

Semantic Networks for Corporate Communication Concepts and Crisis: Differences Based on Corporate Reputation¹

M^a Victoria Carrillo*, James A. Danowski**, Ana Castillo***, Juan Luis Tato Jimenez****

*University of Extremadura, Spain

** University of Illinois, Chicago

*** University of Extremadura, Spain

**** University of Extremadura, Spain

Abstract

There is considerable attention in the literature to concepts including corporate branding, corporate identity, corporate image, corporate social responsibility, and corporate reputation. Nevertheless, it is not known how the terms are associated with one another in news documents about corporations. This research tests hypotheses about these concepts in natural language discourse in the press in relation to corporate reputation. From the Reputation Institute's 2009 Global Pulse² ratings of 600 world corporations the top 30 and the bottom 30 in reputation are examined by mapping semantic networks containing crisis, corporate communication terms, and the corporation names. News documents are compared to see whether the top corporation names are closer to these communication terms and further from the crisis term, compared to the bottom-ranked corporations.

Keywords: crisis, reputation, branding, identity, image, corporate social responsibility, semantic networks.

Introduction

Companies find it challenging to differentiate themselves in consumer publics' minds. Products have become more similar and consumers do not have strong reasons to choose one over another. In attempts to ameliorate this convergence, companies are looking for ways to increase their value and to create differences by better managing intangible assets such as corporate reputation, corporate image, corporate brand and corporate social responsibility. These communication concepts are thought to influence stakeholders' judgments of organizations. Nevertheless, when crises occur these processes may change.

In general, corporate communication components can be viewed as a sequence beginning with *corporate branding*, which may affect *corporate identity, corporate image, and corporate social responsibility*, which in turn may lead to *corporate reputation*, the summary opinions that stakeholders have about the

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² These data are from the Reputation Institute's (<http://www.reputationinstitute.com>) report: "2009 Global Reputation Pulse: Global Section: An Online Study of Consumers in 32 Countries." We are grateful that the Institute provided an Excel file with the rankings of 600 companies at no charge, part of a report normally sold. The name of the most recent report is: 2011 Global RepTrak™ Pulse. Details of the methodology of the annual surveys can be found online at: <http://http://www.reputationinstitute.com/advisory-services/reptrak.php>

organization. Crises may intervene in these processes. The basic model is shown in Figure 1. As relevant literature is reviewed definitions of these concepts are presented.

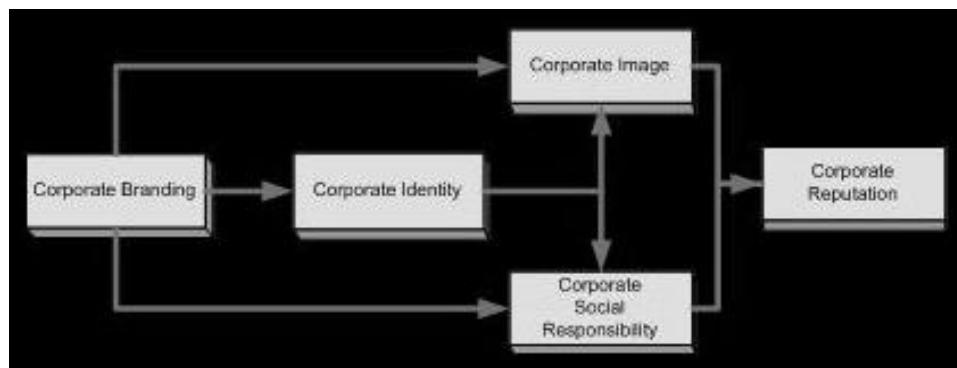


Figure 1. Components of Corporate Communication

Literature Review

The literature about the definitions of corporate communication constructs reveals a lack of consensus. Greyser, Balmer & Urde. (2006) argue that corporate identity, corporate branding, corporate communications, and corporate reputation should be integrated under the single conceptual umbrella of corporate marketing. Rather than collapsing them in this way, however, it may be useful to distinguish among these intangible assets.

