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How executives talk

Exploring marketing executive value articulation with computerized text analysis

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Abstract

Purpose – This paper aims to explore how chief executive officers (CEOs) and C-suite marketing executives (chief marketing officers [CMOs], chief customer officers [CCOs], chief branding officers [CBOs], etc.) talk about marketing concepts to better understand how marketers can more effectively articulate their value and increase their strategic influence within the firm.

Design/methodology/approach – Artificial intelligence-enabled computerized text analysis was used to identify and weight keywords from 266 CEO and C-suite marketing executive interviews. Custom marketing concept dictionaries were used to gauge overall marketing focus.

Findings – The analysis revealed opportunities for C-suite marketers to align specific marketing concepts with that of CEOs for increased strategic influence. Comparisons between C-suite marketing roles showed that CMOs are more focused on marketing strategy than specialized C-suite marketing positions, such as CCO and CBO. This points to a potential decrease in strategic impact for marketing executives dependent on the specialization of their position.

Research limitations/implications – Using IBM Watson's black-box artificial intelligence may limit the ability to replicate results from the content analysis; however, the results identify important ways that marketing executives can use to increase their ability to articulate their value within the firm.

Practical implications – C-suite marketing executives who want to increase the strategic alignment of their role with their firm must pay close attention to the marketing concepts they talk about, and how those align with their CEO's marketing knowledge. The creation of specialized C-suite marketing roles may unintentionally limit the strategic thinking and firm-level impact of marketers.

Originality/value – This paper represents the first use of artificial intelligence-enabled computerized text analysis to explore and compare executive speech acts to help increase marketing's influence in the firm. It is also the first to explore differences in marketing concept use between C-suite marketing roles.

Keywords Strategic planning, Artificial intelligence, Strategic marketing, Computerized text analysis, Marketing influence

Paper type Research paper

Introduction

Most prominent work concerning marketing's value within the firm has considered what role the chief marketing officer (CMO) plays (Nath and Mahajan, 2008), the amount of power the CMO wields within the firm (Nath and Mahajan, 2011) or various proxy measures meant to capture the overall impact marketing has on firm performance (Verhoef and Leeflang, 2009; Katsikeas *et al.*, 2016). This literature stream has been widely acclaimed and rightfully

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commended for its insight and effectiveness. However, there has been less insight about what can be done in marketers' day-to-day role to more intentionally align marketing strategy tasks and firm goals, resulting in a stronger position at the strategy table (Kerin, 1992; Webster, 1992). To address this problem, more subtle and nuanced explorations are required to establish what it means for marketing to effectively *communicate* its value within the firm (Anderson, 1982; Varadarajan and Jayachandran, 1999). Specifically, how do marketing executives *talk* about marketing's role in the firm and does this align with chief executive officers (CEOs)?

Speech acts, the use of sounds and utterances (language) that have meaning (Searle, 1969), make up significant communication within the firm at every level, from the C-suite to the front lines. An exploration into how managers talk and therefore make sense of their business function goals and objectives can provide key insight into how they perceive alignment with other firm priorities (Huff, 1990). Specifically, the common and uncommon language use of CEOs and chief executive roles in marketing (including CMOs) provides insight into whether marketers talk about marketing's role in the firm in a way that communicates its strategic value (Wind and Robertson, 1983; Hanssens and Pauwels, 2016). It is in this context that computer-aided text analysis is uniquely suited to identify, compare and contrast the linguistic sense-making expressed in CEOs' and CMOs' interviews available online.

Researchers have new opportunities to search, scrape, download, analyze and interpret non-numeric unstructured data from the internet (Campbell *et al.*, 2011; Pandey and Pandey, 2017; Pitt *et al.*, 2017; Balducci and Marinova, 2018). Machine learning can help researchers manage and analyze this large volume of unwieldy data. The present work applies computerized textual analysis with the aid of artificial intelligence to CMOs' and CEOs' speech acts to identify their similarities and differences. Understanding how each role conceives of marketing can provide guidance to improve executives' communication and answer the question of how well marketing executives articulate the value they bring to the firm. It is the author's position that being able to articulate one's value is a necessary (albeit not sufficient) condition to have impact in the firm.

This paper also represents an exploration into computerized text analysis and its furthered application in a strategic rather than consumer-focused context (Humphreys and Jen-Hui Wang, 2018). The analysis used IBM's Watson Natural Language Understanding (NLU) artificial intelligence service to examine 262 carefully curated interviews conducted across a 10-year span. These interviews included over 48,000 words from which IBM Watson's NLU extracted approximately 10,000 keywords and phrases that identified linguistic overlap and disparity between CEOs and marketing executive positions. The results indicate that there are specific marketing concepts that may align more effectively to CEOs worldview that can be leveraged by marketing executives to increase their perceived relevance for strategic insights and planning as understood through the specific marketing-oriented way in which they speak. Some surprising results were also revealed concerning the potential shift in how various marketing executive roles (e.g. CMOs, chief customer officers [CCOs] and chief brand officers [CBOs]) talk about marketing concepts, or more specifically, how they do *not* talk about them.

This work contributes to the strategic marketing literature in three meaningful ways. First, this research provides much needed insight into how marketing executives articulate the value of their expertise and activities as they relate to strategic alignment in the firm. An assessment of how marketers talk about their role and marketing's role in the firm is a good starting point to understand marketing's influence (or lack thereof). To the best of the authors' knowledge, this is the only application of computerized text analysis applied to the context of understanding how the marketing function can more effectively articulate its

value. Moreover, it also contributes to a dearth of content analysis for strategic marketing rather than consumer behavior (CB). Second, this work sheds light on the connection between executives' speech acts concerning marketing concepts and their assessments of expert contribution to the firm, which may or may not be strategic in nature, despite their C-suite position. This work is a first step toward a more critical analysis of the ways marketing can contribute value to the firms' overall strategic planning. Third, this work contributes to research that explores marketing's limited influence within the firm by providing evidence of what marketing executives actually consider their contribution to the firm (Clark *et al.*, 2014; Homburg *et al.*, 2015).

The rest of the paper is organized as follows. First, research that identifies marketing's strategic value in the firm and calls for increased articulation of its value is summarized. This is followed by a brief review of the advantages, use and context of computerized text analysis and its intersection with artificial intelligence. Next, the methodology and results are presented, followed by a discussion of impact, implications and suggestions for future research.

Marketing's need to articulate

In the early 1980s, the discipline of marketing began to seriously consider its impact on practice and the academy (Biggadike, 1981; Webster, 1981; Clark *et al.*, 2014). This self-assessment created an intellectual looking glass through which strategic marketing research (MR) has remained fixed upon in several ways, although the significance of the outcomes is less easily gauged. Biggadike's (1981) state of the field assessment of marketing's contribution to strategic management outlined what he saw as the micro-contributions marketing researchers made to global business scholarship and was not, "convinced that many marketers are interested in raising their level of aggregation to the business-unit or industry-unit level and their horizon to the long run" (p. 631). Simultaneously, Webster (1981) was talking to top executives about their concerns with the field of marketing (probably something the marketing discipline could presently do more of) as they experienced it within the firm.

Webster revealed the crucial insight that the CEO must play a central role in the promotion of a marketing perspective and provide support therein. He also found that executives desired marketers to be more entrepreneurial, take risks and be innovative and devote more understanding toward the financial outcomes of their decision-making and return on marketing spend. A year later, Anderson (1982) served to bridge the gap between theoretical impact and practice. His work re-thought how the firm would be structured to give marketing a more prominent place in strategic planning. One of his starting points involved the scholarship of MR: "The ontology of the research tradition defines the basic conceptual building blocks of its constituent theories" (p. 20). He said this in the context that marketing should move away from the dominant theories (ontology) of economics, within which its dominant methodologies did not align, and toward a way of understanding the firm such that:

> [it would] deal explicitly with the role of marketing in the firm and should attempt to explicate its relationship with the other functional areas [. . .] and *specify its contribution* to the formation of corporate 'goal structures'[. . .]. (p. 21, emphasis added).

In this "new" vision of how the firm could operate, marketing plays a central role in the strategic planning process. In addition to marketing's vast responsibilities on the design, discovery and delivery of customer-centric value, and "[. . .] meet[ing] the real needs of their customer coalitions" (p. 23), marketers are charged with understanding the limitations of other functional areas to "effectively negotiate the implementation of its strategies" (p. 24).

