



Metaphor in Nortel's letters to shareholders 1997-2006

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Abstract

Purpose – This paper seeks to analyze the use of metaphor in the 1997-2006 letters to shareholders (LTS) of Nortel Networks Corporation (Nortel). It aims to assess the prevalence of metaphor and changes in the use of metaphor as turnover in corporate leadership took place and as Nortel's financial fortunes changed.

Design/methodology/approach – Metaphors in the LTS are part of a corporation's voluntary disclosures, which in turn may be used for impression management purposes. The paper uses discourse analysis, in particular quantitative and qualitative content analysis, of the LTS to identify key metaphors and to evaluate changes in the prevalence of these metaphors across corporate leaders and during phases of growth and decline.

Findings – Several key metaphors are identified in Nortel's letters to shareholders, including science, journey, vision, construction and theatre. Evidence is also found that demonstrates changes in the prevalence of metaphors across various chief executive officers, and changes in the meaning of metaphors in periods of growth and decline.

Originality/value – The contribution of the paper is to highlight the use of metaphor in the voluntary disclosures (i.e. letters to shareholders) of a major North American corporation during a turbulent decade. The preferences of four very different CEOs are reflected in their choice of metaphor, supporting arguments that metaphor is used in voluntary disclosures as a means of impression management, particularly in relation to trends in corporate financial performance.

Keywords Letter to shareholders, Metaphors, Discourse analysis, Disclosure, Annual reports, Financial reporting

Paper type Research paper

Introduction

Nortel Networks Corporation (Nortel) (Northern Telecom until 1998) was considered a Canadian corporate icon until allegations of accounting irregularities surfaced in 2003. At its height in July 2000, Nortel's shares traded at \$124.50 Canadian per share (\$86.72US), millions of Canadians owned (either directly or indirectly) shares in the

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company, and Nortel made up 36.5 percent of the value of the Toronto Stock Exchange's (TSX) composite index (CBC, 2009a). This study examines the letters to shareholders (LTS) issued in Nortel's corporate annual reports in the years 1997 to 2006, focusing on changes in the use of metaphor as a rhetorical device and a tool for impression management over this ten year period. As well, the use of specific metaphors is traced across changes in Chief Executive Officers (CEOs) and in relation to Nortel's changing performance.

Literature review

Letters to shareholders

LTS form part of a corporation's voluntary disclosures (Devinney and Kabanoff, 1999; Smith and Taffler, 2000). Researchers have posited that voluntary disclosures are able to reduce information asymmetry between management and shareholders (Boesso and Kumar, 2007) and that the nature of voluntary disclosures is linked to the personalities of key individuals within a corporation (Chatterjee and Hambrick, 2007). Research has demonstrated that voluntary disclosure tends to increase with organizational size (Meek *et al.*, 1995), complexity, instability, and volatility (Healy, 2001). Voluntary disclosures are open to manipulation (Balata and Breton, 2005; Mir *et al.*, 2009) and lend themselves to impression management activities (Neu *et al.*, 1998). Smith and Taffler (2000, p. 625) review various studies which use content analysis to explore attributions in LTS and conclude the "[...] studies provide strong evidence of 'self-serving' or 'hedonic' managerial behavior in the annual report narrative. Such self-serving attributions are an attempt at 'impression management'". According to Boesso and Kumar (2007, p. 292) "voluntary disclosures appear to be not simply a means of satisfying the information needs of investors and financial community but a strategic tool that companies can use for managing stakeholder relationship[s]."

Both the accounting and business communications literatures have a long history of studying the LTS included in corporate annual reports. Hyland (1998, p. 224) identified the LTS as having "enormous rhetorical importance", and noted that the LTS is the most prominent and widely read part of a corporate annual report. Devinney and Kabanoff (1999) examined the use of words in the LTS to reveal a corporate strategic orientation and concluded that the text of the LTS provides valuable clues to corporate expectations of the future. David (2001) noted that the narrative sections of corporate annual reports, including the LTS, are those sections most likely to reveal embedded cultural beliefs and values and most likely to provoke interpretive and emotional responses in readers. Prasad and Mir (2002, p. 95), while noting the LTS is the most read part of the annual report, are primarily interested in the LTS since it serves as a "rich source of latent, symbolic meanings". Maltby and Tsamenyi (2010, p. 391) note "[...] that narrative accounting disclosures were being deployed in the interests of the mining companies [on the Gold Coast] in different ways at different epochs in their history".

Amernic *et al.* (2007) summarized reasons the LTS is an appropriate document for study and analysis: it is an important text; it is part of a public document; it is the most widely read part of the annual report; it represents a personal accountability narrative by those signing the LTS; and regardless of whether the LTS was written wholly, in part, or not at all, by the signatories, those signing the LTS are ultimately and legally responsible for the text of the letter.

To these reasons we add those identified by Sussman *et al.* (1983) in relation to speeches delivered by top corporate officers. The texts: reflect corporate values; represent the culmination of a concerted effort (and a formal statement) by the corporation; are issued at a specific time (therefore their context can be evaluated); represent "formally sanctioned boundary spanning activities"; and are addressed indirectly to a mass audience.

Other reasons to study the corporate LTS, as identified specifically in the accounting literature, are that: it is less restricted by regulation, therefore it could be more informative than other parts of the annual report; and the LTS includes explanations and interpretations not found elsewhere in the annual report (Abrahamson and Amir, 1996). Devinney and Kabanoff (1999) are explicit in identifying the LTS as forming part of a corporation's voluntary disclosures and they indicate that the LTS provides an opportunity to examine efforts to shape readers' impressions.

Thus there is considerable evidence that the LTS is an important and meaningful text to evaluate. This is particularly the case for corporations in the public eye, as Nortel was in the period examined. These disclosures form part of a corporation's voluntary disclosures and may be understood as part of the corporation's impression management activities.

Metaphor

Lakoff and Johnson (1980) define metaphor as the use of expressions from one domain to talk about corresponding concepts in another domain, as a way of understanding and experiencing one thing in terms of another. "The primary function of a metaphor is to provide a partial understanding of one kind of experience in terms of another" (Lakoff and Johnson, 1980, p. 154). According to Lakoff and Johnson, metaphor serves as a means of highlighting some aspects of a concept, while at the same time hiding or suppressing other dimensions. Accepting a metaphor and focusing only on aspects of experience which are highlighted by the metaphor allows the metaphor to acquire the status of truth. Given this, metaphor can create a reality by helping to set goals and serving as a guide for future action (Lakoff and Johnson, 1980). When metaphor guides our actions, the actions we take will be consistent with the metaphor. Lakoff and Johnson note that "Most of our metaphors have evolved in our culture over a long period, but many are imposed on us by people in power – political leaders, religious leaders, business leaders [...]" (pp. 159-60). It follows then that those who get to impose their metaphors get to define what we consider true, and then what actions we will take.

Lakoff and Johnson (1980) see metaphor as more than a linguistic device. Rather, metaphors allow us to use one highly structured and clearly delineated concept to structure another which may be less clearly understood. There may be many metaphors that partially structure a single concept. In the case of a concept, such as business, which is not well delineated, Lakoff and Johnson note that overlapping metaphors are possible and that "When a concept is structured by more than one metaphor, the different metaphorical structurings usually fit together in a coherent fashion" (p. 86).

Lakoff and Johnson introduce the idea of formally written text as a form of one-party rational argument. LTS can be understood as examples of such one-party rational arguments, which pay particular attention to properties of the argument such as: the content of the argument, how the argument progresses, the structure of the argument, its strength, the basicness and obviousness of the argument, and its directness and clarity

(Lakoff and Johnson, 1980). Taken together, the LTS can be seen as a one-party rational argument imposed on us by a business leader, who uses metaphor to define what we should consider to be true and what actions we should take.

Typically, metaphor juxtaposes two subjects and forges a connection between them (Walters, 2003). It has been argued that the use of metaphor in language is neither trivial (Cornelissen, 2004) nor neutral (Amernic *et al.*, 2007). For example, metaphors can be manipulated (McGoun *et al.*, 2006) in order to influence a reader's interpretation and actions. The act of writing itself is not neutral; rather writing is intentionally active and constructive (Ferguson, 2007). Metaphors in the LTS, then, can be seen as part of a corporation's voluntary disclosures, written intentionally to manage shareholders' impressions and expectations. This is the case regardless of whether the metaphor is: a substitute for a different expression; an implicit comparison; or a reciprocal transaction between two terms, which results in the creation of a new and unique meaning or relationship between the terms that would not otherwise have been possible (Walters-York, 1996).

A brief history of Nortel[1]

Nortel was founded in 1895 as Northern Electric and Manufacturing (Nortel, 2009a). Since that time "Nortel has been at the forefront of innovation in the ever evolving history of communications" (Nortel, 2009a, p. 1). These innovations were initially in telephone switching technology (electromechanical, computerized, packet, and digital switches), telephone equipment, and communications infrastructure (including microwave, fiber-optic, and satellite communications) (Nortel, 2009a). More recently, Nortel's innovations focused on internet-based communications and efforts to exploit "the convergence of communications and IT [information technology] industries" (Nortel, 2009a, p. 2).

