
M5S 3G6

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

FUNDDED BY  
SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA  
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APPENDIX C
PRENOTIFICATION LETTER

Date
Address

Dear

Within the next few days, you will receive a request to complete a survey questionnaire. We are mailing it to you in an effort to gather an in-depth picture of the downsizing strategies and processes that Canadian academic research libraries have used and the outcomes these have had for the organizations and the professional employees that work in them.

This study is being conducted by researchers at the Faculty of Information Studies, University of Toronto, and hopes to fill a void in the library literature on the phenomenon of organizational downsizing.

We would greatly appreciate your taking the time necessary to complete and return your questionnaire.

Thank you in advance for your help.

Sincerely,

Ethel Auster
Professor and Principal Investigator

Shauna Taylor
Doctoral Candidate and Research Assistant
APPENDIX D

COVER LETTER

Date
Address

Dear,

The pace and scope of the changes that you and your library have had to cope with in recent years are unprecedented. Foremost among these is the almost universal response libraries have made in the face of budget cuts: downsizing. However, little research in Canada has been done to document what has taken place in our largest research libraries.

This study, funded by the Social Sciences and Humanities Research Council of Canada and endorsed by the Canadian Association of Research Libraries, seeks to provide a comprehensive, in-depth picture of the downsizing strategies and processes that Canadian research libraries have used and the outcomes these have had for the organizations and the professional employees that work in them.

In order for our results to be as accurate and representative as possible and of maximum value to you and the professional community, we need the input of every professional currently employed in each of the 25 university-based CARL libraries. We ask that you complete and return our questionnaire which provides you with an opportunity to tell how you experienced downsizing.

You may rest assured of complete confidentiality. The questionnaire has an identification number on the front cover for mailing and follow-up purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire itself. Data will be analyzed and reported by geographical region and topic of interest. Individual respondents and institutions will not be named.

We would be happy to answer any questions you may have about this study. Please e-mail or call us collect at auster@fis.utoronto, (416) 978-7098, or taylor@fis.utoronto.ca.

Thank you very much for your assistance.

Sincerely,

Ethel Auster
Professor and Principle Investigator

Shauna Taylor
Doctoral Candidate and Research Assistant

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APPENDIX E

BALLOT

Participate & Win $500!

NAME: ______________________ PHONE: ______________________

Simply fill out the ballot and place it in the envelope marked “ballot”. Return your sealed ballot to us with your completed survey postmarked by April 3, 1998. The draw will take place April 24, 1998. One ballot will be randomly drawn from among the eligible ballots. The winner will be notified by phone shortly thereafter.

FACULTY OF INFORMATION STUDIES

BALLOT
March 30, 1998

Last week we sent you a questionnaire inviting you to tell us how you experienced downsizing in your library. If you have already completed and returned the questionnaire to us, please accept our sincere thanks. If not, please do so today. In order for the results of this study to truly reflect the downsizing practices and outcomes of Canadian research libraries, it is essential that each person in the sample return the questionnaire. Your response really does matter.

In you did not receive the questionnaire, or it got misplaced, please call us collect at (416) 978-7098 and we will get one to you immediately.

Sincerely,

Ethel Auster
Professor and Principal Investigator

Shauna Taylor
Doctoral Candidate and Research Assistant
APPENDIX G
SECOND FOLLOW-UP

Date
Address

Dear

About three weeks ago, we wrote to you inviting you to participate in a survey on organizational downsizing in Canadian research libraries. As of today, we have not yet received your completed questionnaire. We realize that you may not have had time to complete it. However, we would genuinely appreciate hearing from you.

We are writing to you again because of the significance each questionnaire has to the usefulness of this study. To our knowledge, this is the first national study of this type to focus on how downsizing is implemented in Canadian research libraries and the impact downsizing has had on the library and professional staff. In order for the results of this study to truly reflect the downsizing practices and outcomes of Canadian research libraries, it is essential that each person in the sample return the questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed. We would be happy to answer any questions you have about the study. Please e-mail us at auster@fis.utoronto.ca, taylor@fis.utoronto.ca, or call us collect at (416) 978-7098.

Thank you.

Sincerely,

Ethel Auster
Professor Principal Investigator

Shauna Taylor
Doctoral Candidate and Research Assistant
Table H.1. Results of the regression analysis showing the moderating effect of stage of downsizing (SD) on work redesign (WR) and employee attitudes toward the job.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Interaction Effects</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>F value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>WR x SD</td>
<td>.66 $^{**}$</td>
<td>.07</td>
<td>2.50 $^{**}$</td>
</tr>
</tbody>
</table>

*8 Dummy variables entered as independent variables into the regression model to control for Library effect.

$^{**}$Not significant

$^{**}p<.01$
Table I.1. Results of the regression analyses showing the moderating effects of participation (P), communication (C), and transformational leadership (TL) on work redesign strategy (WR) and employee attitudes toward the job.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Interaction Effects</th>
<th>Standardized Regression Coefficient $\beta$</th>
<th>Adjusted $R^2$</th>
<th>F value for model $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Toward Job</td>
<td>WR x P</td>
<td>-.26$^{**}$</td>
<td>.22</td>
<td>6.16$^{***}$</td>
</tr>
<tr>
<td></td>
<td>WR x C</td>
<td>.05$^{**}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WR x TL</td>
<td>.03$^{**}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library$^{1-a}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^1$ Dummy variables entered as independent variables into the regression model to control for Library effect.