Corporate brand. Branding fosters a long-term perception. A brand is an enduring constellation of perceived attributes for a company, or for its products and services, for which stakeholders hold positive and negative sentiment. The concept of 'the brand' has evolved from a name given to differentiate a firm's products, to that of a relationship based on trust (de Chernatony & Riley, 1998). While maintaining their fundamental characteristics of guarantees of quality and simplifiers of choice, brands are increasingly defined as networks of symbols that users positively value beyond their functional utility for product choice. A company must align three essential interdependent elements to create a strong corporate brand: vision, culture and image, according to Hatch & Schultz (2001). They developed a set of diagnostic questions to reveal misalignments. Although designed for practice, the tool is useful in identifying processes associated with branding at the theoretical level. Is there a gap between the corporate vision and employee culture? Does the company practice the values it preaches? Do the company's vision and core values inspire all its

subcultures? Are company vision, values, and culture differentiated from competitors'? Who are the organization's stakeholders? What images do stakeholders have of the company? In what ways do employees and other stakeholders interact? Do employees care what stakeholders think of the company? What do stakeholders want from the company? Is there effective communication of the corporate vision, core values, and culture to stakeholders?

More at an empirical level, Berens, Van Riel & van Bruggen (2005) investigated the effect of corporate brand dominance. The results show that corporate brand dominance determines the degree to which the company influences attitudes toward products. They found two moderating effects: the perceived fit between corporate concepts and product brand attributes, and stakeholder involvement with brands.

Corporate image. Corporate image is defined as shorter-term perceptions that stakeholders have about the company. These include semantic identity, visual identity and corporate vision, values, and culture. It is like a mental photo of the company at a particular moment. This snapshot is a short-term perception. It is no doubt file away in stakeholders' minds, but they are open to new snapshots as conditions change. The mental image slides in short-term memory filter other information about the company. Gummesson (1993), states that customer perceived quality is a function of "quality in fact and quality in perception" (1993, p. 229). In many uses, corporate image appears not well defined and sometimes it is conflated with brand, corporate social responsibility (CSR) and reputation.

Corporate Social Responsibility. There has been a proliferation of conceptual and empirical work on CSR (e.g. Fombrun, 1996; Hillman & Keim, 2001; McWilliams & Siegel, 2000), some of it linking CSR to corporate financial performance (Fombrun & Shanley, 1990); to consumer perceptions of product quality; to employee morale, productivity, recruitment and retention; to company ownership characteristics (Fombrun & Shanley, 1990), and to capital access.

In recent practice, CSR is popularly associated with 'green' environmental practices, but it has a longer history of involving corporations' voluntary donations to resource-needy non-governmental organizations, ranging from international relief efforts to local youth sports. Carroll (1999) argues that to attain CSR: 1) economic responsibilities require managers to be productive, profitable, and meet society's consumer needs; 2) companies must strictly meet legal responsibilities; 3) necessary ethical responsibilities are considered to go beyond mere legal frameworks; and 4) discretionary responsibilities are philanthropic in nature, exercising managerial discretion in furthering universal human rights, domestically and globally.

Others see CSR as constituted by social performance, business ethics, corporate governance, social contract (Donaldson & Dunfee, 2002), stakeholder management (Donaldson & Preston, 1995), corporate citizenship (Zadek, 2001), accountability (Valor, 2005) or care for people at the bottom of the pyramid (Prahalad & Hammond, 2002). Nevertheless, these definitions do not clarify specific social and environmental concerns, how a company may integrate them in its operations and relationships with its stakeholders, and how this may be carried out from a strategic perspective (Porter & Kramer, 2006).

CSR becomes strategic in Mintzberg's (1987) concept of emergent strategies for success of the company, highly dependent on: its relationship with its key stakeholders and its reputation (Fan, 2005); its understanding of the competitive environment; and its image and reputation built on transparency, information, communication and reporting practices.

Corporate reputation. The work of Baden-Fuller, Ravazzolo & Schweizer (2000); De Quevedo (2001); Dollinger, Golden & Saxton (1997); Fombrun (1996); Fombrun & Shanley (1990); Groenland (2002); and Fombrun & Van Reil (1997), leads to the notion that corporate reputation results from the 'social legitimization' of the firm. Brammer & Pavelin (2006) stress the increasing importance of CSR to corporate reputation. A seminal empirical study by Fombrun & Shanley (1990) finds that social responsiveness, measured by corporate charitable donations and having a separately endowed corporate charitable foundation, is positively associated with corporate reputation. Duhé (2009) studies 706 firms over a 21-year timeframe and finds that management quality, financial soundness, and social responsibility, all contributing to corporate reputation, made positive contributions to firm financial performance. Fryxell & Wang (1994) identify a close relationship between corporate reputational capital and social responsibility. As a form of social capital, corporate reputation is not a fleeting impression; it is an accumulation of perceptions and experiences. It depends on repeated performances and impressions. Nevertheless, Highhouse, Broadfoot, Yugo & Devendorf (2009) assert a lack of consensus on how to conceptualize and operationalize corporate reputation (Chun, 2005; Wartick, 2002). De Castro, López & Saez (2006) affirm their inability to identify and measure it, pointing to the concept being socially complex and intangible in nature.