Nortel's place in Canadian business in the 1990s has been described as "mythic" (CBC, 2009a), and Nortel served as "a shining symbol of the modernization of Canadian industry" (Maich, 2009). According to the CBC (2009a, p. 3), "From a stock market perspective, Nortel became a giant through explosive growth as it developed equipment to address the surge in internet demand in the latter half of the 1990s". Beginning in late October 2001, however, Nortel's fortunes began to change (*ibid.*). Over the next few years Nortel's sales and profit forecasts were downgraded, successive rounds of layoffs reduced its year 2000 workforce of 93,700 by almost two-thirds, its stock price collapsed, a series of financial statement restatements were required, a number of senior executives were fired and/or faced criminal charges related to their activities at Nortel, and shareholders initiated several class-action lawsuits against the company. In January 2009, Nortel, once Canada's largest company, filed for bankruptcy protection. Since then Nortel has divested many of its business divisions and closed down international operations. Nortel issued its final LTS in 2007. In 2008 and 2009 Nortel's annual report consisted only of financial statements; in 2010 the financial statements were accompanied by Management's Discussion and Analysis. In June 2009 Nortel's shares were delisted in both Canada and the USA (CBC, 2009b). By December 31, 2010 Nortel's workforce was reduced to 740 individuals (Nortel, 2010, p. 78). Throughout 2009 and 2010 Nortel continued selling off assets and in April 2011 Nortel announced plans to sell off its patent portfolio (Nortel, 2011) a move that "[...] will mark the end of a storied 128-year-old communications company [...]" (McNish and Marlow, 2010).

Table I highlights key aspects of Nortel's performance from 1997-2006. The number of employees, revenues, assets, and research and development spending, as originally reported in the respective annual reports, all show growth from 1997-2000. Beginning with a massive net loss in 2001, however, Nortel's statistics reflect a company in decline.

Bagnall (2009a) identified a number of possible reasons for Nortel's failure, including an inadequate accounting system whose reporting delays adversely impacted management decision making; a failure to identify and nurture key businesses in their product portfolio, resulting in research and development investments in many non-core technologies; and a comparative lack of productivity by Nortel employees in terms of revenue dollars generated per employee. In addition to these challenges, Nortel's many acquisitions in 1999 and 2000 left the company with a significant amount of debt, and the bursting of the technology bubble in late 2001 (Hunter, 2002) meant many of Nortel's customers were reluctant to invest in new telecommunications infrastructure.

Nortel's CEOs 1997-2006

MacDonald (2000, p. xxxviii) describes Nortel as "[...] a drama in itself [...] Moving on and off the stage is a panorama of personalities, ranging from the crafty to the forceful to the disdained. Some reach pinnacles of wealth and esteem, while others leave under a cloud". Though MacDonald's book chronicles Nortel's first 100 years (ending with John Roth as CEO), the "panorama of personalities" continued. John Roth was CEO from 1997-2000; Frank Dunn held the top job in 2001-2002; Bill Owens stepped in for

Year	Number of employees	Total assets	Revenues	Research and development expenses	Net income (loss)	Cash from (used in) operations
<i>Growth</i>						
1997	72,900	\$12,554	\$15,499	\$2,147	\$812	\$789
1998	75,000	\$19,732	\$17,575	\$2,453	\$(569)	\$1,586
1999	80,630	\$22,597	\$22,217	\$2,908	\$(197)	\$973
2000	93,700	\$42,180	\$30,275	\$4,005	\$(3,470)	\$40
<i>Decline</i>						
2001 ^b	52,100	\$21,137	\$17,511	\$3,224	\$(27,302)	\$425
2002 ^b	36,960	\$15,971	\$10,560	\$2,230	\$(3,585)	\$(589)
2003 ^b	35,160	\$16,591	\$10,193	\$1,960	\$434	\$78
2004 ^b	34,150	\$16,984	\$9,828	\$1,959	\$(51)	\$(164)
2005 ^b	34,760	\$18,112	\$10,523	\$1,856	\$(2,575)	\$(173)
2006	33,760	\$18,979	\$11,418	\$1,939	\$28	\$(32)

Notes: ^aNortel's 1997-1999 financial statements were reported in accordance with Canadian Generally Accepted Accounting Principles (GAAP); 2000-2006 financial statements were prepared in accordance with United States GAAP. ^bFinancial data for the years 2001-2005 was subsequently restated; the effect of restatements are not incorporated here

Sources: Financial data derived from Nortel's 1997-2006 financial statements as originally issued in each year's Annual Report. Financial data are reported in millions of US dollars for all years. Employment numbers based on information from the CAR for the year indicated or from Nortel's Environmental Performance Metrics (www.nortel.com/corporate/community/environment/performance_metrics/index.html) or averaged across both sources, if numbers differed

Table I.
Selected indicators of
Nortel's growth and
decline: 1997-2006^a

2003-2004; and Mike Zafrovski was CEO from 2005-2009. The following paragraphs describe the education and experience of each of Nortel's four most recent CEOs, as well as, where possible, something of their personalities and priorities, based on publicly available data.

John Roth

John Roth graduated from McGill University with a master's degree in electrical engineering in 1966 (MacDonald, 2000). Roth joined Nortel in 1969 as a design engineer, but quickly moved into management (MacDonald, 2000). Roth had a reputation for achieving results, for understanding technical details, but also "for strategic thinking, spotting trends, and seizing growth opportunities" (MacDonald, 2000, p. 163).

Roth introduced Nortel to the wireless communication industry, successfully capitalizing on an upsurge in demand for wireless digital switches in the 1990s. He also identified the move to internet-based communications as an important opportunity for Nortel and set out a vision (which he called webtone) for internet communications that would be as fast and reliable as telephone communications (MacDonald, 2000, p. 177). Roth's strategy to implement this vision was to acquire many smaller internet-focused companies; Nortel acquired 14 such companies in the first three years of Roth's tenure as CEO (MacDonald, 2000, p. 188). Roth was recognized in 2000 as Canada's CEO of the year and, in announcing his retirement, Nortel's Board of Directors commented "John Roth has distinguished himself as one of the truly outstanding CEOs and leaders in our industry. His vision and personal leadership style and his courage to make tough decisions, have served to define the modern Nortel Networks [. . .]" (Nortel, 2001b).

In spite of numerous accolades, John Roth has been blamed by some for Nortel's subsequent difficulties. Maich (2005) interviewed Nortel's former first ethics officer who indicated the emphasis on ethics was reduced during Roth's tenure. The CBC (2009c) noted that Roth extensively restructured Nortel away from a manufacturing company towards a service provider by outsourcing production and closing two-thirds of Nortel's manufacturing facilities. In 2001, the value of many of Roth's acquisitions – many purchased just the year before – collapsed. In spite of Nortel's operational and financial difficulties, Roth took early retirement in 2001, leaving Nortel without strong leadership (Bagnall, 2009b). Evans (2009) wrote "While Roth has mostly avoided the spotlight while Nortel has plunged into a death spiral, there's no doubt some of the strategic decisions made while he was CEO ultimately played a role in the company's financial struggles. Some of the multi-billion dollar acquisitions made under his watch, for example, were spectacular failures that [. . .] ultimately left the company vulnerable as it failed to secure strong footholds in many of the growth markets." This pattern is consistent with Chatterjee and Hambrick's (2007, p. 357) research on narcissistic CEOs, that found "narcissistic CEOs [. . .] engage in certain types of strategic actions: bold, quantum, highly visible initiatives, rather than incremental elaborations on the status quo. Given this, narcissistic CEOs will tend to deliver extreme and fluctuating performance for their organizations." Table I reflects the extremes of Nortel's performance during and immediately after Roth's time as CEO.

Frank Dunn

Frank Dunn, Nortel's former Chief Financial Officer under John Roth, joined Nortel in 1976 after graduating from McGill University with a Bachelor of Commerce degree,

having majored in finance (Nortel, 2001b). In Nortel's press release announcing Dunn's appointment, Nortel commented "[...] as we progressed through the search [for a new CEO], it became clear the industry was going through a deep and protracted correction. The company required the management skills, industry experience, and business credentials that Frank Dunn has demonstrated" (Nortel, 2001b, p. 1). Wahl (2004, p. 1) interpreted Dunn's appointment slightly differently "[...] he appeared to be the only guy willing to take the job: preserve Nortel at a time when the telecom industry was in complete disarray and the company was facing doom-by-debt". Writing just after Dunn was terminated for cause in April 2004, Wahl (2004, p. 1) described Dunn as "[...] abrasive and reluctant to collaborate with anyone outside a tight circle of advisors, he was suspicious of the media and a less-than-dynamic speaker". Crockett (2002) described Dunn as fiercely competitive, even "super aggressive", and as someone who does not like to lose.