$^{**}$Not significant

$^{***}p \leq .001$
APPENDIX J

EXPLORATORY ANALYSES OF DOWNSIZING APPROACH

In our study, we made the decision to categorize libraries into two groups based on their scores on a scale from 0 to 100 (see 3.4.1.1). Libraries scoring 50 and below would be categorized as adopting a convergence approach to downsizing and libraries scoring above 50 would be categorized as adopting a reorientation approach to downsizing. Another way one could have categorized the libraries by downsizing approach would be to look at the library scores that naturally group together. The library scores for downsizing approach ranged from 51.7 to 70.9. A group of seven libraries had scores between 63.0 and 70.9. The two remaining libraries are slightly further away from this group having scores of 51.7 and 55.6. Since the two libraries seem to stand apart from the group of seven an artificial split could be made at 60. That is, libraries scoring 60 and below (Libraries 2 and 9) could be categorized as convergence and libraries scoring above 60 (Libraries 1, 3, 4, 5, 6, 7, and 8) could be categorized as reorientation. Based on this criterion for categorization, one could test the proposed three hypotheses relating downsizing approach to downsizing processes. To test hypotheses 1 to 3, a one-tailed t-test was performed. Based on our exploratory analyses, we found that:

H1. The data do not support Hypothesis 1, in that there was no significant difference between libraries in the convergent group and libraries in the reorientation group regarding participation (t = .70, p = .25).

H2. The data do not support Hypothesis 2, in that there was no significant difference between libraries in the convergent group and libraries in the reorientation group regarding communication (t = 1.1, p = .16).
H3. The data do not support Hypothesis 3, in that there was no significant difference between libraries in the convergent group and libraries in the reorientation group regarding transformational leadership behaviours (t = 1.7, p = .06).

The lack of support for all of the hypotheses is not surprising since we did force an artificial split in the data in order to categorize the libraries into two groups. We were curious, however, to see if there were any differences in the lowest scoring library and the highest scoring library within the reorientation category. If the effect of downsizing approach is very strong, we might be able to see a difference in our outcome variables (e.g., participation, communication, and transformational leadership) even within gradations of the reorientation category. We decided to do some exploratory analyses. A one-tailed t-test was performed between the lowest (Library 2) and highest (Library 3) scoring libraries. The results show there was a significant difference between libraries regarding participation (t = 2.3, p = .01), communication (t = 1.9, p = .03), and transformational leadership (t = 2.6, p = .01). Although these findings are exploratory, we interpret the results as a positive indication that had we libraries with a wider range of downsizing approach scores (i.e., scores in the 30 to 40 range), Hypotheses 1 to 3 may have been supported. In fact, it seems quite possible that Library 2 is closest to the convergence approach to downsizing. Further exploratory analysis seems to support this view. In the dendrogram below (Figure 5.5), we have clustered the nine libraries on the three outcome variables (participation, communication, and transformational leadership) to see which libraries are similar to one another. Three clusters are found: cluster 1 consisting of Libraries 5, 8, 9, 4, 6; cluster 2 consisting of Libraries 3, 1, 7; and cluster 3 consisting of Library 2. In interpreting dendrograms we usually interpret a large jump in scale as showing a merger of two entities which are not naturally grouped together (Bund Jackson 1983). In Figure J.1 the large jump occurs for the last merger of Libraries 5, 8, 9, 4, 6, 3, 1, 7 with Library 2. This finding is quite interesting because Library 2 is also our lowest scoring library on downsizing approach.
Figure J.1. Cluster Analysis on Participation, Communication, and Transformational Leadership for 9 Libraries.

Rescaled Distance Cluster Combine

<table>
<thead>
<tr>
<th>CASE</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>Num</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>5</td>
<td>++</td>
<td>---</td>
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<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>8</td>
<td>---</td>
<td></td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>9</td>
<td>++</td>
<td>---</td>
<td>----</td>
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<td>----</td>
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</tr>
<tr>
<td>4</td>
<td>+++I</td>
<td></td>
<td>----</td>
<td>----</td>
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<td>----</td>
</tr>
<tr>
<td>6</td>
<td>+++</td>
<td>+++</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>3</td>
<td>---</td>
<td></td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1</td>
<td>---</td>
<td>+++</td>
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<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>7</td>
<td>---</td>
<td></td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2</td>
<td>---</td>
<td>+++</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

Dendrogram using Average Linkage (Between Groups)

While the findings of the t-test and cluster analysis are exploratory in nature, they do indicate that Library 2 is different from the other libraries. These findings coupled with the fact that Library 2 also scored lowest on downsizing approach (51.7) strengthens our view that Library 2 is closest to the convergence approach to downsizing.
REFERENCES


Brockner, J., T. Tyler, and R. Cooper-Schneider. 1992b. The Influence of Prior Commitment to an Institution on Reactions to Perceived Unfairness: The Higher They Are, the Harder They Fall. *Administrative Science Quarterly* 37(2): 241-261.