Because of this ambiguity in the scientific literature about conceptual and operational definitions for corporate reputation, it is often treated by default as unique for each firm with little generalizability. Moving toward a more general treatment, De Castro, López & Saez (2006) conceptualize and measure two dimensions: business reputation and social reputation. Indicative of the long-term nature of reputation formation, a survey among British managers shows that firm and product reputation are shaped over several years. Nevertheless, reputation is one of the most difficult to accumulate resources (Walsh & Beatty, 2007). Fombrun & Shanley (1990, p. 254) called for future research that better specifies "the

dimensionality of the [corporate reputation] construct." There is little agreement as to whether corporate reputation is a one-dimensional or multidimensional construct.

In the corporate strategy literature, corporate reputation is considered an intangible asset that contributes to a competitive advantage in the marketplace for goods and services (Barney, 2002). In this context Fombrun (1996) refers to this asset as reputational capital. Consistent with this resource-based view, reputation may be viewed as a valuable resource that should be managed by the firm (Barney, 2002). Fombrun & Shanley (1990) view corporate reputation as the outcome of a competitive process in which a firm signals its key positive characteristics to constituents to maximize its economic and non-economic status.

In the marketing and management literature, corporate reputation rests on the premise that a favorable perception that the stakeholder has of an individual or organization positively impacts attitudes and behaviors toward that entity (Fombrun, 1996; Fombrun & Rindova, 1996; Fombrun & Shanley, 1990). Since 1990, there has been greater interest in the stakeholder's emotional association with a firm, which is thought to influence its long-term financial performance (Chun, 2005). In concluding this section, let us reiterate our definition: corporate reputation is the cumulative collective representation of the organization's past and present actions and outcomes that communicate its capability to obtain value for stakeholders. Perception of value is rooted in sentiment; high value is good.

Definitional diversity in the scientific literature has not prevented the for-profit Reputation Institute from measuring corporate reputation and advising clients about it. They say their "Global RepTrak Pulse" surveys calculate reputation ratings by averaging perceptions of trust, esteem, admiration, and good feeling. The operational definitions for these elements, however, are not published. They state that their extensive international fieldwork shows that a company's reputation is influenced by seven factors: 1) products and services, 2) innovation, 3) workplace, 4) governance, 5) citizenship, 6) leadership, and 7) performance (Reputation Institute, 2011). Again, they do not provide scientifically important details on these claims. Accordingly, a goal of this paper is to see if their reputation ratings are associated with the corporate communication concepts explicated, as they appear in their social representation in news documents. At a minimum we should find that dividing corporations into top and bottom in reputation and examining news content, there should be more mention of corporate reputation among the top firms. This would provide some evidence of validity for the Reputation Institute's assessments.

Crisis. Despite the best-laid plans and well-managed past performance, unexpected challenges arise for strategic management of corporate branding, and of identity, of image, of CSR, and of reputation.

Corporate crisis can arise for a variety of reasons. Most crises result in a large amount of negative press coverage about the company. Ogilvy Public Relations defines corporate crisis as follows:

Crisis - |'kri-ses/n, pl cri-ses/'kri-sez| an unstable or critical time or state of affairs in which a decisive change is pending; a paroxysmal attack of pain, distress, or disordered function. – Webster's Dictionary (2010)

As Webster's indicates, a crisis is a period of trauma, distress and inevitable change. While events triggering a corporate crisis cannot be predicted with absolute certainty, they always bring about change—often for the worse, and always involving the company's reputation, management, brand or market share. The goal of crisis management is to contain and/or prevent the impact on the various audiences that corporations must recognize; these audiences are customers, employees, communities, government, and of course, the shareholder/investment community (Tortorella, 2008, p. 1).

Hypotheses

Rationale. Corporate communication components of branding, of identity, of image, and of CSR are important to organizations' attainment of reputation. As the literature review and conceptual explications have shown, it is through these components, and through other variables as well, that stakeholders rate organizations. Figure 1 shows the components in a sequence based on beginning organizational action of *corporate branding*, which can determine key elements of three other components, *corporate identity, corporate image, and corporate social responsibility*. These three elements are considered central in determining and managing *corporate reputation*. We do not suggest that all organizations go through this sequence of components as they develop and manage corporate communication. Rather, this presents a logical progression based on the processes typically associated with these components.