At Nortel, Dunn implemented deep cost-cutting measures, but did not articulate a vision for the company (ibid.). While it appeared Nortel returned to profitability under Dunn's leadership, accounting irregularities were detected in 2003 that led the Board to have "[...] terminated for cause the Chief Executive Officer and the nine most senior finance leaders of this company because it held them responsible for the misconduct." (Nortel, 2004b, p. v). Detailed financial statement reviews begun in 2003 eventually led to the restatement of Nortel's audited financial statements for the years 2001-2005.

William (Bill) Owens

Bill Owens, a retired US admiral, who had served as vice-chairman of the US Joint Chiefs of Staff – the second highest ranking military officer in the US – was appointed to succeed Frank Dunn as Nortel's CEO (MacDonald, 2004; Nortel, 2004b). He graduated from the US Naval Academy with a degree in mathematics. In the US military, Owens had been "recognized as a superior strategist with a keen intellect, high social IQ and a deep interest in communications technology" (Wahl, 2005, p. 1). This interest in communications technology, and his business and political connections in the USA and internationally, probably led to Owens' 2002 appointment to Nortel's Board of Directors (MacDonald, 2004). When Nortel needed a new CEO to replace Frank Dunn, Owens seems to have been chosen since he could "step in and shore up the company's credibility" (Wahl, 2005, p. 1). Owens is known for his integrity (ibid.), for being "unflinchingly honest and forthright" (Wahl, 2005, p. 1), and as "a leader beyond reproach" (MacDonald, 2004, p. 1).

Owens instituted radical changes in Nortel's internal structure and culture in his efforts to "return Nortel to the list of global good corporate citizens" (Wahl, 2005, p. 5). According to Nortel's press release announcing his replacement, Owens succeeded: "Bill re-established stability within Nortel and credibility with all its stakeholders" (Nortel, 2005a, p. 1), however, Bagnall (2009a) indicated that Owens failed to complete mergers or joint ventures that could have brought Nortel much needed cash.

Mike Zafirovski

Mike Zafirovski's biography indicates he completed a degree in mathematics, and was captain of his college soccer and swimming teams (Nortel, 2005b). Zafirovski spent 25 years working at General Electric and was President and Chief Operating Officer at Motorola prior to joining Nortel (2005b). According to Nortel's press release (Nortel,

2005a, p. 1), “Mike Zafirovski has the kind of proven, team-building leadership that has seen him create significant new value during his career [. . .]”. According to Maich (2009, p. 2), “Zafirovski was a star hired away from Motorola, at enormous expense, and with much fanfare. He was seen as a technological whiz and a turnaround expert. But his tenure has been marked by deteriorating results, thousands more layoffs, and the spiraling destruction of the last remains of Nortel’s equity value”.

Under Zafirovski’s leadership Nortel: filed for bankruptcy protection in January 2009; began a systematic sell-off of divisions; and had its stock delisted from the Toronto and New York Stock Exchanges. Zafirovski himself left Nortel in August 2009 (Nortel, 2009b).

This paper examines the period 1997-2006 and the LTS written by successive CEOs. Throughout the ten year period under review, Nortel’s annual reports included annual LTS by the four CEOs described in Table II. We analyze these letters to evaluate how the use of metaphor varies by authorship and in response to Nortel’s changing fortunes.

Research questions

Metaphors in corporate letters to shareholders

We investigate the use of metaphors in the LTS contained in Nortel’s corporate annual reports as it rose to become the largest corporation in Canada (in terms of market value) and then descended towards bankruptcy. Prior research has identified metaphors in the LTS of other corporations.

Amernic and his colleagues (Craig and Amernic, 2004; Amernic and Craig, 2006; Amernic *et al.*, 2007) have been particularly active in examining the use of metaphor in corporate communications. Amernic and Craig (2006) identified a health metaphor in describing the well-being of General Electric. Amernic *et al.* (2007) identified five “root metaphors” in Jack Welch’s letters to General Electric shareholders: teacher; physician, architect, military commander, and saint or messiah (see also Amernic and Craig, 2006; Craig and Amernic, 2004). Amernic *et al.* (2007) described the CEO as a seer or visionary, which is consistent with a vision or sight metaphor.

In other related research, McGoun *et al.* (2006) discussed the metaphor of financial statements as the lens through which a corporation is viewed. Amernic and Craig (2006, p. 121) identified the metaphor of a “journey without end” in their analysis of the

Year	CEO	Chairman of the Board	Letter to shareholders (LTS)	Length of LTS (total number of words)	Length of LTS as percent of 1997 LTS
1997	John A. Roth	Donald J. Schuenke	Combined letter	1579	100
1998	John A. Roth	Donald J. Schuenke	Combined letter	1688	107
1999	John A. Roth	Frank C. Carlucci	Combined letter	1753	111
2000	John A. Roth	Frank C. Carlucci	Combined letter	1092	69
2001	Frank Dunn	L.R. Wilson	Combined letter	2132	135
2002	Frank Dunn	L.R. Wilson	Separate letters	1862	118
2003	Bill Owens	L.R. Wilson	Separate letters	2053	130
2004	Bill Owens	L.R. Wilson	Separate letters	2434	154
2005	Mike S. Zafirovski	Harry J. Pearce	Separate letters	2712	172
2006	Mike S. Zafirovski	Harry J. Pearce	Separate letters	2792	177

Table II.
Nortel: setting the tone at the top

letter announcing the merger of three major aluminum companies. Spence (2007) also identified the metaphor of a journey in describing corporate social and environmental reporting. He argued that this metaphor has been used by corporations to avoid defining what the destination actually is.

Other researchers have also identified metaphors in corporate communications. David (2001, p. 215) noted the use by Microsoft of a "high-tech myth of innovation and change" in their 1997 corporate annual report. In addition, David (2001) identified history as a key metaphor in Coca-Cola's corporate annual reports. Cornelissen (2004, p. 705) examined the metaphor of "organization as theatre", which is consistent with Amernic *et al.*'s (2007) metaphor of the leader as an art form. The metaphor of sport, competition and games (McGoun *et al.*, 2006; Amernic and Craig, 2006; Amernic *et al.*, 2007) is an enduring metaphor in organizational theory and communications.

We consider corporate LTS to form part of a corporation's voluntary disclosures, chosen as an aid to manage shareholder impressions. As an element of voluntary disclosure, we anticipate the prevalence of specific metaphors in Nortel's letters to shareholders will vary over the ten year period studied, across Chief Executive Officers and as Nortel's performance varies. Specifically,

- Based on the prior research noted previously, we anticipate being able to identify metaphors in Nortel's LTS.
- Since LTS are voluntary disclosures, we anticipate the nature of metaphors used in the LTS will vary across Nortel's four different CEOs.
- We anticipate metaphors will be used to manage shareholder expectations, such that the metaphors included in Nortel's LTS in periods of growth and decline will differ and the meaning attributed to some metaphors will differ based on performance.

Method

Techniques used to analyze letters to shareholders

A variety of techniques have been employed to analyze LTS in previous research, with most analysis of LTS conducted using content or textual analysis (Devinney and Kabanoff, 1999; Sussman *et al.*, 1983; Abrahamson and Amir, 1996). Suddaby and Greenwood (2005) identified key words using an inductive process and then tallied the frequencies of each key word (including alternative derivations and plurals of the word). Many other researchers have focused on qualitative approaches to analyzing LTS (Jones and Shoemaker, 1994; Hyland, 1998). In a specific analysis of metaphors, Amernic *et al.* (2007) describe a process of "close readings" that are used to identify metaphors used in the LTS. Metaphors are then distilled down into a small number of root or fundamental metaphors. They then generate a table of frequencies of use of various root metaphors.

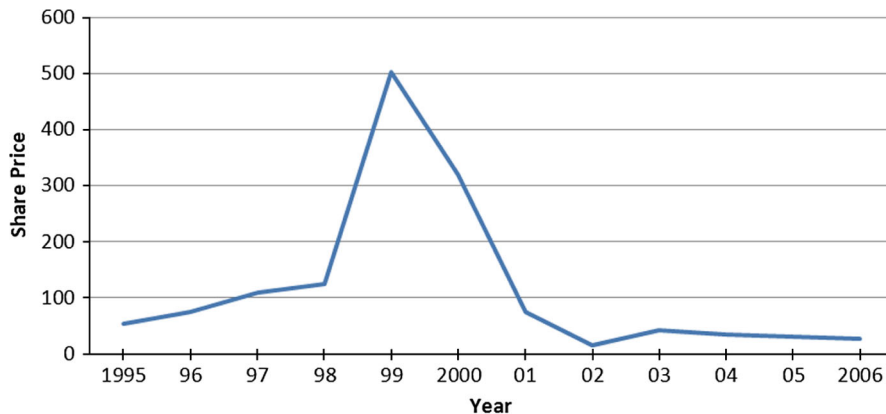
Copies of Nortel's 1997-2006 annual reports were obtained from the SEDAR web site (www.sedar.com). From 1997-2001 one LTS, signed by both the Chair and CEO was issued. Beginning in 2002, two different letters were written each year, both addressed to the shareholders, one signed by the Chair and one by the CEO (see Table II). In order to ensure comparability across the full ten years examined, the Chair/CEO letters in 2002-2006 were jointly examined as if a single LTS had been written and signed by the Chair and CEO. Thomas (1997) indicates the LTS is representative of the "corporate

speak” of top management and Amernic and Craig (2006) title their book on the language of corporate leadership “CEO-Speak”. In keeping with this literature, we attribute the LTS to the CEO, rather than the Chairman of the Board.