Taken together, to lift the aggregated contribution of marketing scholarship to levels of C-suite strategic interests and influence, there is a need to explore how marketers can more effectively *communicate* and *align* what they do within the firm. Repeated calls for communicative-based pathways to establish marketing's influence can be seen in both major problem areas (theory and practice) that played out within the literature in the 1990s and 2000s.

Biggadike (1981) and Webster (1981) are representative of work in the 1980s aimed at problem recognition within the marketing discipline. This stream of work cogently captured the two cornerstones of marketing's dilemma, its theoretical (scholarship) and practical (applied) impact. Theoretical considerations of marketing's transitional state and potential contributions were captured in works such as Day (1992) who proposed particular marketing competencies. The context for competency execution can be framed in the strategic dialogue between corporate and business units. Here, marketing's ability to articulate and perform its value through what Day calls distinctive (marketing's role as expert), integrative (marketing contribution across functions) and supportive (marketing as peripheral) competencies may increase functional value within the firm. Webster (1992) points out that marketing's contributions to the firm require an understanding that marketing operates at three levels in the organization: corporate, SBU and functional (Varadarajan and Clark, 1994). Webster (1992) also speaks to the way in which marketing communicates for status through the hierarchy of situation and dimensions of marketing that occur in the forms of: "marketing as *culture*, marketing as *strategy*, and marketing *tactics*" (p. 10, original emphasis). This creates three distinct ways in which marketing must communicate the meaningfulness of its contribution across functional areas, leadership teams, internal and external environments. However, it remains clear that meaningful business function influence is going to occur at managerial or executive ranks. To this end, Varadarajan (1992) identifies marketing's unique boundary spanning capability among stakeholders as "justification for marketing's greater involvement in corporate and business level strategic decision making" (340). Indeed, he attributes some of marketing's loss of influence to the focus on micro issues (Biggadike, 1981) that at best creates meaningful dialogue about tactical execution *after* strategic decision-making has occurred. This attention to micro issues tends to be far from the executive level, where organization-wide sway is created.

There is some evidence that areas traditionally within marketing's expertise, such as pricing and distribution, have been lost to other functions, namely, finance (Verhoef and Leeflang, 2009). This could be because of such foundational elements of financial accountability (Webster, 1981), or more specifically that, "marketing managers are not finance literate and have trouble answering [budgeting] questions" (Brown *et al.*, 2005, p. 11). Moreover, there has been little cross-disciplinary work regarding how marketing-literate other business functions might be. Indeed, dating back to Webster (1981), the assumption has been that marketing should learn to speak finance and accounting rather than the other way around. This in itself is very telling about the assumed strategic dominance of one discipline over the other (Verhoef and Leeflang, 2009). There is a legitimate organizational stake in marketing's ability to communicate its functional boundaries and roles, tasks and "decision rights," while simultaneously owning and being the primary advocate for the voice of the customer (Jaworski, 2011, p. 219). A common belief might be that the presence of a CMO would mean these elements of marketing's value and domain are automatically conveyed and translate into firm performance, yet surprisingly that has not been the case (Nath and Mahajan, 2008). Verhoef and Leeflang (2009) expanded beyond CMO presence to the entire marketing department and determined that influence hinges on two of the same components identified by Webster (1981), namely marketing departments' financial

accountability and their ownership of innovative product and service concepts (the latter of these was also identified in the 1980s, see Bennett and Cooper, 1981). Verhoef and Leeflang (2009) suggest that marketers hone their finance and accounting skills, as well as leverage customer knowledge for the purposes of new product design and improvement, presumably to get better at answering financial questions and craft a more strategically rich and relevant story about the marketplace.

Research on the link between CMOs and financial performance finds that CMOs differ in their impact on financial performance of the firm depending on levels of idiosyncratic managerial discretion and the amount of customer power present in the firm, as operationalized by the firm having a "major customer" (Boyd *et al.*, 2010) This work highlights the boundary-spanning significance of the marketing position and the degree to which external customer forces impact the negotiation to influence CMOs face within the firm (Anderson, 1982; Varadarajan, 1992). In similar fashion, Nath and Mahajan (2011) consider the individual power CMOs wield within the firm. In alignment with prior findings, they recommend that CMOs potentially increase their power (thus influence) by increasing cooperation with the sales department, being more innovative (in the condition of *low* top-management-team marketing experience) and gaining control of critical firm resources.

To summarize, marketing's ability to negotiate for resources, communicate its value and breadth of expertise across managerial levels and share the strategic importance of understanding market-related stakeholder relationships, can be studied through the lens of understanding executive-level speech acts. Therefore, this paper explores the type of language use that can more effectively align marketers' work and worth with the strategic vision and focus of the firm. It is with this in mind that computerized text analysis is explored to provide a rich source of insight.

Speech, thought and analysis

The core distinction of the research technique and application of textual analysis lies in the relationship between human speech and cognition (Reger and Pfarrer, 2007; Sapir, 1944; Whorf, 1956). In particular, the way individuals understand their environment is partially determined by and captured in their language, which represents personal internal categories and theories of the way things appear to work in their world. Insight into how people think, as captured by the way they talk, can also be used to track schematic cognitive changes over time (Reger and Pfarrer, 2007). In this way it is possible to analyze speech acts to identity what an individual is focused on, what matters to them and/or the turns of their attention (Bowman, 1984; Huff, 1990). The analysis of what is said – e.g. word choice, frequency, emotion and sentiment – can reveal underlying categories and themes that point to, reference, and disclose what is not always explicitly stated by an individual. This can reveal ways in which individuals understand certain aspects of their lives, for example the value their professional role offers their employer. Given the increased availability of textual content on the internet, the potential to investigate distinctive and nuanced speech acts pertaining to marketing is very promising. However, because of issues regarding coder bias and reliability, data that is congested, unorganized and often unformatted, the use of computers to aid the researcher shows potential.

The application of computerized text analysis (sometimes referred to as computer-aided text analysis) has become increasingly relevant with the online growth of unstructured data (Krippendorf, 2019; Neuendorf, 2017). Unstructured data refers to information that has no pre-assigned or inherent numerical system organizing it, such that the researcher must assign numeric coding manually or with the aid of computer software [see Balducci and Marinova (2018) for a comprehensive overview]. Various software packages have been

produced for more efficient application of computer-aided text analysis, such as NVivo, DICTION, CATPAC and MECA (Neuendorf, 2017; Short *et al.*, 2010).

Within the marketing literature, computerized text analysis has mostly been applied to consumer-facing contexts, for example, consumer discussions on consumer-generated advertisements (Campbell *et al.*, 2011); differences in attributes presented by expert-written buying guides and consumer online reviews of cameras (Lee and Bradlow, 2011); storyline impact on online reviews of movies (Simmons *et al.*, 2011); and consumer interpretations of advertising slogans (Dowling and Kabanoff, 1996). To a lesser degree there has also been some work that has focused on explicitly firm-related and executive issues. For example, Yadav *et al.* (2007) used computerized text analysis as part of a study on CEO attention and innovation outcomes to identify future-oriented word choice in letters to shareholders. Using a similar technique on SEC filing documents, Saboo and Grewal (2013) determine customer vs competitor firm orientation (one of their independent variables) and its effect on stock market response. Kashmiri and Mahajan (2017) used DICTION to identify entrepreneurial orientation (Short *et al.*, 2010) among their firm sample of CEOs, which was also based on letters to shareholders. In all these examples, computerized text analysis was one part of a larger statistical analysis methodology and relied on particular software to aid the researchers in their word choice identification and coding procedures. Much less represented in the marketing literature is development in the application of computer text analysis to unstructured data that incorporates machine learning in the form of cognitive computing and natural language processing (NLP) (Darbirian *et al.*, 2017; Pitt *et al.*, 2018).