Corporate identity is the element that generally has the least semantic elaboration for stakeholders. It means how the organization is identified or recognized in terms of core attributes of its business. Corporate image is more complex and includes a mixture of linguistic and nonverbal elements, along with positive and negative sentiment about them, in stakeholder perceptions. CSR is the most complex of the components because it is issue specific in nature and usually involves sequences or parallel sets of corporate behaviors regarding the social and/or physical environment. Usually these are not directly in line with the corporate business focus. Multiple agents or stakeholders, or valued other publics are involved. All

three of these, identity, image, and social responsibility are important, but not the exclusive determinants of corporate reputation. Crisis challenges these relationships such that organizations with better reputations are less impacted, while those with worse reputations most affected.

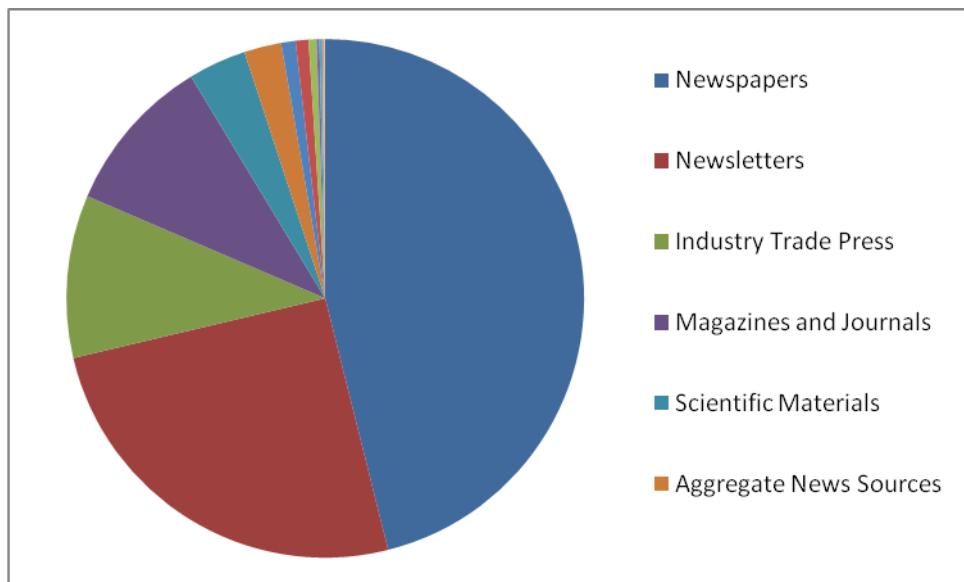
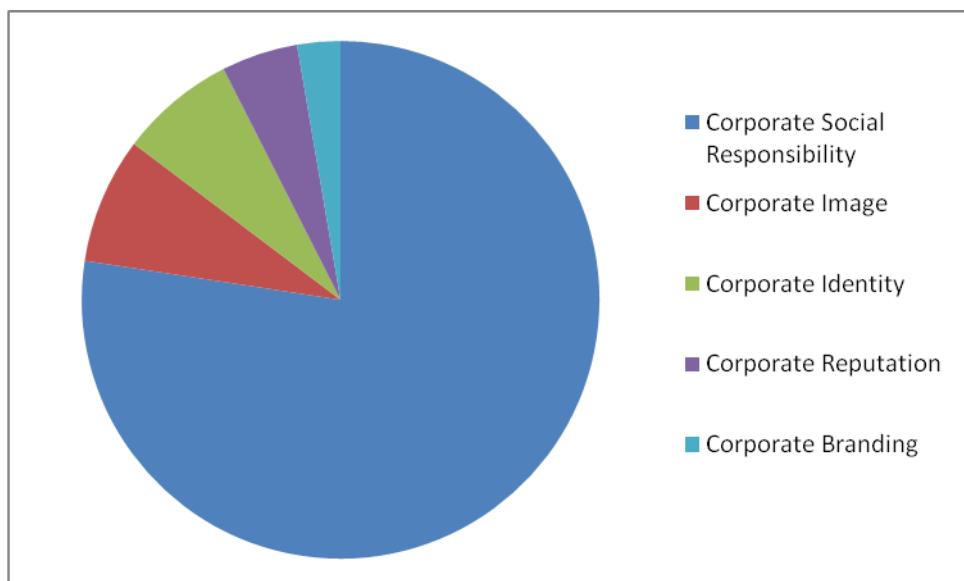
H1: In Lexis-Nexis world documents, components of corporate communication will be more central in the core network of the top 30 organizations of the Reputation Institute's Global Reputation Pulse 600 than in the network for the bottom 30 organizations.