Two separate processes were used to assess and evaluate the use of metaphor in the LTS in Nortel’s annual reports, one qualitative and one quantitative. Qualitatively, a selective reading approach (Gibson, 2004) was used to identify metaphors used in the annual reports. In keeping with Lakoff and Johnson’s (1980) definition, metaphors were identified when an expression from one domain was used to refer to a concept from another domain. In particular, concepts from a non-business domain needed to be used to describe business in general or Nortel specifically. For example, Business is a Journey, Business is War, and Business is Theatre. Words invoking each metaphor were identified by the first author (for example, the Construction metaphor was invoked by words such as foundation, build, architecture, structure, etc.) The categorization of words by metaphor was verified by the second author and any disagreements in categorization were resolved. Titles for each metaphor were proposed independently by both researchers and a research assistant; through discussion, an appropriate title for each metaphor was selected (see the Appendix for sample terms which invoked particular metaphors and illustrative quotations for each metaphor (see Table A1)).

Quantitatively, the full text of each LTS was imported into a spreadsheet. Each word in the LTS was placed into a unique cell location in the spreadsheet. A count of cells was used to determine the length of each LTS, expressed as the total number of words (see Table II). Through a series of data sorts, frequency counts for each word were determined. Frequency counts by individual word within each of the metaphors identified qualitatively were derived on a year-by-year basis. Words not assigned to a specific metaphor were identified separately as “not assigned”. The list of non-assigned words was examined by both researchers to determine if any additional metaphors could be determined which had not previously been identified judgmentally. No additional metaphors were identified in this manner. In addition, the authors reviewed the list of metaphors identified based on individual words to ensure the words were indeed used metaphorically. A number of apparent metaphors were eliminated on the basis they were too literal in meaning.

Because frequencies are difficult to interpret when the length of the LTS varies over time (as noted in Table II), we also determined the percentage of words or “density” (Devinney and Kabanoff, 1999), relative to total words in the LTS by year. We were also interested in evaluating whether the choice of metaphors varied with Nortel’s performance. To do this we identified two broad phases in Nortel’s performance in the period studied: 1997-2000 was identified as a period of growth and 2001-2006 as a period of decline (see Table I and Figure 1). According to Table I, based on Nortel’s annual financial statements as originally issued, Nortel grew steadily in size as measured by number of employees, total assets, total revenues, and research and development expenses from 1997-2000. We label this period as a period of growth. 2001-2006 we designate as a period of decline, based on declining numbers of employees, total assets, revenues, and research and development expenses (though it could be argued that Nortel’s decline did not really begin until it began reporting negative Cash from Operations in 2002). Nortel’s stock price performance between 1997 and 2006 also supports the identification of 1997-2000 as a growth phase and 2001-2006 as reflective of decline (see Figure 1).



Note: The figure shows Nortel's adjusted share price after taking stock splits and reverse stock splits into consideration (including a 1:10 reverse split in December 2006)

Figure 1.
Nortel share price
(December 31,
1995-December 31, 2006),
price per share, in US
dollars

To compare the periods of growth and decline, we determined the mean frequencies and densities (percentages) of each metaphor in these periods. Using density data we identified individual years in which a particular metaphor differed significantly from the (ten year) mean density for that metaphor. To examine the use of metaphors by CEO we also identified densities of metaphors used by individual CEOs that differed from the mean densities. Lastly, we compared the density of various metaphors in the periods of growth and decline to address the research question of whether the choice of metaphor and performance are related.

Results

A total of 13 distinct metaphors identified qualitatively in Nortel's LTS are outlined briefly in the Appendix. Tables III and IV provide a summary of the frequency count of words addressing each of the 13 metaphors, as well as the percentage of words in each LTS addressing each metaphor (density). The most common metaphors by density are Science, Journey, and Vision. Each of these metaphors has a relatively high mean density (greater than 1.0 percent of all words in the LTS). Metaphors with intermediate mean densities (0.50-0.99 percent) are: Construction, Theatre, Sports, and Heritage. Low mean density metaphors (0.15-0.49 percent) are: War, Sound, Revolution and Health. Very low mean density metaphors (less than 0.15 percent of words), though still striking from a qualitative perspective, address Religion and Fire.

The metaphor Science is the most prevalent metaphor in Nortel's LTS (mean density 2.4 percent) in the period studied. This metaphor includes concepts from physics (flow, velocity, wave), environmental science (climate, environment) and biology (DNA, evolve, growth), as suggested by phrases such as "The network is a living lab [. . .]" (Nortel, 1998, p. 4 (CEO Roth)) and "Growth to a vibrant business is the equivalent of water and oxygen to plants" (Nortel, 2005c, p. vii (CEO Zafirovski)). Science is the most prevalent metaphor in eight of the ten years examined and is one of the top three metaphors by density in each year (see Table V, Panel A). Use of the Science metaphor is significantly above the mean in 1999 (see Tables III and IV) with phrases such as "this promises to be an eBusiness tsunami [. . .]" (Nortel, 1999, p. 4 (CEO Roth)). However, the Science metaphor

Metaphor	1997		1998		1999		2000		2001		2002	
	Roth ^b		Roth ^b		Roth ^b		Roth ^b		Dunn		Dunn	
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Science	36	2.3	52	3.1	70***	4.0	21	1.9	55	2.6	41	2.2
Journey	37	2.3	27	1.6	26	1.5	22	2.0	48	2.3	53*	2.8
Vision	19	1.2	14	0.8	19	1.1	15	1.4	44*	2.1	26	1.4
Construction	15	0.9	25	1.5	11	0.6	14	1.3	31	1.5	17	0.9
Theatre	9	0.6	19	1.1	18	1.0	11	1.0	18	0.8	18	1.0
Sports	12	0.8	10	0.6	8	0.5	6	0.5	15	0.7	10	0.5
Heritage	10	0.6	15	0.9	18	1.0	9	0.8	8	0.4	10	0.5
War	6	0.4	3	0.2	7	0.4	5	0.5	11	0.5	8	0.4
Sound	11	0.7	8	0.5	6	0.3	0**	0.0	12	0.6	8	0.4
Revolution	6	0.4	6	0.4	12**	0.7	6*	0.5	3	0.1	1	0.1
Health	0*	0.00	3	0.2	1	0.1	4	0.4	7	0.3	4	0.2
Religion	2	0.1	0	0.0	1	0.1	0	0.0	2	0.1	6	0.3
Fire	0	0.0	1	0.1	3	0.2	0	0.0	1	0.0	1	0.1
Frequency <i>n</i> = 2007	163	10.4	183	10.8	200	11.5	113	15.7	255	12.0	203	10.9
LTS length (words)	1,579		1,688		1,753		1,092		2,132		1,862	

Table III.
Frequency and Density of Metaphors in Nortel's letter to shareholders, by year (ranked by mean density)

Notes: Density is calculated as Frequency divided by length of letter to shareholders (LTS), measured as number of words. ^bFor 1997 and 1998 Roth was CEO and Schuenke was chairman; for 1999 and 2000 Roth was CEO and Carlucci was chairman. ***, **, * = Significantly different from the mean at <0.01, <0.05 and <0.10 respectively (two-tailed)

Metaphor	2003		2004		2005		2006		Mean frequency	Mean density
	Owens		Owens		Zafirovski		Zafirovski			
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
Science	45	2.2	37**	1.5	49	1.8	72	2.6	47.8	2.38
Journey	43	2.1	32	1.3	44	1.6	54	1.9	38.6	1.92
Vision	34	1.7	30	1.2	33	1.2	36	1.3	27.0	1.34
Construction	13	0.6	23	0.9	19	0.7	26	0.9	19.4	0.97
Theatre	10	0.5	12	0.5	15	0.6	18	0.6	14.8	0.74
Sports	12	0.6	26	1.1	15	0.6	28	1.0	14.2	0.71
Heritage	17	0.8	9	0.4	12	0.4	9	0.3	11.7	0.58
War	18	0.9	12	0.5	11	0.4	17	0.6	9.8	0.49
Sound	11	0.5	2**	0.1	5	0.2	7	0.3	7.0	0.35
Revolution	0**	0.0	0**	0.0	0**	0.0	3	0.1	3.7	0.18
Health	3	0.1	3	0.1	4	0.1	7	0.3	3.6	0.18
Religion	1	0.0	2	0.1	2	0.1	5	0.2	2.1	0.10
Fire	1	0.0	1	0.0	1	0.0	1	0.0	1.0	0.05
Frequency <i>n</i> = 2007	208	10.1	189	7.8	210	7.7	283	10.1	20.1	10.00
LTS length (words)	2,053		2,434		2,712		2,792		2,009.7	