IBM Watson is a deep NLP system that achieves accuracy by highlighting context (High, 2012). Watson determines the context by comparing the original text to other data bases, referred to as a *corpus*, and draws inferences based on these past exposures. Watson is also considered a *cognitive system*, that is, "[it] applies human-like characteristics to conveying and manipulating ideas" (High, 2012, p. 7). This allows the NLP to make inferences about passages of texts that combines with other passages of texts while drawing on massive corpora to extract as much context as possible. This can then be applied at a scale and speed not achievable by individuals alone. This does not mean that Watson understands the words themselves, rather, "it understands the features of language that are used by people" (High, 2012, p. 5). Integral to the way Watson's NLP can process unstructured data is the deep-learning algorithms embedded within the system. Deep learning allows Watson to self-teach and self-learn based on vast exposure to information. It can process and make predictions about unstructured data based on past data collection and processing, referred to as *reinforced learning* (Nisbet *et al.*, 2018). The reinforced learning that the deep-learning algorithm permits is how Watson can, "[detect] repeated patterns of values in data and [use] it to make accurate prediction of future outcomes" (Nisbet *et al.*, 2018, p. 776). In this way, Watson's NLP can adapt to changes in data over time and update old patterns through exposure to new information. This creates value for researchers who want to use cognitive systems such as Watson to explore themes, discover patterns and highlight details that human coders/readers may not easily associate with a given textual data set or could overlook all together (Humphreys and Jen-Hui Wang, 2018; Nisbet *et al.*, 2018). This was a primary reason Watson NLP was chosen over traditional methods of content analysis. The potential for the machine-learning algorithm to identify potential patterns and concepts not subject to coder/reader bias and fatigue was very appealing, as was the more nuanced outcome based on keyword and keyword phrase analysis rather than more traditional word counts.

Methodology

Sample

To explore the relationship between how CEO and CMO executives talk and what it represents in terms of their strategic mindset and marketing influence, interviews were collected from the internet. First, other marketing C-suite roles besides that of the CMO were identified. A fair portion of firms feature C-suite roles such as CCO, CBO, chief sales officer, chief product officer, chief creative officer, chief experience officer, chief communications officer or chief content officer, all of which are C-suite titles typically viewed as marketing roles (Gesenhues, 2017). Google Search was used to determine the sample of interviews with marketing C-suite executives and interviews with CEOs. To ensure that the search results were not customized to the searcher's history, which could potentially bias the search results, "private results," were not used. The full name of the C-suite role was entered into the query in quotation marks along with its abbreviation. The two terms were separated with "OR" and placed in parentheses to ensure either term was included in the webpage. Outside of the parentheses, the word "interview" was added. Finally, a 10-year (2008-2018) publication time period was designated. Foreign language interviews were excluded, as were video interviews without transcripts. The searches were terminated at page 9 of Google's results to optimize relevancy. Each interview was verified to have occurred in the 10-year time period and 6 CEO interviews were discarded because they occurred before 2008 but had been published online more recently.

The final sample consisted of 262 interviews, with 144 CEOs and 118 marketing C-suite roles. The marketing roles comprised 37 CMOs, 42 CCOs and 39 other chief executive marketing roles, such as CBO, chief sales officer and chief knowledge officer, all of which are referred to as C_O in the rest of the paper. The sample included a variety of notable firms, such as Bank of America, Athleta, Caterpillar, Deloitte, Forever 21, Jimmy Choo, Ocean Spray, Omni Hotels, Uber and Virgin. Although it appears that the sample size is small, data quality was traded-off for quantity; alternate approaches to online data collection, such as scraping, could result in data with quality issues. By collecting relevant data and eliminating as much "noise" as possible, reliability and validity should increase given the inherent "black box" of machine-learning algorithms.

Watson analysis

The final data set of online interviews was saved as Word files to be copied and pasted into the Watson NLU API that can be found at www.ibm.com/watson/services/natural-language-understanding/. Each interview was run through the machine-learning algorithm, but only the identified keywords, keyword phrases and associated weights were collected (a complete overview of Watson NLU can be found at https://console.bluemix.net/apidocs/natural-language-understanding#analyze-text). The exploratory nature of this work limited relevant output from the NLU to keyword and keyword phrase analysis to align the machine-learning identified keywords with custom dictionaries that reflect specific marketing-centric thought processes found in CEO and marketing executive language use.

Dictionaries

To gauge the amount of marketing perspective identified by the NLU output, separate marketing dictionaries were developed (see Appendices for full dictionaries). While there are several publicly available marketing dictionaries available online, many terms included therein would lead to erroneous classifications, such as "roles," "account," "accountability" and "margin", that are not marketing specific. Using marketing textbooks assisted the separation of marketing into distinct categories (promotion vs MR). Furthermore, the

developed dictionary is tailored to transcriptions of speech acts, which are more casual than formal business writing, and in which an individual may refer to "market research" instead of "marketing research." The process to develop these custom dictionaries started with a survey of marketing principles textbooks for terms. Multiple rounds of term assessment were conducted by the paper's authors that resulted in an overall marketing dictionary consisting of 253 terms separated into 7 distinct sub-dictionaries based on the following core marketing concept domains: *marketing strategy, CB, MR, product, place, price, promotion* and *digital*[1]. The last dictionary, digital, may be a point of contention as all aspects of marketing can have a digital component. However, the field still seems to separate digital activities in its own category, as evidenced by universities' business curriculum featuring digital or internet marketing courses, industry-focused surveys that present questions specific to digital marketing spend and digital data (e.g. Fuqua School of Business' cmosurvey.com), and organizational roles with titles such as "digital marketing manager," "director of digital marketing," "web marketing specialist" and "digital strategist." The dictionaries were then shared with expert raters who talked through disagreements and settled on a final version of each dictionary. The inter-rater reliability of the dictionaries was a highly acceptable 0.84 (Neuendorf, 2017).

Results

IBM Watson identified a total of 10,544 keywords and phrases, of which nearly 17 per cent were marketing keywords (1,790 total marketing keywords identified from dictionaries described above). Of those marketing keywords, at the aggregate level, all C-suite executives spoke most about digital marketing ($P_{digital}$ = 25.42 per cent), CB (P_{CB} = 24.92 per cent) and product ($P_{product}$ = 18.99 per cent). CEOs spoke the least about price (P_{price} = 2.40 per cent), promotion (P_{promo} = 3.30 per cent) and place (P_{place} = 9.89 per cent). Slightly over 10 per cent of the interviews did not feature a single marketing keyword. The 27 interviews that did not include a single marketing keyword were from 19 CEOs, 6 CCOs and 2 C_O. Furthermore, approximately 90 per cent of interviews did not feature a single keyword related to price or promotion (Table I).

On average, interviews had 40.24 keyword phrases identified by the Watson NLU, of which 6.83 were related to marketing. The emphases on digital marketing ($M_{digital}$ = 1.74), CB (M_{CB} = 1.7) and product ($M_{product}$ = 1.30) were consistent with results above. As the interviews varied in length, and therefore in the number of phrases extracted by Watson NLU, interviews' *category keyword share*, defined as the ratio of marketing-specific keywords for each of the dictionaries (e.g. all marketing, marketing strategy, CB, MR,

Keyword category	Total count	% of total keywords	% of marketing keywords	% of interviews with > 1 keyword
All	*10,544*	*100.00*		
Marketing	*1,790*	*16.98*	*100.00*	*89.69*
Strategy	211	2.00	11.79	27.10
CB	446	4.23	24.92	50.00
MR	199	1.89	11.12	22.52
Product	340	3.22	18.99	51.53
Place	177	1.68	9.89	28.63
Promotion	59	0.56	3.30	9.16
Price	43	0.41	2.40	10.69
Digital	455	4.32	25.42	51.15

Table I. Summary statistics of IBM Watson keywords across interviews

product and digital) relative to the total number of keywords identified by the NLU per interview, was calculated. The average share of marketing keywords across all interviews was 19.15 per cent, though there was substantial variance, with the highest keyword share at 85.71 per cent.

A key feature of Watson's NLU is the calculation of keyword *weight* (NLU labels it *"relevance"*), which estimates the relative importance of particular keywords and phrases in the context of the interview, which is measured on a scale from 0 to 1. This is an interesting metric because it captures the fact that not all phrases are of equal relevance. For example, it is possible that an executive interview might feature some marketing keywords, but those keywords may or may not be considered significant in the overall framework of the text. As the focus of this research is to identify a marketing perspective through language use, only the weights associated with marketing keywords were preserved. If a phrase extracted by the Watson NLU was not associated with marketing, the weight measure took on a missing value.

The average marketing keyword weight across all interviews was 58.66 per cent. The minimum marketing keyword weight found was 25.33 per cent from a CEO interview. The maximum marketing keyword weight identified was 92.12 per cent and interestingly also belonged to a CEO. The marketing categories *promotion* (65.84 per cent), *marketing strategy* (64.08 per cent) and *digital* (60.76 per cent) were weighted as the most relevant *when present* in interviews. This is of particular interest because *promotion* was the second-least frequently identified marketing keyword category, but on few occasions it was mentioned in an interview and was weighted heavily (Table II).