H2: Organizations in the top 30 will have closer connections to communication components than will the bottom 30 organizations.

H3: For the top 30 corporations, crisis will be less central in semantic networks than it will be for the bottom 30 corporations.

Methods

The organizations studied were the top 30 and bottom 30 from the Reputation Institute's 2009 *Global Reputation Pulse 600* report. Also studied were the communication components of: corporate branding, corporate identity, corporate image, corporate social responsibility, and corporate reputation. Data were gathered from world news from Lexis-Nexis for two years from January 2008 to January 2010. These documents include newspaper stories, newsletters, industry trade press, magazine and journal articles, scientific materials, and aggregate news stories, in proportions shown in Figure 2. The documents are in English, the so-called language of businesss. Searches were conducted to retrieve the full text of all documents for the five communication components and for the 60 corporations. Documents retrieved numbered 11,035. The total amount of text was 55.4 mb. Figure 3 shows the relative treatment of the corporate communication components.

Figure 2. Document Sources in the *Lexis-Nexis* Test CollectionFigure 3. Corporate Communication Components in the *Lexis-Nexis* Text Collection

The analysis was a semantic network analysis using WORDij software suite (Danowski, 2010). The WordLink program in this package was used. This software was set to count word pairs appearing three word positions before each word in the text and three word positions after each. A word-window of three words was previously found most valid after extensive empirical testing of different sized windows. The program was run with default settings of no word stemming, and removal of numbers and punctuation. A string conversion file was created to change each corporate component and each corporation name into a unigram, a single word. Table 1 shows the conversion file. These were entered into the program as an 'include list,' which is the opposite of a 'stop word list.' In other words, only the unigrams appearing in the include list were retained in the text and all other words were removed before counting word pairs.

Table 1. Unigram String Conversions

Communication Component Unigrams

corporate branding->corp_branding
corporate image->corp_image
corporate identity->corp_identity
corporate social responsibility->corp_soc_resp

Top Corporation Unigrams

Ferrero->ITA_Ferrero
Ikea->SWE_Ikea
Johnson & Johnson->USA_Johnson&Johnson
Petrobras->BRZ_Petrobras
Sadia->BRZ_Sadia
Nintendo->JAP_Nintendo
Christian Dior->FRA_Christian_Dior
Kraft Foods->USA_Kraft_Foods
Mercadona->SPA_Mercadona
Singapore Airlines->SIN_Singapore_Airlines
Tata->IND_Tata
UPS->USA_UPS
General Mills->USA_General_Mills

El Corte Inglés->SPA_El_Corte_Ingles
Matsushita Electric Industrial->JAP_Matsushita
FedEx->USA_FedEx
Grupo Bimbo->MEX_Grupo_Bimbo
Honda Motor->JAP_Honda_Motor
Whirlpool->USA_Whirlpool
Votorantim->BRZ_Votorantim
Walt Disney Company->USA_Disney
China Faw->CN_China_faw
Google->USA_Google
China Merchants Bank->CN_China_Merch_Bank
Caterpillar->USA_Caterpillar
Costco Wholesale->USA_Costco
Sberbank->RUS_Sberbank
Vale->BRZ_Vale
State Bank of India->IND_State_Bank_India
Microsoft->USA_Microsoft

Bottom Corporation Unigrams

Royal Bank Of Scotland->Royal_Bank_Scot
Bell Canada->Bell_Canada
Africa Anglo American->SA_Anglo_Amer
CFE->MEX_CFE
ERGO Insurance->GER_Ergo_Insur
Stora Enso->FIN_Stora_Enso
PEMEX->MEX_Pemex
TOTAL->FRA_Total
Bidvest->SAF_BidVest
EON->GER_EON
Commerzbank->GER_Commerzbank
Citigroup-USA_Citigroup
CITGO->USA_CITGO
Eurobank Efg->GRE_Eurobank_Efg