Table IV.
Frequency and Density of Metaphors in Nortel's letter to shareholders, by year (ranked by mean density)

Notes: Density is calculated as Frequency divided by length of letter to shareholders (LTS), measured as number of words. ^bFor 1997 and 1998 Roth was CEO and Schuenke was chairman; for 1999 and 2000 Roth was CEO and Carlucci was chairman. ***, **, * = Significantly different from the mean at <0.01, <0.05 and <0.10 respectively (two-tailed)

Year	Metaphor 1	Metaphor 2	Metaphor 3	Metaphor 4	Metaphor 5
<i>Panel A: Top five metaphors addressed by year</i>					
1997	Science	Journey	Vision	Construction	Sports
1998	Science	Journey	Construction	Theatre	Heritage
1999	Science	Journey	Vision	Theatre	Heritage
2000	Journey	Vision	Science	Construction	Theatre
2001	Science	Journey	Vision	Construction	Theatre
2002	Journey	Science	Vision	Theatre	Construction
2003	Science	Journey	Vision	War	Heritage
2004	Science	Journey	Vision	Sports	Construction
2005	Science	Journey	Vision	Construction	Theatre
2006	Science	Journey	Vision	Sports	Construction
<i>Panel B: Top five metaphors addressed by CEO</i>					
Roth	Science	Journey	Vision	Construction	Theatre
Dunn	Journey	Science	Vision	Construction	Theatre
Owens	Science	Journey	Vision	Sports	Construction
Zafirovski	Science	Journey	Vision	Construction	Sports

Table V.
Top five metaphors
addressed in each year
(growth 1997-2000;
decline 2001-2006) and by
each CEO (based on
density)

continues to be used extensively even as Nortel moves from its growth phase into a period of decline. For example, Nortel suggests that “The big story of 2001 was about a correction, not extinction” (Nortel, 2001a, p. 2 (CEO Dunn)) and calls on readers of the CAR to “imagine a fast-moving river of information [...]” (Nortel, 2001a, p. 4 (CEO Dunn)), which presumably Nortel could help control.

Journey is the second most commonly used metaphor in Nortel's LTS. It is included fairly consistently across all years examined, though its use in 2002 is significantly greater than the mean percentage usage across all ten years (see Tables III and IV). Journey is one of the top two metaphors (based on density) in each of the ten years examined. It is invoked by words or phrases such as path, traffic, road map, and navigation. Zafirovski used the Journey metaphor extensively in his 2005 LTS, as is evident in the following excerpts from the LTS: “It won't happen overnight, but the journey is underway” (Nortel, 2005c, p. iv (CEO Zafirovski)); “Our people want to rebuild this company and are prepared for the tough journey ahead” (p. iv); “This is a journey that will take us three to five years to complete” (p. vi); “[...] a journey we are very excited to embark on. It is a journey that we will pursue with passion, ingenuity, determination and persistence unrivaled by our competitors” (p. vii).

The Vision metaphor is one of the top five metaphors addressed in nine of ten years (all years except 1998), though its density is significantly greater than the mean only in 2001. Vision is invoked through the use of words such as focus, look, reflect, review, and see, and is reflected in Nortel's LTS in phrases such as “It is important that while deeply engaged in the present we do not lose sight of the future” (Nortel, 2004a, p. xi (CEO Owens)) and “A common vision, a common strategy, and unity of direction and effort [...] are also essential for a successful future” (Nortel, 2002, p. 6 (CEO Dunn)).

Metaphors identified previously as having intermediate mean densities include Construction, Theatre, Sports and Heritage. Each of these metaphors is included multiple times among the top five metaphors (see Table V, Panel A). Construction is included among the top five in eight of ten years, Theatre in six, and the Sports and Heritage metaphors are each among the top five in three years. The use of each of these

metaphors is quite consistent each year, with no one year having either a significantly higher or lower density for these metaphors. Terms such as architecture, build, footing, and foundation are typical of the Construction metaphor, as illustrated in the following quotations: “We’re laying the foundation for new growth [...]” (Nortel, 1998, p. 3 (CEO Roth)) and “These are the fundamental building blocks for networks [...]” (Nortel, 1998, p. 2 (CEO Roth)). A Theatre metaphor is invoked with words such as blockbuster, dramatic, marquee, stage and usher. As used by Nortel, Theatre is suggested in quotations such as “[...] they worked tirelessly behind the scenes [...]” (Nortel, 2005c, p. ii (CEO Zafirovski)); “[...] we’ll play a role in reshaping economic life [...]” (Nortel, 1998, p. 3 (CEO Roth)) and “Quite simply, the internet is ushering in a remarkable period [...]” (Nortel, 1999, p. 3 (CEO Roth)). Words like goal, marathon, race, and win suggest a Sports metaphor, as illustrated in Nortel’s LTS: “[...] we’re well positioned to play and win the global game” (Nortel, 2002, p. 8 (CEO Dunn)) and “From a standing start in 1995, the number of Web users worldwide grew [...]” (Nortel, 1999, p. 2 (CEO Roth)). A Heritage metaphor is suggested through the use of words such as history, legacy, tradition, and genealogical terms such as next generation and roots. Nortel invoked the Heritage metaphor in LTS extracts such as “Nortel Network’s association with the BCE family of companies [...] is part of our heritage” (Nortel, 1999, p. 5 (CEO Roth)); “We’re all joining together to define a new legacy for the company” (Nortel, 2001a, p. 6 (Dunn)) and “We must lead the way to these next-generation networks [...]” (Nortel, 1997, p. 29 (CEO Roth)).

War, Sound, Revolution and Health metaphors were included in Nortel’s LTS at low densities. Use of the War metaphor was least prevalent in 1998, however, it was one of the five top metaphors invoked in 2003. The Sound metaphor was significantly less prevalent in the years 2000 and 2004. However, it returned to more typical use in 2005, “As part of our new operating rhythm [...] we looked at every organization [...]” (Nortel, 2005c, p. vi (CEO Zafirovski)) and 2006 (see the Appendix). Revolution was used most densely in the growth years of 1999 and 2000, and was significantly less common during the decline in 2003-2005. Health was used at a significantly lower density in 1997 than any of the other years. Metaphor using War terminology (aggressive, attack, battle, defense, deploy, halt, seize, target, veteran) included statements such as “Nortel is on the offense again” (2003, p. xiv (CEO Owens)), “We are setting aggressive targets [...]” (Nortel, 2005c, p. vii (CEO Zafirovski)), and “[...] Nortel attacked its top priorities” (Nortel, 2006, p. 1 (CEO Zafirovski)). The Sound metaphor arises from the use of terms such as feedback, resonate, rhythm, and translate, for example, as used in the fragment “Our vision of network transformation and the supporting technologies, resonated [...]” (Nortel, 2003, p. x (CEO Owens)). A Revolution metaphor is depicted in statements such as “The internet is at the center of a revolution sweeping through the communications industry” (Nortel, 1997, p. 27 (CEO Roth)). Health concepts such as cure, healthcare, heart, and survival form part of the Health metaphor, as illustrated in “Investment in R&D [...] – it’s the lifeblood of our industry and company” (Nortel, 2002, p. 5 (CEO Dunn)).

The final two metaphors identified in Nortel’s LTS address Religion and Fire. Words such as belief, blessing, devoted and faith suggest Religion, as do sentences such as “My strong takeaways and beliefs are that our positives are significant and difficult to replicate” (Nortel, 2005c, p. v (CEO Zafirovski)). The Fire metaphor, as suggested by a statement such as “No telecom company was unaffected by a critical

mass of difficulties that engulfed the entire industry" (Nortel, 2001a, p. 2 (CEO Dunn)), is also evoked by terms like extinguished, fuel, ignite and sparked.

In eight of the years from 1997-2006, there is at least one metaphor whose density is significantly different than the ten year mean density for that metaphor, providing support for the intuition that the prevalence of metaphors differs across the years examined (we explore reasons for the variation in the use of metaphors in the Discussion section which follows)[2].

Nortel was guided by four different CEOs in the ten year period under review. Among the top five metaphors (by density) used by each CEO, all CEOs referred to Science, Journey, Vision, and Construction (see Table V, Panel B). In their top five metaphors, Owens and Zafirovski made reference to Sports, highlighting the competitive challenges facing Nortel when their fortunes started to fail. Roth and Dunn both included Theatre among their top five metaphors. Roth's LTS used the highest density of metaphors (an average of 12.1 percent in his LTS), while Owens' and Zafirovski's LTS had the lowest densities (8.9 percent) (see Tables III and IV).

Table I and Figure 1 provide evidence used to distinguish between Nortel's periods of growth and subsequent decline. Science was the most common metaphor in both periods. The use of metaphors of Sports, War, and Religion all moved up in the percentage density by two or three spots in the ranking in the period of decline. In contrast, the use of metaphors of Revolution and Heritage dropped off in ranking by two or more ranks as Nortel moved from growth to decline (see Table VI).