Descriptive statistics by C-suite roles

Overall, and as might be suspected, CEOs spent less of their interviews discussing marketing-relevant concepts (12.93 per cent of keywords) compared to marketing C-suite roles (CMOs: 31.31 per cent, CCOs: 24.93 per cent and C_O: 22.34 per cent). To explore a more global viewpoint of marketing within the interview data, the percentage of interviews that featured at least one marketing keyword for each executive role was calculated. In the sample, 100 per cent of CMO interviews had at least one marketing keyword, followed by C_O at 94.87 per cent, CEOs at 86.81 per cent and finally CCOs at 85.71 per cent.

Perhaps not as surprising, all executives spoke extensively about digital concepts, which was one of the two most frequently mentioned categories across roles (CEOs: 25.14 per cent; CMO: 29.93 per cent; CCO 13.41 per cent; and C_O: 31.93 per cent). CEOs and CCOs both had a focus on CB, which was one of the top two most frequently discussed marketing categories for both roles (22.54 and 54.41 per cent, respectively). CMOs discussed marketing strategy the most (27.37 per cent) and C_O focused on product (31.02 per cent). Across all executive roles, promotion and price were the least frequently mentioned. While CEOs spoke about marketing less overall compared to the marketing executives, their share of promotion and price keywords were actually greater than that of all marketing executives (Table III).

Interview-level analyses and results

C_O interviews, on average, featured the most marketing keywords ($M_{C\_O} = 8.51$), followed by CMOs ($M_{CMO} = 7.41$), CEOs ($M_{CEO} = 6.41$) and CCOs ($M_{CCO} = 6.21$), but this is perhaps not the most illustrative metric, as the average number of keywords per interview varied greatly by role, with CEOs ($M_{keywords\ CEO} = 49.56$) far outstripping C_Os ($M_{keywords\ C\_O} = 38.10$), CCOs ($M_{keywords\ CCO} = 24.93$) and CMOs ($M_{keywords\ CMO} = 23.65$).

CMOs had the highest marketing *keyword share* ($M_{CMO} = 30.85$ per cent), followed closely by CCOs and C_O ($M_{CCO} = 26.32$ per cent; $M_{C\_O} = 23.02$ per cent) and finally CEOs

Keyword category	Count per interview				% relative to total # keywords in interview				IBM Watson weight for keywords in category			
	Mean	SD	Minimum	Maximum	Mean (%)	SD	Minimum	Maximum (%)	Mean (%)	SD	Minimum (%)	Maximum (%)
All	*40.24*	*13.09*	*17*	*50*								
Marketing	*6.83*	*6.38*	*0*	*30*	19.15	0.18	0	85.71	58.66	0.14	25.33	92.12
Strategy	0.81	1.87	0	12	2.30	0.05	0	28.57	64.08	0.15	28.50	94.33
CB	1.70	3.09	0	19	5.05	0.11	0	76.19	58.26	0.15	22.00	92.71
MR	0.76	2.30	0	17	1.99	0.06	0	71.43	58.78	0.17	26.00	90.00
Product	1.30	2.14	0	15	3.85	0.07	0	71.43	58.12	0.14	26.00	91.67
Place	0.68	1.72	0	12	1.73	0.04	0	28.57	57.83	0.14	26.00	89.00
Promotion	0.23	0.86	0	7	0.60	0.02	0	23.81	65.84	0.16	30.00	89.67
Price	0.16	0.67	0	8	0.39	0.02	0	19.05	54.87	0.16	24.00	88.00
Digital	1.74	2.91	0	17	4.62	0.07	0	47.62	60.76	0.15	28.00	93.00

Table II.
Summary statistics of IBM Watson keywords count, proportion and weight per interview

Role	Keyword category	Total count	% of marketing keywords	% of interviews with > 1 keyword
CEO (n = 144)	All	7136		
	Marketing	923	100.00	86.81
	Strategy	88	9.53	18.75
	CB	208	**22.54**	**48.61**
	MR	137	14.84	22.92
	Product	140	15.17	45.14
	Place	130	14.08	34.03
	Promotion	34	*3.68*	*9.03*
	Price	37	*4.01*	*17.36*
	Digital	232	**25.14**	**47.92**
CMO (n = 37)	All	875		
	Marketing	274	100.00	100.00
	Strategy	75	**27.37**	**67.57**
	CB	47	17.15	56.76
	MR	10	3.65	16.22
	Product	63	22.99	**70.27**
	Place	9	3.28	16.22
	Promotion	4	*1.46*	*5.41*
	Price	4	*1.46*	*2.70*
	Digital	82	**29.93**	62.16
CCO (n = 42)	All	1047		
	Marketing	261	100.00	85.71
	Strategy	12	4.60	19.05
	CB	142	**54.41**	**50.00**
	MR	17	6.51	21.43
	Product	34	13.03	38.10
	Place	25	9.58	23.81
	Promotion	9	*3.45*	*9.52*
	Price	1	*0.38*	*2.38*
	Digital	35	**13.41**	**45.24**
C_O (n = 39)	All	1486		
	Marketing	332	100.00	94.87
	Strategy	36	10.84	28.21
	CB	49	14.76	48.72
	MR	35	10.54	28.21
	Product	103	**31.02**	**71.79**
	Place	13	3.92	25.64
	Promotion	12	*3.61*	*12.82*
	Price	1	*0.30*	*2.56*
	Digital	106	**31.93**	**58.97**

Note: The two highest values per role are bolded and the lowest two values are italicized

Table III.
Summary of keyword categories across roles

(M_{CEO} = 13 per cent). Given the left-skewed data and the number of zero values (which correspond to non-marketing keywords) present in the data set, the non-parametric Kruskal–Wallis[2] test was used to compare all executive roles' keyword shares. To identify significant pairwise comparisons after the Kruskal–Wallis test, the Dunn's test with the Benjamini–Hochberg multiple-comparison adjustment was calculated (Benjamini and Hochberg, 1995; Dinno, 2015). The differences in keyword share among executives were

statistically significant ($\chi^2_{(3)} = 40, p < 0.001$), and the Dunn's test indicated CEOs' marketing keyword share was significantly smaller than all marketing executive roles' share (all $p < 0.01$). Furthermore, CMO's marketing share was significantly higher than CCO and C_O (both $p < 0.05$). There were no differences between CCO and C_O.

Unsurprisingly, marketing executives' marketing keywords were more heavily weighed than CEO's marketing keywords, though the difference was not very large ($M_{Weight\ CMO} = 64.97$ per cent; $M_{Weight\ CCO} = 64.53$ per cent; $M_{Weight\ C\_O} = 59.61$ per cent; and $M_{Weight\ CEO} = 54.81$ per cent), but were statistically significant ($\chi^2_{(3)} = 21.44$; $p < 0.001$). CEOs weights were statistically different from CMOs and CCOs (both $p < 0.01$), though surprisingly not that of C_Os.

Marketing strategy dictionary results

The differences in talking about marketing strategy differed greatly between the CMO and other executive roles ($\chi^2_{(3)} = 43.92, p < 0.001$). CMO interviews had an average 7.4 per cent marketing strategy share, which was statistically greater than C_Os at 2.34 per cent, CCOs at 1.31 per cent and CEOs at 1.23 per cent in pairwise comparisons ($p < 0.01$). The weights rendered to marketing strategy were interesting because CCOs seldom discussed marketing strategy, but when they did, it was weighted the highest among executive roles ($M_{Weight\ CCO} = 67.58$ per cent, $M_{Weight\ CMO} = 65.51$ per cent, $M_{Weight\ CEO} = 62.81$ per cent and $M_{Weight\ C\_O} = 61.38$ per cent). These differences are only illustrative, as they are not statistically significant ($\chi^2_{(3)} = 1.021, p = 0.796$). This may be because of the relative infrequency in which executives discussed strategy. CEOs mentioned a marketing strategy keyword 27 times, CMOs 25 times, C_Os 11 times and CCOs 8 times (Figure 1).