Deutsche Bank->GER_Deutsche_Bank
Oi->BRZ_Oi
Avtovaz->RUS_Avtovaz
Fortis->NET_Fortis
Dogan Group->TUR_Dogan_Group
Credit Suisse->SWZ_Credit_Suisse
Japan Tobacco->JAP_Japan_Tobacco
Deutsche Telekom->GER_Deutsche_Telekom
Mitsubishi Motors->JAP_Mitsub_Motors
KFW Bankengruppe->GER_KFW_Bankengruppe
Exxon Mobil->USA_Exxon_Mobil
Public Power Corporation->GRE_Public_Power
Fortis->BEL_Fortis
Deutsche Bahn->GER_Deutsche_Bahn
AIG->USA_AIG
Halliburton->USA_Halliburton
UBS->SWZ_UBS

Direction of words in a pair was retained. In other words, a word appearing first followed by another was treated as distinct from the opposite word order, indicated by the arrows in Figures 4 and 5. All frequencies of word pairs were used. Separate analyses were done for the top and for the bottom corporations by grouping the Lexis-Nexis documents into two files with the corporate communication concept files added to both. The program UCINET 6 (Borgatti, Everett & Freeman, 2002) converted the output file of WordLink for input to its graphics program, NetDraw (Borgatti, 2002). It has more flexibility in showing features of nodes and links than WORDij's Vizij software for graphing networks. The latter is particularly useful for animating time-series network data, which were not used in this study.

In the Netdraw graph output shown in Figures 4 and 5, betweenness centrality was used to show which nodes were more central in the network. Betweenness centrality is most frequently used in the social network analysis literature to measure centrality. It traces the shortest path from each node (here a unigram) to each other node and counts the number of times each other node is included on the shortest paths. A node that appears more frequently on these shortest paths is more central in the network. In Figures 4 and 5, the corporate communication components are displayed as blue triangles. The top corporations are red squares and the bottom ones are grey squares.

Results

Hypothesis 1 was tested by running the Core/Periphery procedure in UCINET 6 (Bogatti, Everett & Freeman, 2002). This measures the extent to which some nodes appear close together in the center, with the remaining nodes linked to the core from the periphery. Only for the top corporations was there a core cluster. It contained six entities: corporate branding, usa_google, usa_disney, corporate reputation, corporate identity, and usa_ups. There was no core-periphery structure among the bottom corporations. As hypothesized, the top corporation file contained communication concepts in a central core while the bottom corporation file did not even have a core. This shows support for hypothesis 1. Corporate branding, corporate identity, and corporate reputation form a core network structure for the top corporations.

Results for the test of Hypothesis 2 are shown in Table 2. The test was conducted by computing the average valued shortest path distances between the top and bottom corporations and each of the corporate communication components. The program OptiComm in WORDij (Danowski, 2010) was used for this purpose. It traces all shortest paths, weighted by link frequency, between a seed word (each of the corporate communication components) and all of the target words, the top and bottom corporations. Results were that the largest statistically significant difference was for corporate image. It was more than twice as close to the top-ranked corporations. Corporate reputation was also significantly higher for the top corporations. In contrast, both corporate social responsibility and corporate branding were just as close to top and bottom corporations; there were no significant differences for them. Corporate identity had no measurable position in the network. The hypothesis was therefore partially supported. The finding that corporate reputation had a closer distance for the top corporations may in part be because we grouped corporation documents according to the Corporate Reputation Institute's naming of the top and bottom ones in reputation. It is, therefore, a validity check on the rankings data, in addition to support for hypothesis 2.

Table 2. Shortest Network Paths for Communication Concepts to Top and Bottom Corporations

Concept	Network Distance					
	Top Corps.		Bottom Corps.		Significance	p
	Ave.	St. Dev.	Ave.	St. Dev.		
Corporate Image < .00005**	1.28	.63	2.91	.51		
Corporate Social Responsibility	1.38	.67	1.41	.00	p < .40	
Corporate Branding	1.38	.67	1.41	.00	p < .40	
Corporate Reputation	1.83	1.04	2.19	.51	p < .048*	
Corporate Identity	----	----	----	----		

Hypothesis 3 was tested by computing flow betweenness centrality of the concept 'crisis' among the corporate communication concepts and company names. Flow betweenness is not an option for resizing nodes in Netdraw, while regular betweenness is and we have used it in Figures 4 and 5. Nevertheless, Borgatti (2005) convincingly argues for flow betweenness' greater appropriateness for communication relationships. It accounts for multiple paths among nodes, not merely the single shortest path, and it uses varying link strength values, unlike the betweenness centrality that converts each link to either present or absent. We await Borgatti's changes to Netdraw to allow node sizing by flow betweenness.