Discussion

Overview

A total of 13 distinct metaphors were identified in Nortel's LTS. These metaphors varied somewhat year by year, based on the CEO who authored the letters, and also based on the period examined. There did, however, seem to be some metaphors that

Metaphor	Growth pre-2001 1997-2000		Decline 2001 and later 2001-2006		Change in rank (growth-decline) Difference		
	(%)	Rank	(%)	Rank			
Science	44.8	2.93	1	49.8	2.14	1	0
Journey	28.0	1.83	2	45.7	1.96	2	0
Vision	16.8	1.10	3	33.8	1.45	3	0
Construction	16.3	1.06	4	21.5	0.92	4	0
Theatre	14.3	0.93	5	15.2	0.65	6	-1
Heritage	13.0	0.85	6	10.8	0.46	8	-2
Sports	9.0	0.59	7	17.7	0.76	5	2
Revolution	7.5	0.49	8	1.2	0.05	12	-4
Sound	6.3	0.41	9	7.5	0.32	9	0
War	5.3	0.34	10	12.8	0.55	7	3
Health	2.0	0.13	11	4.7	0.20	10	1
Fire	1.0	0.07	12	1.0	0.04	13	-1
Religion	0.8	0.05	13	3.0	0.13	11	2
Total	165.1			224.7			
Mean length of LTS	1,528			2,330.8			

Table VI.
Mean frequency (and density) of metaphors in Nortel's letter to shareholders (by time period; ranked by frequency in the growth period)

were quite common, and indeed, had been found in the literature to have been used by other corporations in their voluntary disclosures as well. Business as a journey has previously been identified in corporate communications by Amernic and Craig (2006), Craig and Amernic (2004), David (2001), and Spence (2007). Craig and Amernic (2004) identified a vision metaphor, as did McGoun *et al.* (2006), and several studies have documented a construction metaphor (Amernic *et al.*, 2007; Amernic and Craig, 2006). These findings suggest that corporate communications may include certain baseline metaphors that are expected or commonly recur. Baseline metaphors that are either unusually absent or included at an abnormally low density, or metaphors that are included at a higher than usual density may be metaphors that reflect corporate impression management activities and that provide stronger clues to priorities, values, and plans. From this perspective the density of a corporation's various metaphors can provide valuable information. David (2001) identified an innovation and change metaphor in Microsoft's annual report. We find a Science metaphor prevalent in Nortel's LTS. It may be, in addition to metaphor varying by CEO and performance, that industry affiliation also influences the choice of metaphor.

LTS are elements of corporations' voluntary disclosures. In this way, the choice of metaphor in the LTS helps convey the cultural beliefs and values of the corporation and its leaders, and signal future actions. The reader plays an active role in interpreting metaphor. Content analysis, both qualitative and quantitative, aims to capture various meanings within a text, even though not all readers will necessarily be aware of or identify all of these meanings. Some readers will not necessarily attend to all the various metaphors. For example, a young reader, accustomed to seeing movies in a multiplex theatre would not necessarily identify the term "blockbuster" as part of a theatrical metaphor, since they would never have lined up around the block to see a movie. Thus, readers may be impacted somewhat differently by the same metaphor, depending on their background and the extent to which they read discourse in a critical manner.

Given the evidence reported previously indicating the use of metaphors in LTS in Nortel's corporate annual reports, it is important to consider why metaphors are employed, and of more interest, why particular metaphors are employed by different authors, and under different circumstances. The LTS forms a very important part of a corporation's discourse. Such discursive practices are seen by many to be a form of social practice that is implicated in the construction of social reality (Spence, 2007). If this is the case, the choice of metaphors used in the LTS is not neutral; rather particular metaphors are invoked deliberately as an element of a corporation's rhetorical and persuasive activities, with the intention of changing the behavior and/or attitudes of readers. In other words, the use of metaphor can be understood as part of the corporation's impression management practices.

Metaphors by CEO

John Roth. John Roth was the CEO with the highest density of metaphors in his LTS. His use of colorful metaphoric language is not surprising, given his reputation as someone who both liked the media and saw communications as a key contributor to success. Health was referred to at a significantly lower density in 1997 than in any other year. In a year of record results, it was not necessary to comment on the company's indisputable health. Roth's slogan for the 1997 annual report captured it all

in one word: Advantage. Theatrical references are greatest in density in 1998, largely with reference to dramatic changes occurring in the industry – and resulting changes in Nortel's portfolio of products. These changes are reflected in the 1998 slogan “A new era of networking”.

Roth was seen as capable of spotting new trends and taking advantage of discontinuities in both business and technology. Thus he appeared comfortable with both evolutionary and revolutionary change. Under Roth, Nortel acquired many internet companies and needed to blend them into the Nortel family. Throughout Roth's tenure, Nortel exhibited strong performance built on its 100 year history. Based on these roots, Nortel's, 1999 LTS reflected on the changing of the millennium and looked forward to responding to the changes required to launch an internet revolution. This focus is clear in the slogan for the year: “Changing times, new beginnings”. Roth's significantly more dense use of metaphors of Science and Revolution coalesced around the Year 2000 theme and the emergence of the internet as a key communications network, as suggested in the following excerpt from his 1999 LTS: “Like the Industrial Revolution of the last century, the Internet Revolution is transformative as well as historic” (Nortel, 1999, p. 2).

In the 2000 LTS Revolution was an important metaphor, as indicated in the following quotations: “The internet revolution has also created major discontinuities in global communications, providing new growth opportunities for our company and our customers” (Nortel, 2000, p. 4) and “Nortel Networks is well positioned to lead this revolution to a new stage of development for our customers [...]” (Nortel, 2000, p. 5).

Throughout his tenure Roth had no real need to speak of health, religion, or war. Nortel's health was largely taken for granted; religion was mentioned only in the sense of Nortel being blessed; and references to war were unnecessary. When Roth invoked a Sports metaphor, key references were to achievements: wins, records, and record-breaking.

Perhaps Theatre is an appropriate metaphor for Roth's own legacy as much of Nortel's success under Roth was subsequently found to be illusory. Maltby and Tsamenyi (2010, p. 398) comment explicitly on parallels between the narrative disclosures of gold mining companies on the Gold Coast to those of companies in the dot-com era, concluding “Investors were encouraged to believe that the promoters' ingenuity would produce high returns, despite the absence of detailed information about the assets and prospects of the [...] companies.”

Frank Dunn. Frank Dunn's LTS were those that included the highest density of metaphors referring to Journey and Vision, and a high density of references to Construction. This is not unexpected as Dunn became CEO during a particularly volatile period in the information technology industry. Nortel needed to begin its long journey back to health, and to do this it needed a vision and a plan to rebuild. Interestingly, however, Dunn was not known as a visionary or a builder. His expertise was in finance, and despite the references to Construction, his term as CEO was characterized by deep cost-cutting, rather than building.

In the 2001 LTS, following a disastrous period for the industry, the Vision metaphor had significantly greater density than in any of the other years, reflecting a time when a vision for the future was seen as most necessary: “Nothing focuses and energizes our people like the challenge of leading a big discontinuity like broadband networking” (Nortel, 2001b, p. 6). Nortel's heritage was written about least in 2001, perhaps in an

effort to avoid comparisons between 2001's dismal performance and the record high performance levels of the preceding few years. In 2002's LTS, the Journey metaphor occurred at a significantly higher than usual density: "Now that we've turned the page on 2002, we're driving harder than ever to succeed in 2003 and beyond" (Nortel, 2002, p. 8).

Bill Owens. Bill Owens' LTS had one of the lowest densities of metaphors overall (8.9 percent) among the four CEOs. Perhaps this is not surprising for a retired US admiral with a reputation for being honest and forthright. Owens utilized the greatest density of metaphors addressing Sports and War, reflecting military language and competition. Owens' LTS also had a relatively "quiet" tone, with use of the Sound and Revolution metaphors significantly below the mean.

In 2003, under (retired admiral) Owens, the metaphor of business as War emerged as more dense than it is in the other years examined as illustrated in the following quotation: "Nortel is on the offense again. Competition will remain fierce [. . .]" (Nortel, 2003, p. xiv). In particular, terms such as target, exploit, aggressive and deploy are most dense in the 2003 LTS, which was released after CEO Dunn was fired. It may have been particularly important in this LTS to convey the sense that Nortel had a clear and aggressive plan of attack.

In 2004, the metaphor Sports had its highest density across the ten year period. Regarding the latter Owens wrote: "A highly experienced new management team is in place and we continue to enhance it with additional executives who have the skills and know-how required to excel on the global stage. We are in a marathon – not a sprint. I am confident Nortel will be well positioned and resourced for the race. We are truly playing to win" (Nortel, 2004b, p. xiii).