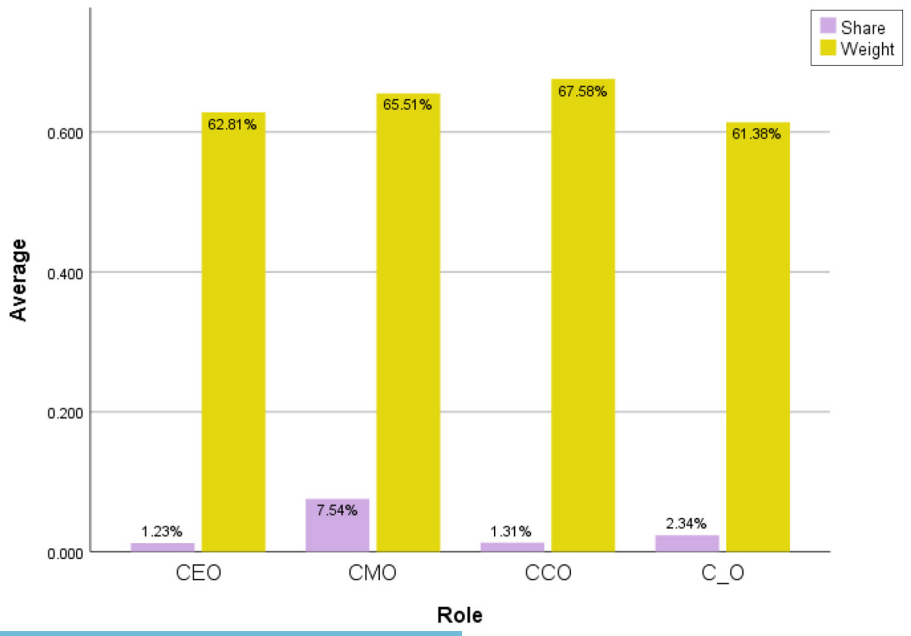

Figure 1. Marketing strategy share and weight by role

Consumer behavior dictionary results

As expected, CCOs discussed CB the most. CCOs' average CB share was 13.98 per cent, compared to CMOs at 5.48 per cent, CEOs at 2.94 per cent and C_O at 2.84 per cent ($\chi^2_{(3)} = 7.69$, $p = 0.053$). The weights accorded to CB were significantly different across roles ($M_{Weight\ CMO} = 66.18$ per cent; $M_{Weight\ CCO} = 65.65$ per cent; $M_{Weight\ C\_O} = 55.13$ per cent; $M_{Weight\ CEO} = 54.52$ per cent; $\chi^2_{(3)} = 15.91$, $p < 0.01$), with the pairwise differences between CCO–CEO, CCO–C_O, CMO–CEO and CMO–C_O statistically significant ($p < 0.05$). The relationship with CCOs and CB is not particularly noteworthy; however, it does seem that CCOs seemed to focus on CB concepts at the expense of other more strategically driven concepts such as MR, price and promotion (Figure 2).

Marketing research dictionary

The executives that spoke the most about MR were C_O ($M_{C\_O} = 3.17$ per cent), which may have been because of the varied executive roles that are included in this category. Given the growth in marketing analytics, the small values found in the MR share was a surprise, which for the CEO, CMO and CCO averaged under 2 per cent, with the lowest value for CMOs ($M_{CMO} = 1.29$ per cent). However, the differences across roles are only illustrative, as they were not statistically different from one another ($\chi^2_{(3)} = 1.28$, $p = 0.73$). Interestingly, even though C_O have the "highest" MR share, it was not necessarily as important to them ($M_{Weight\ C\_O} = 57.7$ per cent) compared to CMOs, who, despite mentioning it the least, had the highest weight ($M_{Weight\ CMO} = 73.37$ per cent). The differences among executive roles were not statistically significant, but this was likely because of the few overall mentions of MR terms ($\chi^2_{(3)} = 5.32$, $p = 0.15$) (Figure 3).

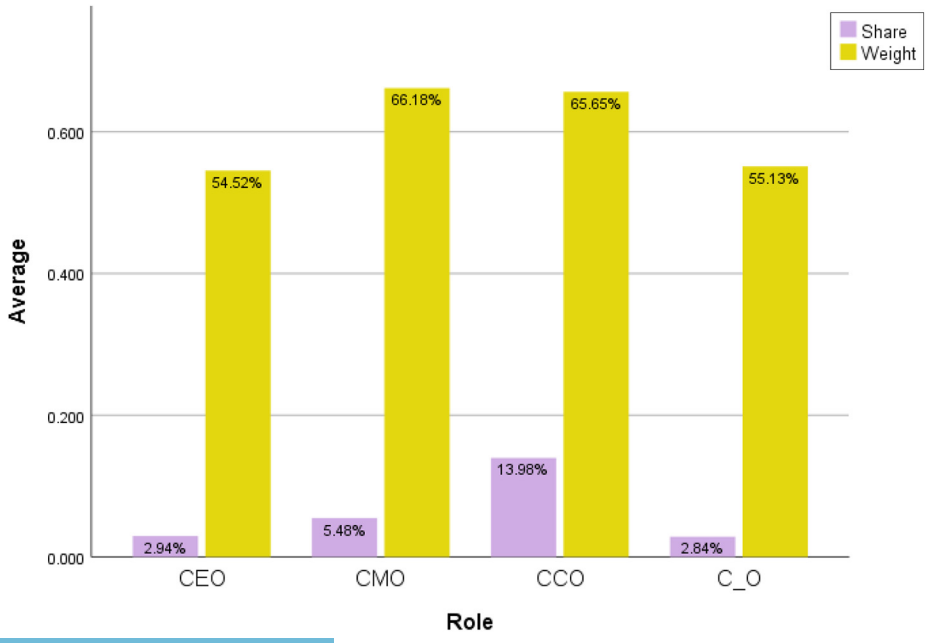

Figure 2.
CB share and weight by role

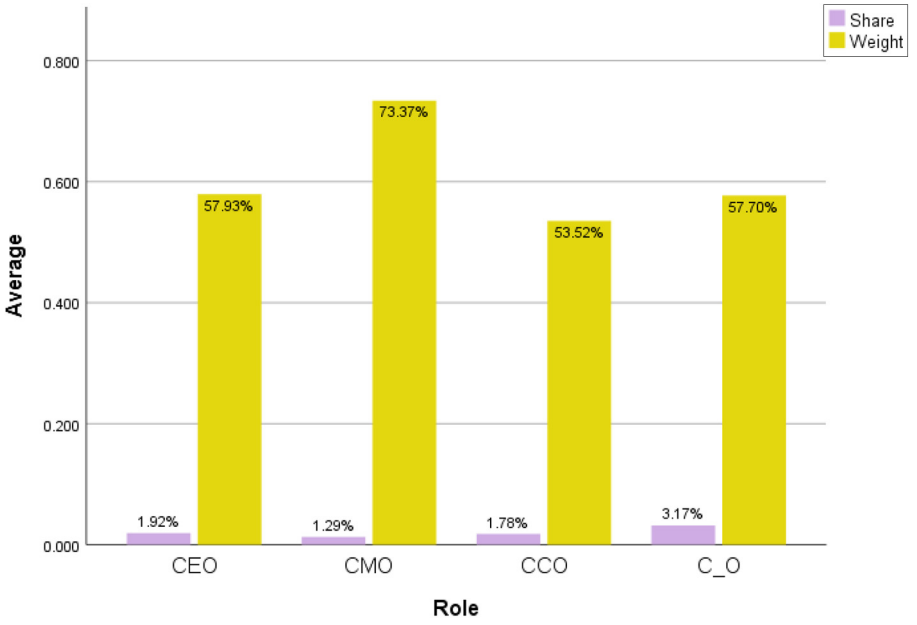

Figure 3.
MR share and weight by role

Product dictionary results

There were substantial differences between specific groupings of marketing executives' product share, with CMOs and C_Os close together (M_{CMO} = 7.45 per cent; and M_{C_O} = 7.61 per cent) and CCOs and CEOs close together (M_{CCO} = 3.68 per cent; and M_{CEO} = 1.95 per cent). Indeed, the differences were statistically significant ($\chi^2_{(3)}$ = 37.77, p <0.001), with CMO and C_O product share statistically higher than that of both CCO and CEO ($p < 0.05$). The product keyword weights were also statistically different ($\chi^2_{(3)}$ = 7.30, p = 0.063), with marketing executive roles averages close together (ranging from 59.74 to 62.71 per cent), and the CEO product weight average at 54.92 per cent. This is of particular interest as the product offering is generally at the center of the business and revenue model, directly related to long-term strategic planning and growth (Figure 4).