For the top corporations the flow betweenness value for crisis was 10.82 while for the top corporations it was only 4.24. Crisis was therefore 255% more central for the bottom corporations. Hypothesis 3 is supported. Examining Figures 4 and 5 one can see that for the top corporations the most central concept is corporate social responsibility while for the bottom corporations it is crisis. Organizations appearing in the upper left corner of the figures were network isolates, having no links to the other nodes.

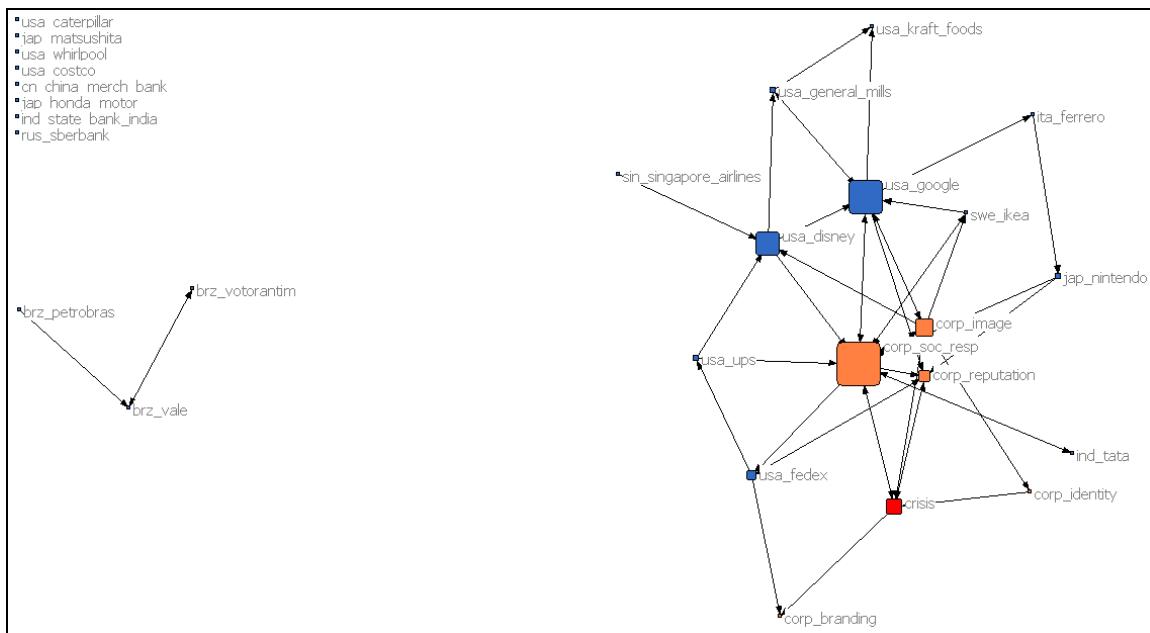


Figure 4. Network of Concepts and Organizations in *Lexis-Nexis* for the Top 30 Corporations in Reputation