Owens had a reputation for an interest in communications technology, a keen ability to strategize, and for being well-connected in both business and politics. He is described as having integrity and credibility. However, he was not seen as an effective CEO and was thought to have overlooked some key opportunities for alliances and collaborations (Bagnall, 2009a). It seems Owens was occupied in responding to shareholder lawsuits and in taking aggressive action to deploy new products to try to achieve targets. Perhaps because of his relative lack of experience from the perspective of a developer, rather than a user, of technology, Owens seemed reluctant to make dramatic changes in Nortel's businesses, though he did work to change Nortel's corporate structure and culture. This is reflected to some extent in his relatively low density use of metaphors of Theatre and Revolution. At the same time, Owens seemed reluctant to compare Nortel's performance to its past history. This is also consistent with his role as an outsider to Nortel – he is an American with no history of employment with the Canadian-based Nortel. This reluctance was reflected in very few references to the metaphors of Health and (the history and roots aspects of) Heritage. Owens' stay-the-course approach as CEO is evident in the rather uninspiring motto adopted for both of the annual reports under his leadership: "This is the way; This is Nortel" (2003, 2004b).

Mike Zafirovski. Mike Zafirovski was hired as Nortel's CEO based on his track-record as a team builder, leader, and turnaround expert and on his technical and managerial experience in the information technology industry. Although Zafirovski made some reference to all 13 metaphors, his use of metaphors did not differ significantly from the mean usage by the other CEOs except for the relatively low use

of the revolution metaphor. His initial approach to restructuring Nortel was to reduce the scale of Nortel's operations, with no revolutionary changes in its scope of activities. Zafirovski used comparatively few references to the Construction metaphor (compared to Nortel's growth phase of 1997-2000). This is particularly telling in light of Nortel's subsequent filing for bankruptcy protection under Zafirovski's leadership and Zafirovski's efforts to dismantle and sell off Nortel's businesses. In this sense Zafirovski's relative avoidance of the commonly invoked Construction metaphor reveals his latent (Prasad and Mir, 2002) corporate strategic orientation (Devinney and Kabanoff, 1999).

Metaphors by performance

Table VI suggests that performance also impacts how much is said and the choice of metaphors used. The mean length (in words) of LTS during Nortel's decline was 52 percent longer than the length of LTS during growth. This is consistent with Healy's (2001) comment that voluntary disclosure increases with organizational complexity, instability and volatility – all characteristic of Nortel's period of decline. In addition, Nortel's growth period (1997-2000) included the following metaphors ranked at least two positions higher relative to their rank ordering in the decline period (2001-2006): Revolution and Heritage. This constellation of metaphors suggests much more of the focus of Nortel's LTS in the growth phase was on Nortel's past and plans for new technological developments via the internet (Revolution). The decline of the Revolution metaphor was particularly marked, as it dropped four positions, from the eighth most frequent metaphor in the growth period to being ranked twelfth in the decline period. In Nortel's decline phase, the following metaphors were more highly ranked (by at least two places) than they had been previously: War, Religion, and Sports. These relatively more prevalent metaphors suggest Nortel's challenges and struggles (War), and its various approaches to address them. For example, proactive responses to decline can be seen in the focus on teams (as reflected in the Sports metaphor). Responses to decline reflected a need for faith and hope, as evident in the increased rankings of the Religion metaphor.

Changes in the meaning of certain metaphors can be linked to Nortel's changing performance as well. In the growth period use of a Health metaphor referred to the good health of the company; during Nortel's decline the Health metaphor was invoked to refer to the need to restore Nortel's health. The Religion metaphor changed from a low level focus on Nortel's being "blessed" and having "devoted" employees during growth to a focus on "believing" in the future during decline. During the growth phase, the Sports metaphor was called on to celebrate results: wins, records, and record-breaking. In decline, however, the Sports metaphor tended to focus on teams, competition, and goals (in the sense of objectives, not goals scored). These different meanings at different times in Nortel's life are consistent with Maltby and Tsamenyi's (2010) findings.

Contributions, conclusions and future research

This research contributes to both accounting and business communication literatures. Metaphors in corporate LTS are clearly identified as strategic elements of voluntary disclosure intended to manage the impressions stakeholders hold about a company. Many aspects of metaphor are examined, from both quantitative and qualitative

perspectives. We identify a number of baseline metaphors present in all years examined, we note the possibility of an industry influence in choice of metaphor, we find evidence that the prevalence of various metaphors changes over time and that the meaning of a particular metaphor may vary in periods of organizational growth or decline. Further, we discuss the influence of the author's personality on the choice of metaphors employed and find additional evidence that the use of metaphor in LTS is related to decision making and corporate performance. This highlights the importance of corporate governance considerations, particularly knowing who is running the company. Taken together, these findings add to the richness and complexity of our understanding of the use of metaphor in business communications.

Nortel was an iconic company in Canada throughout much of its over 100 year history. Millions of Canadians were adversely affected by Nortel's declining performance and subsequent filing for bankruptcy protection. This paper adds a new dimension to our understanding of Nortel's demise, serves as a cautionary tale for investors, and helps to shed light on the question that has perplexed many stakeholders – what else could they have done to identify or understand some of Nortel's difficulties. The ten year period covered by Nortel's LTS in this paper provides an uncommon longitudinal perspective on the evolution of a company in turbulent times. Each year's LTS adds to the unfolding story of the company over time to reveal Nortel's growth and subsequent decline as seen through the metaphors of four successive CEOs. Taken together the various metaphors used in Nortel's LTS reinforce an overarching metaphor, that business is an organism.

Factual information can be conveyed without the use of metaphor. The finding that the text of the LTS invokes a number of metaphors is consistent with the use of metaphor for impression management purposes (Boesso and Kumar, 2007). For example, metaphors of War and Sports suggest the struggles faced during Nortel's decline. Devinney and Kabanoff (1999) concluded that voluntary disclosures in LTS offer clues to a corporation's future plans. In Nortel's case, Zafirovski's comparatively limited use of the Construction metaphor hints at his future plans to dismember Nortel.

Other researchers in voluntary disclosure and impression management have argued that voluntary disclosures reflect the personality and background of key individuals in a corporation (Chatterjee and Hambrick, 2007). This certainly seems to be the case with Admiral Owens invocation of the metaphor of War. Healy (2001) indicated that voluntary disclosure tends to increase with organizational complexity, instability, and volatility. Nortel's decline exhibits these characteristics, and, as would be expected based on Healy (2001), the mean length of LTS during Nortel's decline increased dramatically. Smith and Taffler (2000) found strong evidence of self-serving attributions in LTS. We find some evidence of this as well in the discussion of the contribution of industry trends to Nortel's decline and in Zafirovski's emphasis on his role as an outsider: "As I write this, I have been leading Nortel for five months [...]" (Nortel, 2005c, p. iv) and also "[...] as I reflect on my first full year as President and CEO [...]" (Nortel, 2006, p. 2). Smith and Taffler (2000) identify such attributions as attempts at impression management.

In accordance with the taxonomy introduced by Walters-York (1996), in this study we are particularly interested in the stylistic use of metaphor as an implicit comparison between two concepts or domains (Lakoff and Johnson, 1980). In the LTS the metaphors used are generally implicit comparisons between business and some other

concept. For example, among the metaphors used in Nortel's LTS are the ideas of business as a journey, business as theatre, business as sport, and business as war. Business as Science is the metaphor employed most densely in Nortel's LTS. This reflects the nature of Nortel's activities in communications, engineering, technology and science. Nortel's second most prevalent metaphor is that of a Journey, especially in 2002, when the whole industry was in disarray. It could be argued that Nortel uses the metaphor of a journey to minimize efforts to hold the corporation or CEO accountable for performance (Spence, 2007) – for if they are still on the journey, they cannot be judged on their success in reaching their destination. The metaphor of business as War evokes particularly strong images – of campaigns of aggression, of defense and attack, of battles and targets. The use of these terms, natural as they might have been for Admiral Owens, highlights that language is not neutral (Amernic *et al.*, 2007) and language provokes emotional and interpretive responses in readers (David, 2001; Prasad and Mir, 2002). Lakoff and Johnson (1980) also note that overlapping metaphors are possible, particularly in the case of a concept which is not well delineated. If this is the case (p. 86) suggest different metaphorical structurings “usually fit together in a coherent fashion”. Many of the metaphors identified in Nortel's LTS fit together if a corporation is considered an organism. For example, an organism has vision and sound, a heritage, religion and health; an organism is governed by science, is impacted by fire, war and revolution; an organism may engage in sports, construction, and theatre; and an organism is on a journey. One logical extension of the overarching metaphor business as an organism is that an organism (and therefore a business) has a finite life – as we see for Nortel itself.

There is evidence that some of the metaphors identified in Nortel's LTS have also been found elsewhere in the communications of other corporate entities. This raises questions regarding the extent to which the use of metaphor in corporate LTS may be ritualistic. The appeal to certain metaphors in each of Nortel's LTS hints at a baseline or ritualistic use of metaphor. For example, Science, Journey, Vision, and Construction are invoked at least ten times in each of Nortel's ten LTS. A ritualistic use of metaphor may be consistent with arguments made by Curtis (1998) that corporations in the public eye try to obfuscate in their LTS. Indeed, this might also be consistent with a desire to minimize the extent to which the authors of the LTS might be held personally accountable for the performance of their corporations (Spence, 2007).