Place dictionary results

Overall, none of the executive roles spoke extensively about place. CCOs had the highest place share (M_{CCO} = 2.57 per cent), followed by CEOs (M_{CEO} = 1.81 per cent), then CMO and C_O close together (M_{CMO} = 1.16 per cent and M_{C_O} = 1.09 per cent), but these differences were not statistically significant ($\chi^2_{(3)}$ = 3.29, p = 0.35). While CMOs' place share was in the bottom two, their place keywords had the highest weight among the executives' roles ($M_{Weight\ CMO}$ = 64.39 per cent; $M_{Weight\ CCO}$ = 59.63 per cent; and $M_{Weight\ CEO}$ = 57.17 per cent). C_Os, surprisingly, had not only the lowest place share, but also the lowest weight on place keywords ($M_{Weight\ C\_O}$ = 55.32 per cent). These differences, however, were not statistically significant ($\chi^2_{(3)}$ = 1.76, p = 0.62), which is likely because of the somewhat infrequent mention of place keywords (CEOs: 49 place keywords in 144 interviews; C_O: 10 in 39 interviews; CCOs: 10 in 42 interviews; and CMOs: 6 in 37 interviews). It is worth asking whether or not some traditional domains of marketers' expertise are drifting toward other

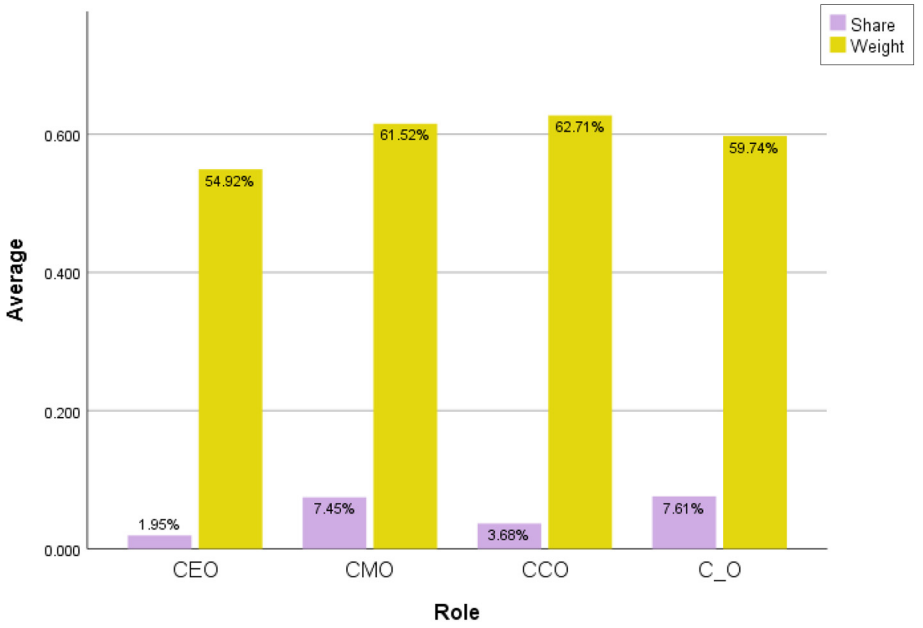

Figure 4.
Product share and weight by role

business functions. In this case, it is possible that place concepts are being handled more and more by operations as the value chain becomes more centralized (Figure 5).

Promotion dictionary results

Given the importance of promotion in the marketing mix, it was surprising that all promotion shares were less than 1 per cent across all executive roles (M_{CCO} = 0.89 per cent; M_{C_O} = 0.81 per cent; M_{CMO} = 0.51 per cent; and M_{CEO} = 0.47 per cent) and were not statistically different ($\chi^2_{(3)}$ = 1.18, p = 0.76). The weight values were quite different across roles, and CCOs had the highest promotion weight ($M_{Weight\ CCO}$ = 79.85 per cent), followed by CEOs ($M_{Weight\ CEO}$ = 65.89 per cent), CMOs ($M_{Weight\ CMO}$ = 59.83 per cent) and C_O ($M_{Weight\ C\_O}$ = 56.90 per cent). While these differences appear substantial, they are not statistically significant ($\chi^2_{(3)}$=5.61, p = 0.13), likely because of the shockingly infrequent mentions of promotion overall (N_{CEO} = 13 promotion keywords; N_{C_O} = 5; N_{CCO} = 4; N_{CMO} = 2). In this case, there again may be extenuating circumstances that leads to promotion concepts pushed down into more tactical conversations, especially with the increase in digital specialization and channels (Figure 6).

Price dictionary results

Similar to promotion keywords, all executives' average price keyword share was very low and did not reach 0.6 per cent for any of the roles. While the differences are statistically significant ($\chi^2_{(3)}$ = 14.12, p = 0.003) the meaningfulness of such a difference is questionable. Furthermore, CCO, CMO and C_O roles each only had *one* mention of price keywords across all their respective interviews. For the CCO roles, the single price keyword was weighed 82 per cent, the CMO price keyword weight was 65 per cent, and for the C_O, it was weighed 38 per cent. CEOs mentioned a price keyword 25 times across 144 interviews, and the average

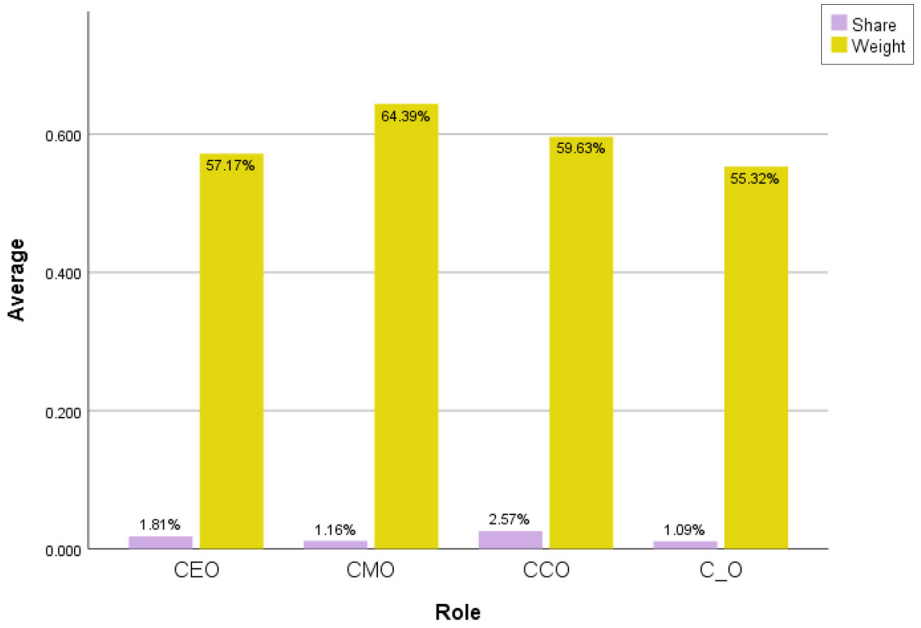

Figure 5.
Place share and weight by role

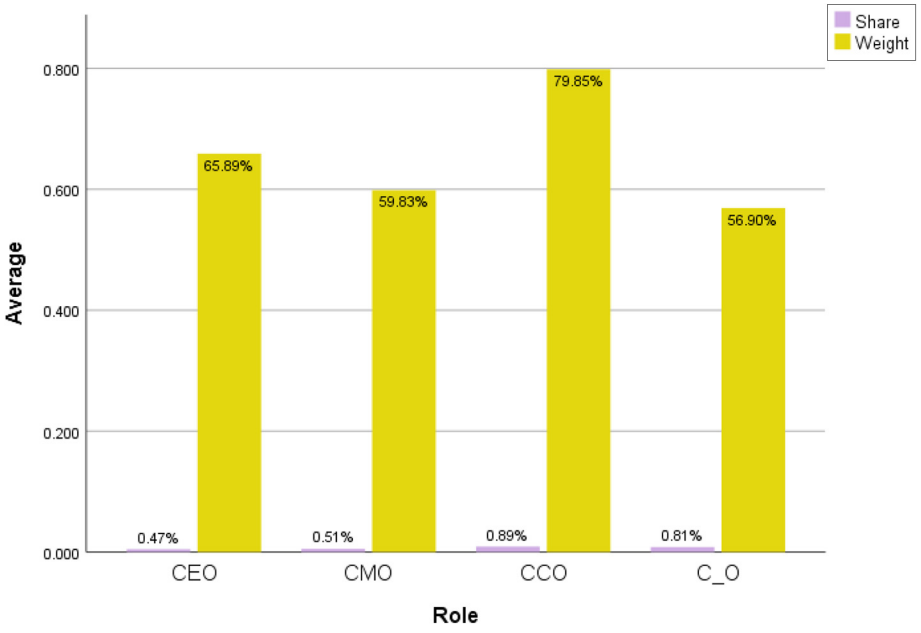

Figure 6.
Promotion share and weight by role

weight was 54.05 per cent. Digital transformation may also be at play in the use of the price concept because of more automated approaches to price through platforms such as Amazon. However, because price is a strongly strategic category at the center of revenue and cash flow, it is surprising that it would not be more present in the sample (Figure 7).