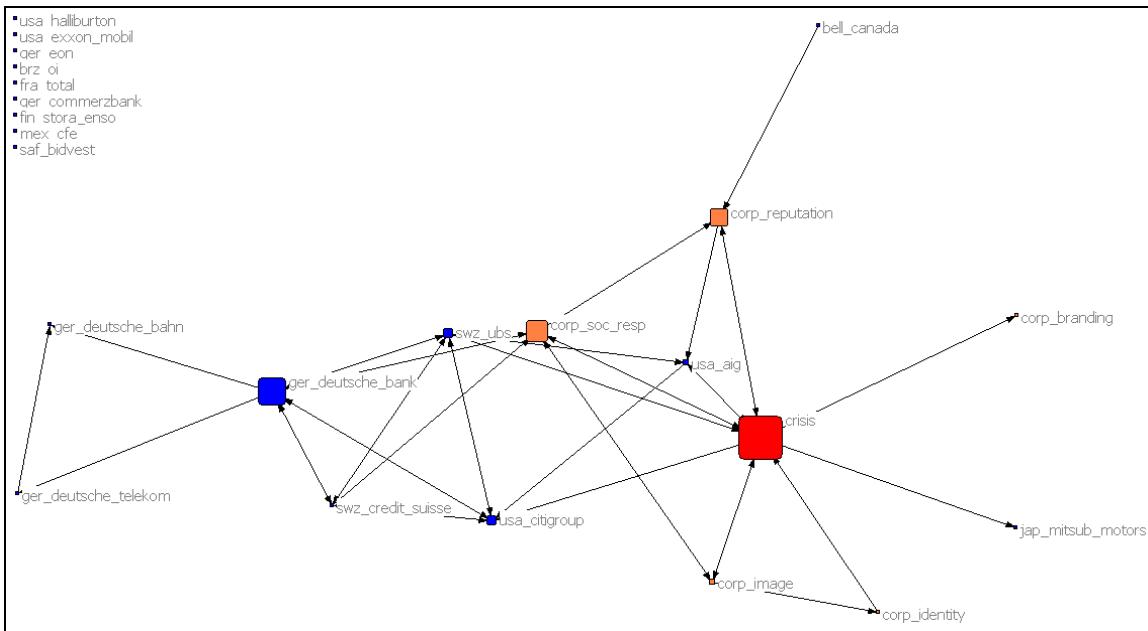


Figure 5. Network of Concepts and Organizations in *Lexis-Nexis* for the Bottom 30 Corporations in Reputation

Discussion

Interpretation

The most noteworthy results were that crisis was significantly more important for the bottom-rated corporations in terms of news coverage. Crisis was the most central concept and overcame corporate communication concepts in relative importance, perhaps producing in stakeholders' minds the low reputation rankings. On the other hand, for the top reputation corporations, while crisis was connected to corporate communication concepts, it was much less important, 255% less central in the network. For the top corporations, corporate social responsibility was the most central concept in the network, although not different enough to be statistically significant.

Another noteworthy finding was that the corporate communication concepts of corporate branding, corporate reputation and corporate identity form a core for the top rated corporations. Nevertheless, while at a macro-network level these were part of the core elements for the top corporations, at a more micro level, corporate image and corporate reputation were found significantly different in average network

distance of top and bottom corporations from it, but not corporate branding. Corporate image stood out as more than twice as close to the top than to the bottom corporations.

Corporate identity was not well positioned in the network and is perhaps therefore not very important in how top and bottom ranked corporations are discussed in the press. This may be due to its more ephemeral nature compared to the other components.

Both corporate branding and corporate social responsibility are virtually equally linked for both top and bottom-reputation corporations virtually. They are constants for corporations studied, not variables. This may show their ubiquity and widely shared importance for the range of corporations studied.

Crisis appears to push communication concepts to a more central position in the network for bottom-ranked corporations. This may mean that corporations which already had lower reputations were more affected by crisis than those with higher reputations. Or, it could mean that regardless of reputation prior to crisis, it had the effect of pushing communication concepts from the center even as crisis-impacted corporations may need to manage these concepts to recover from crisis. The fact that the term crisis appeared in both the top and bottom-rated corporation networks suggests that perhaps top corporations' existing stronger reputations and their more central communication concepts, particularly corporate identity, render them less prone to the negative effects of crisis. Future research can develop time-series research designs more tailored to treating these possibilities to see if the results are replicated and if this explanation stands.

Limitations

There is not a way to know for certain from the news document data how important the concepts studied are executives' strategy. The results could merely reflect third-party observations that are not tied to actual management practices. This may be a less likely limitation considering that public relations activities of the organization have been widely found responsible for most of the print media content about the corporations. One may therefore expect that print media content results are palpably correlated with internal management strategies and practices. Otherwise corporate image, corporate reputation and crisis, would not likely be the focus of public relations for top corporations, along with corporate branding and corporate social responsibility being the focus for both groups of corporations studied.

Another limitation is that while the rankings were for one year's data, this study used two previous years of print media in the analysis under the assumption that some degree of past coverage along with present coverage would be associated with corporate concepts. It remains to be determined how far back one must go to find the optimal fit between past performance and current reputation.

Directions for Future Research

Both limitation points suggest areas of useful future research, conducting time-lagged analysis of print media coverage of the key communication concepts in relation to subsequent changes in reputation. This would gauge the optimal accumulation time for corporate reputation. It would also reveal possible changes in the variables studied from before, to during, and to after crisis. On the same time basis, it would be useful to analyze corporate press release content in relation to the other print media to measure the association between public relations-based corporate positioning messages and media coverage. Knowing this association would help estimate how much the analysis based on media coverage reflects internal corporate strategy and its linguistic structure, versus third party interpretations of reporters and editors based perhaps on other factors. This can contribute to building theory about crisis and corporate communication, which until now has been treated mainly anecdotally.

Findings also point to the need for more research focused specifically on the semantic components of corporate image. A follow up study could map from full text the node-centric network surrounding corporate image to reveal the aggregate social meanings of the concept for top and bottom-reputation corporations.

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