Evidence provided in this paper demonstrates that Nortel uses metaphor in its LTS, and the use of metaphor varies by CEO and depending on Nortel's rising or falling fortunes. Preferences for particular metaphors may also vary by industry. Readers should be critical in their reading of LTS and actively question the metaphors that are invoked in the LTS. This is particularly the case as the meaning of Nortel's metaphors changed with changes in financial performance. For example, the metaphors of Religion, Sports and Health all changed as Nortel's performance deteriorated.

This research is subject to a number of limitations: our frame of reference may have impacted which metaphors stood out for us; our imperfect knowledge of the events, personalities, products, and technologies that are relevant in the ten years studied may have influenced our understanding of Nortel's use of metaphor; our level of analysis concentrated on individual words; we confined our study to the examination of metaphor, which is only one of a range of possible rhetorical strategies; we confined our analysis to the content in Nortel's annual reports as originally issued; and finally,

we have not directly contacted any of the authors of the LTS to attempt to determine whether they consider their use of metaphor to have been intentional or whether they consciously intended to manage readers' impressions and expectations.

Future research to observe the selection of metaphors for corporate annual reports as they are being created could lend additional richness to the understanding of how such voluntary disclosure decisions are made. Another way to enhance the richness of the understanding of voluntary disclosures in corporate annual reports would be to examine the use of metaphor in both the LTS and the photographs included in an annual report. Future analysis based on the sentence as the unit of analysis could also be conducted. Broader questions related to the use of rhetorical devices other than metaphor could be examined in LTS, such as the use of repetition and layout, or an exploration of audience positioning and who the rhetoric is intended to persuade. Given the large number of restatements of Nortel's financial results, it could also be informative to examine the use of metaphor in communications issued accompanying the restated financial statements for a more direct assessment of impression management activities.

Readers who actively, critically, and constructively search LTS for hidden meanings and metaphors may find unexpected information within the voluntary disclosures of the LTS. This information is available to assist the reader in: evaluating the corporation's and CEO's past performance; assessing the corporation's future plans and prospects; and in making investment and credit decisions. However, the reader needs to keep in mind that the company's choice of information to disclose may be selected with an intention to manage the impression of the company (and the CEO) that the reader takes away as truth (Lakoff and Johnson, 1980). To use a War metaphor: forewarned is forearmed.

Notes

1. For a more detailed assessment of Nortel's history to 2000, see *Nortel Networks: How innovation and vision created a network giant, 2000*, by Larry MacDonald and *The Bubble and the Bear: How Nortel burst the Canadian dream, 2002*, by Douglas Hunter.
2. Metaphors that are found to be significantly more prevalent in a particular year, based on density, include: *Science* (1999); *Vision* (2001); *Journey* (2002); and *Revolution* (1999, 2000). Metaphors that are found to be significantly less prevalent in a particular year, based on density, include: *Health* (1997); *Sound* (2000, 2004); and *Revolution* (2003-2005) (see Tables III and IV).

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Metaphor	Sample terms	Phase	Illustrative quotations (<i>terms in italics related to the metaphor specified</i>)
Science	Flow, Wave, Generate, Velocity, DNA, Evolve, Growth, Climate	Growth	As new and ever more powerful <i>waves</i> of eBusiness applications <i>surge</i> through the world's networks ... (Nortel, 1999, p. 5 (CEO Roth))
		Decline	While the <i>aftershocks</i> of the 2001 industry correction are still being felt, this will not diminish our faith in the industry ... (Nortel, 2001a, p. 2 (CEO Dunn))
Journey	Drive, Path, Traffic, Travel, Way	Growth	Our challenge is to continue down the <i>path</i> of high growth (Nortel, 1999, p. 5 (CEO Roth))
		Decline	... we have moved to introduce a strategic <i>road map</i> ... (2003, Dunn, p. xii) I look forward with great enthusiasm to the opportunities ahead in continuing to <i>chart a course</i> of renewal and transformation for Nortel (2005c, p. iii (CEO Zafirovski))
Vision	Focus, Look, Optical, Reflect, Review, See	Growth	It offers a <i>panoramic vision</i> of a networked society that allows our ideas and aspirations to soar around the globe and into cyberspace (Nortel, 1998, p. 2 (CEO Roth))
		Decline	While the restatement process has been arduous, we were absolutely <i>focused</i> on ensuring it was done to the best of our abilities and that we could move forward with total confidence in our financial reporting (Nortel, 2003, p. viii (CEO Owens)).
Construction	Base, Build Footing, Foundation, Structure	Growth	Your company is going forward on a <i>solid footing</i> , well balanced in terms of customers, technologies, products, and global revenues (Nortel, 1997, p. 28 (CEO Roth))
		Decline	The <i>foundations</i> for restoring profitability [...] have been laid (Nortel, 2001a, p. 5 (CEO Dunn))
Theatre	Blockbuster, Deliver, Dramatic, Marquee, Play, Stage, Ushering	Growth	Nortel Networks is a <i>leading player</i> in each of these market segments ... (Nortel, 1999, p. 5 (CEO Roth))
		Decline	These and other <i>marquee</i> customer wins [...] underscore how Nortel's spirit of innovation [...] and expertise in twenty-first century communications are delivering customer value (Nortel, 2006, p. 3 (CEO Zafirovski))
Sports	Games, Goal, Marathon, Race, Record, Team, Win	Growth	Thanks to the performance and commitment of our 73,000 employees around the world and the support of our customers and investors, Nortel was a <i>winner</i> in 1997 (Nortel, 1997, p. 27 (CEO Roth))
		Decline	We are in a <i>marathon</i> – not a <i>sprint</i> (Nortel, 2004a, p. xiii (CEO Owens))
Heritage	Heritage, History, Roots, Legacy, Next Generation	Growth	This growth is setting the stage for a <i>historic</i> transition: the move from dial tone to web tone (Nortel, 1997, p. 28 (CEO Roth))
		Decline	Our infostructure vision is really about going back to our technology <i>roots</i> (Nortel, 2002, p. 7 (CEO Dunn))

(continued)

Table AI.

Metaphors, sample of associated terms, and illustrative quotations from Nortel Corporate Annual Reports split by growth and decline (year, CEO, and page)

Metaphor	Sample terms	Phase	Illustrative quotations (<i>terms in italics related to the metaphor specified</i>)
War	Aggressive, Attack, Deploy, Halt, Marshalling, Seize, Veteran	Growth	Our [...] vision [...] accelerated the <i>deployment</i> of high-speed transport systems [...] that <i>triggered</i> the growth of the internet (Nortel, 1997, p. 29 (CEO Roth))
		Decline	We're <i>marshalling</i> our resources and <i>rallying</i> the company behind our sales force ... (Nortel, 2001a, p. 5 (CEO Dunn))
Sound	Conversation, Resonate, Reverberate, Rhythm, Voice	Growth	Once connected, our <i>voice conversations</i> follow a dedicated pathway ... (Nortel, 1997, p. 28 (CEO Roth))
		Decline	It is clear that our deep understanding of networking and our innovative spirit <i>resonates</i> with customers [...] (Nortel, 2006, p. 3 (CEO Zafirovski))
Revolution	Revolution, Revolutionary	Growth	The global communications industry has experienced more than two decades of <i>revolutionary</i> ferment (Nortel, 1998, p. 2 (CEO Roth))
		Decline	The internet <i>Revolution</i> is also carrying on (Nortel, 2001, p. 2 (CEO Dunn)) Some call it the broadband <i>revolution</i> ... (Nortel, 2001a, p. 2 (CEO Dunn))
Health	Cure, Healthcare, Heart, Lifeblood	Growth	The data traffic flowing through network <i>backbones</i> often slows to a crawl ... (Nortel, 2000, p. 5 (CEO Roth))
		Decline	Of course, the company's <i>health</i> is not framed in numbers alone (Nortel, 2006, p. 2 (CEO Zafirovski))
Religion	Belief, Blessing, Devoted, Faith	Growth	Nortel is <i>blessed</i> with talented people who bring integrity, intelligence, enthusiasm, and customer focus to their work (Nortel, 1997, p. 28 (CEO Roth))
		Decline	I firmly <i>believe</i> that our industry is at an inflection point (Nortel, 2006, p. 4 (CEO Zafirovski))
Fire	Engulfed, Extinguished, Fuel, Ignite, Sparked	Growth	Your company has always succeeded by [...] embracing discontinuities and capitalizing on change to <i>fuel</i> new growth (Nortel, 1998, p. 4 (CEO Roth))
		Decline	It reinforces three main themes; the company's role in enhancing the human experience, <i>igniting</i> and powering global commerce and helping to secure and protect the world's most critical information (Nortel, 2003, p. xiii (CEO Owens))

Note: Since the level of analysis in this study is the individual word, some illustrative quotations may refer to more than one metaphor, though only the terms linked to one metaphor are identified

Table A1.

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