Digital dictionary results

Digital marketing was a popular keyword category with CMOs and C_Os (M_{CMO} = 9.04 per cent; and M_{C_O} = 6.41 per cent). CCOs and CEOs were fairly similar in their digital share (M_{CCO} = 3.53 per cent; and M_{CEO} = 3.32 per cent). The overall differences were significant ($\chi^2_{(3)}$ = 10.9, p = 0.012), with CMOs digital share notably higher than that of CCOs ($p < 0.1$) and CEOs ($p < 0.05$). All digital keywords were weighed highly in marketing executive interviews. Specifically, keyword weights suggested that CCOs' infrequency in mentioning digital marketing did not necessarily reflect that they viewed it as unimportant, as they had the highest digital keyword weight ($M_{Weight\ CCO}$ = 68.06 per cent), followed by CMOs ($M_{Weight\ CMO}$ = 66.33 per cent), C_Os ($M_{Weight\ C\_O}$ = 61.41 per cent) and CEOs ($M_{Weight\ CEO}$ = 56.68 per cent). The differences were statistically significant ($\chi^2_{(3)}$ = 14.7, p = 0.002), with CEO weights lower than that of CCO and CMO ($p < 0.05$) (Figure 8).

Figure 9 displays aggregate pair-wise differences of all executives in the form of a multidimensional scaling map. The results as a whole show that although there is significant clustering with the CEO role, there is less homogeneity represented by the various marketing executive roles. Consistent with the individual keyword analyses, these results demonstrate that collectively marketing executives seem to have disparate ways of conceiving and articulating their role in the firm. C_O are particularly weak and do not seem to add noteworthy marketing value or unique marketing perspectives compared to the CEOs in this sample. This lack of cohesion in the use of marketing keywords as a whole may

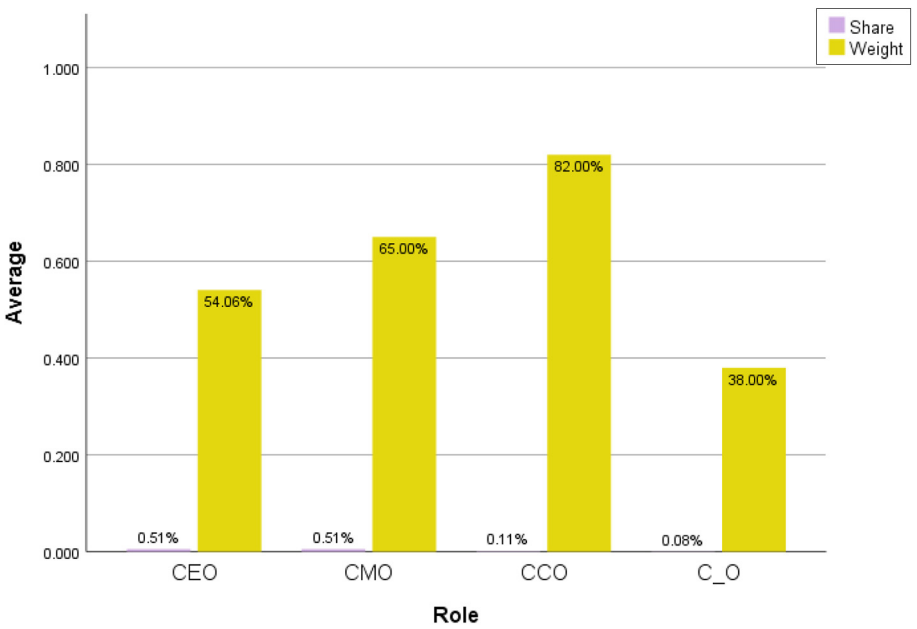

Figure 7.
Price share and weight by role

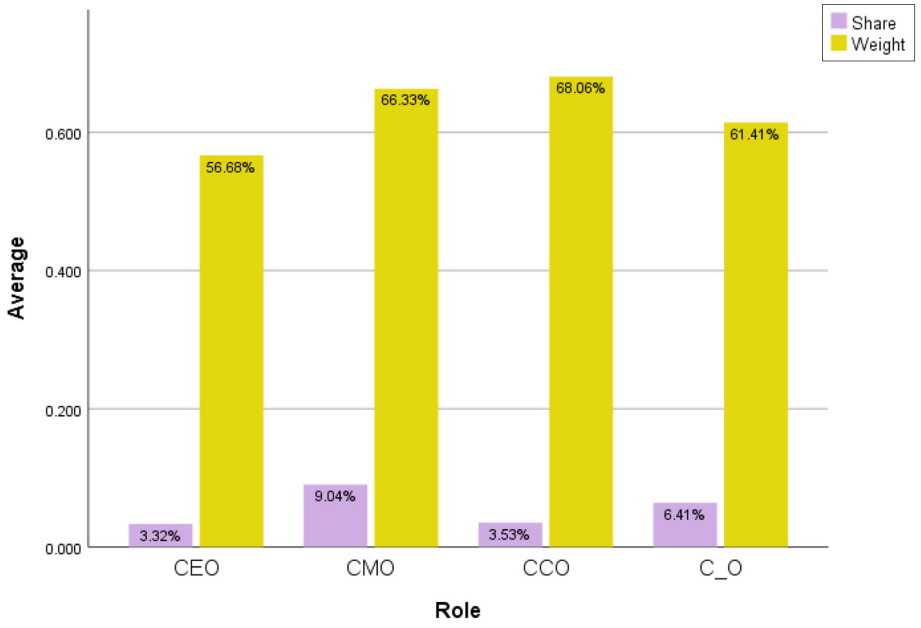

Figure 8.
Digital share and weight by role

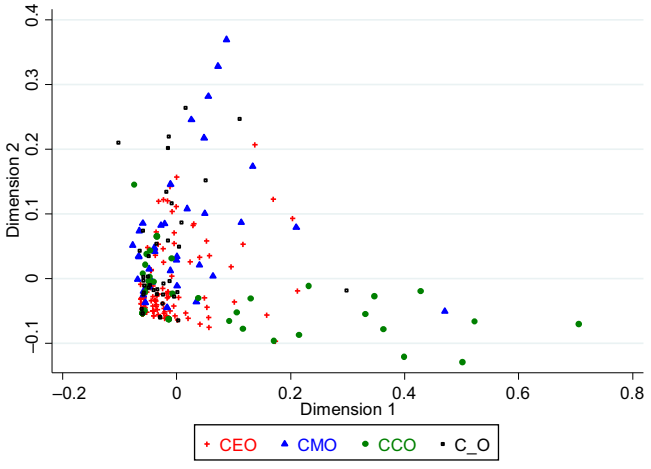

Figure 9.
MDS map of executive roles

signify a more systemic problem either in the way marketers are educated, trained or told to perform their role. It also reinforces the idiosyncratic nature of how different marketing executives make sense of their role in the firm and the ways they articulate that value.

Discussion

Exploring the gap between how CEOs talk and therefore think about marketing concepts is a critical step toward understanding the ways in which marketing executives can position

themselves as strategic assets. Beyond the internal complexities of organizational business function interaction and worldview (Anderson, 1982), a foundation of what and how to articulate marketing concepts through speech acts is a notable step in the right direction. The examination of how CEO and senior marketing executives talk about marketing concepts provides a window into opportunities for increased strategic emphasis and collaboration. Additionally, results from this study also reveal potential limitations in the ways senior marketing executives conceive of their own strategic importance to the firm. It is a flawed assumption that marketing executives prioritize and actively seek ways to contribute to the strategic direction and planning of the firm given the gaps observed in their marketing-relevant dialogue. It comes as no surprise that a CEO may not use large amounts of marketing concepts, which leads to the question of how to *cut into* the mindset of a CEO through the articulation of marketing's strategic value.

A significant opportunity for marketing executives to impact strategic contribution is related to topics in which CEOs already indicate some marketing-based attention. For example, CEOs demonstrated more marketing-concept share than all marketing executives in *promotion* and *price*. Promotion represents several avenues necessary for strategic relevance. It represents significant areas of budget allocation for reaching new and existing markets and is a traceable route to such growth metrics as sales, brand building and market share. It is not surprising that CEOs would have various growth metrics as top-of-mind strategic heuristics as a matter of daily concern. Price is also directly related to a finance and strategy-facing mindset as a basis for revenue and cash flow fluctuation. This is especially relevant for different stages of an organization's product development and launch cycle. Five-year forecasts based on current and future product offerings are a cornerstone of gauging and planning for the future. However, the fact that promotion and price were among the least mentioned marketing concepts across all marketing executive roles is very concerning. Perhaps it reflects the mundane nature of these two categories relative to the overwhelming demands put on marketing executives to manage an increasing amount of digital-related responsibilities and consumer data reflected in the text analysis (Quinn *et al.*, 2016). There is also the possibility that core promotion and price language use is subject to a camouflage effect in which they are subsumed in digital terms that capture promotion and price activity (e.g. content marketing, influencer marketing and pay-per-click advertising). Regardless, it is crucial for marketing executives to be cognizant of specific conversations that take place, either in meetings, at the water cooler, over email or analytic reports, to emphasize and intentionally provide marketing strategy context for even everyday messaging and pricing decisions. This means that part of the marketing executive role may be to put more emphasis on the "strategic big picture" these routine decisions lead up and contribute to, which will no doubt also focus on bottom line firm performance on a variety of metrics.

Predictably, CEOs and marketing executives focused markedly on digital marketing concepts. The realities of creating and delivering value through digital marketing channels as well as the challenge of demonstrating return on digital efforts is a strategic reality every organization grapples with nowadays. Marketing executives in organizations undergoing digital transformation are particularly well positioned to have the ear of the CEO. Efforts ranging from what channels are most applicable for target market reach, what range of key performance indicators make the most sense to track, and whether and what digital marketing tasks should be handled in house or outsourced are all necessary for strategic planning in the digital context.

Another key area and opportunity for marketing to win over CEOs in the digital context involve marketers as conversation leaders for customer data privacy and protection

(Martin and Murphy, 2017; Ferrell, 2017). This is especially important as marketers should be the primary proponents of customer data collection, analysis and actionable insights for the firm. However, the results show that little attention is given to MR, which initially seems surprising given the growth of marketing analytics, data mining and the treasure-trove of digital data. Yet, the massive growth in these areas has increased public scrutiny over how consumer data is collected, stored, sold and mined making it an uncomfortable topic to discuss. This creates scenarios wherein marketers may be seen as partially responsible for damage to firm reputation through the unethical use and/or mishandling of consumer information. However, if marketing executives take the lead on and initiate efforts that champion protecting consumer data, CEOs will be more likely to take a proactive stance. Moreover, as in the recent case of Apple, consumer data privacy can become the foundation for marketing efforts that differentiate an organization from the competition.

A consequential insight from this research is the realization that specific executive level marketing roles may influence the domain of marketing within the firm. For example, CMOs tended to speak the most about marketing strategy, which represents a holistic understanding of marketing elements and how they are executed across the firm. This would seemingly be of more strategic relevance to the CEO than a more single dimension perspective of marketing activity. At the same time, CCOs tended to focus more on CB concepts, and shockingly, 15 per cent within this group did not speak to a single marketing concept. This, in combination with CCOs' lack of focus on MR begs the question as to whether more "specialized" executive roles encourage strategic thinking. Is this representative of a linguistic-based mission drift wherein more specialized executive marketing roles talk and think less about the strategic significance of their activities in the firm?

CCOs ranked low and near equal with CEOs in talking about product concepts, which seems somewhat counter-intuitive considering the product is at the heart of most value offerings and CB related activities. It could be that in some circumstances, the designation of an executive role with more limited focus around a single marketing related concept reduces the executive's mindset and scope, which results in a type of functional-role myopia. If this were to be the case, it could lead to less strategy relevant thinking and thus fewer speech acts concerning marketing's expertise in the organization and strategic plan as a whole. Understanding how all things marketing fit with strategic planning is foundational for having executives that can effectively articulate and promote their strategic relevance in the C-suite. Given that a number of notable firms, such as Coca-Cola and Uber, have replaced their CMO with a more specialized marketing executive, preliminary findings from this research point toward less rather than more strategic insight and influence. The results from the present work suggest that rather than synergies that should be created in the combination of marketing concepts, there are potentially inadequacies from over specialization as represented in limited inter-marketing executive role concept use.

Writ large, marketing executives looking to increase their strategic influence in the firm must go about an attempted culture change (Brown *et al.*, 2005). In this respect, the marketing concepts that an executive chooses to share and emphasize works toward the creation of a "shared mental model" representative of marketing's strategic role (Varadarajan and Jayachandran, 1999, p. 139). This undertaking requires that marketing executives be cognizant of their own role, its strategic relevance and how to speak about it in such a way that is consistent and substantive. It also requires desire to comprehend how their CEO views the marketing role, what knowledge gaps are present, opportunity gaps to speak to marketing's expertise and how and when to provide solutions to problems that are uniquely marketing centric. However, the results from this text analysis may indicate that there is a much larger gap in the understanding of various marketing executives' strategic

contribution as demonstrated through their use or non-use of marketing concepts. This may represent an over-specialization of the marketing executive role and a shift in mindset from more holistic marketing thought, e.g. represented by CMOs in this study, to a tactical officer more focused on the immediacy of short-term outcomes than long-term initiatives.

Limitations and future research

Although a number of significant and surprising insights resulted from this research, there are some limitations. The most significant limitation of this research involves the NLU black box of artificial intelligence. The efficiencies of computerized textual analysis have been well documented (Short *et al.*, 2010); however, relying on machine learning to produce text analysis output requires a trust in the computer output that cannot be easily understood, or easily reverse-engineered for replication. It is entirely possible that if the present data set were run through Watson again, there could be variations in the keywords and keyword phrases and weights, which would be impossible to completely explain. This affects one of the most desirable attributes of content analysis, its transparency and replicability (Krippendorf, 2019). Another limitation for this kind of analysis is the nature of the executive interview itself. The context of questions and topics has the potential to greatly affect the kinds of terminology executives use in their responses. If a particular interview revolved around a very narrow subject area, this has the potential to skew the alignment of concepts found in their speech acts. However, it is always the case that the nature of the questions in interviews impacts the way answers are phrased and during interviews that revolve around an individual's professional life, certain biases may be somewhat mitigated.

Despite the limitations this work encountered, the benefits and opportunity for marketing researchers are bright and far reaching. By its very nature, machine-learning algorithms can be trained and output customized and improved (Neuendorf, 2017). Likewise, the advantage of non-biased pattern recognition is of great benefit along with the scale and scope of text that can be analyzed. Continued work using this kind of analysis for the basis of executive related research questions holds promise for comparing within and between executive roles for a variety of marketing questions. For example, going into more depth about the nature and extent of strategic thinking in executive marketing roles that are not designated "Chief Marketing" may provide insights into whether or not there is a subtle marginalization and specialization into marketing knowledge that is represented in the C-suite. This can be even more expanded through an exploration of dictionaries that capture other business functions (e.g. finance, accounting and strategic management) to measure the impact other business-function worldviews have on marketing executives (Key, 2012). Likewise, studying matched samples of CEOs and marketing executives from the same firms from different countries may provide industry and geographic insights into strategic thought processes. There is also potential for delineating specific areas that marketing executives are more or less willing to discuss, for example, cutting-edge digital marketing channel strategies, customer data breaches, failed social media campaigns or leaked messaging. This may provide key insights into how executives understand what is and is not permissible to discuss openly. Other opportunities in this arena of research may develop with increased technological advancement where NLU algorithms are expanded into audio and video interviews or presentations rather than solely text based.

Conclusion

This paper examines how much and in what ways CEOs and marketing executives talk about marketing concepts to produce insights that can lead to marketing's increased strategic influence in the firm. Analyzing over 250 interviews using Watson NLU artificial

intelligence demonstrated that there are opportunities for marketing executives to leverage key marketing concepts to help strengthen their strategic contribution to the firm. The results also reveal areas that may inhibit marketing's influence through the narrowing of marketing expertise as illustrated in more specialized marketing executive roles. In particular, there is evidence that not all marketing executive roles use the same marketing concepts to understand and articulate their importance in the firm.

Notes

1. The dictionaries are available upon request.
2. The Kruskal–Wallis test (Kruskal and Wallis, 1952) is a nonparametric equivalent to the one-way ANOVA (Dinno 2015).

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