

# **Investigating Value Propositions in Social Media:**

Studies of brand and customer exchanges on Twitter

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### **Abstract**

Social media presents one of the richest forums to investigate publicly explicit *brand value propositions* and its corresponding *customer engagement*. Seldom have researchers investigated the nature of value propositions available on social media and the insights that can be unearthed from available data. This work bridges this gap by studying the value propositions available on the Twitter platform.

This thesis presents six different studies conducted to examine the nature of value propositions. The first study presents a value taxonomy comprising 15 value propositions that are identified in brand tweets. This taxonomy is tested for construct validity using a Delphi panel of 10 experts – 5 from information science and 5 from marketing. The second study demonstrates the utility of the taxonomy developed by identifying the 15 value propositions from brand tweets (n<sub>b</sub>=658) of the top-10 coffee brands using content analysis. The third study investigates the feedback provided by customers (n<sub>c</sub>=12077) for values propositioned by the top-10 coffee brands (for the 658 brand tweets). Also, it investigates which value propositions embedded in brand tweets attract 'shallow' vs. 'deep' engagement from customers. The fourth study is a replication of studies 2 and 3 for a different time-period. The data considered for studies 2 and 3 was for a 3-month period in 2015. In the fourth study, Twitter data for the same brands was analysed for a different (n<sub>b</sub>=290, n<sub>c</sub>= 8811) 3-month period in 2018. This study thus examines the nature of change in value propositions across brands over time. The fifth study was on generalizability and replicates the investigation of brand and customer tweets (n<sub>b</sub>=635, n<sub>c</sub>=7035) in the market domain of the top-10 car brands in 2018. Lastly, study six conducted an evaluation of a software system called Value Analysis Toolkit (VAT) that was constructed based on the research findings in studies 1 - 5. This tool is targeted at researchers and practitioners who can use the tool to obtain value proposition-based insights from social media data (brand value propositions and the corresponding feedback from customers). The developed tool is evaluated for external validity using 35 students and 5 industry participants in three dimensions (tool's analytics features, usability and usefulness).

Overall, the contributions of this thesis are: a) a taxonomy to identify value propositions in Twitter (study 1) b) an approach to extract value proposition-based insights in brand tweets and the corresponding feedback from customers in the process of value co-creation (studies 2 - 5) for the top-10 coffee and car brands, and c) an operational tool (study 6) that can be used to analyse value propositions of various brands (e.g., compare value propositions of different brands), and identify which value propositions attract positive electronic word of mouth (eWOM). These value proposition-based insights can be used by social media managers to devise social-media strategies that are likely to stimulate positive discussions about a brand in social media.

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## **Publications**

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## **List of Acronyms**

- AMA American Marketing Association
- ALT Analytics domain identifier
- B2C Business-to-Customer
- C2B Customer-to-Business
- C2C Customer-to-Customer
- CE Customer Engagement
- DBMS Database Management System
- FMCG Fast-Moving Consumer Goods
- FP Foundational Premise
- G-D Goods-Dominant Logic
- HCI Human-Computer Interaction
- ICT Information and Communication Technology
- IHIP Intangibility, Heterogeneity, Inseparability and Perishability
- IS Information Systems
- IRR Inter-Rater Reliability
- JDBC Java Database Connectivity
- MkIS Marketing Information System
- NLP Natural Language Processing
- ROI Return on Investment
- S-D Service-Dominant Logic
- SNS Social Networking Sites
- SQL Structured Query Language
- SUS System Usability Scale
- TAM Technology Acceptance Model
- VAT Value Analytics Toolkit

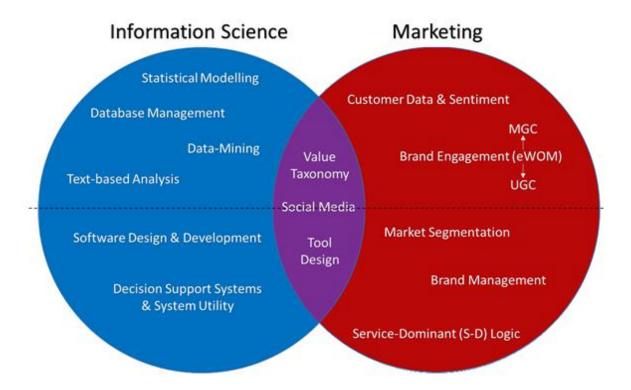
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# **Chapter 1 – Introduction**



"Reality is made of language" - Terence McKenna

### 1 Introduction

If you only had 280 characters with which to describe why customers should consume a product or service from your brand in a sea of competitors, what would you convey? This is the strategic dilemma which confronts every brand in the era of social media, and forces businesses to clearly articulate the competitive value on offer for customers; this is what's known as a brand's value proposition. A value proposition is defined as "a statement of the functional, emotional and self-expressive benefits delivered by the brand that provide value to the target customer" (Aaker, 2012). This statement of benefit is an objective representation of the value on offer to a market audience. While a value proposition quantifies the objective, value is a subjective measure (Zeithaml, 1988) which represents the utility gained from "consumption behaviour" (Babin et al., 1994) such as engaging with a brand's online marketing materials (e.g., tweets containing definitions of benefit). As value in the form of utility is consumer-defined (Noble et al., 2005), a value proposition on the other hand is primarily brand-defined and an objective competency-based marker as to the potential benefits (i.e., the promise) available to the market (Grönroos, 2009). A value proposition is an important construct for brand management (e.g., to facilitate brand awareness) and community building

(e.g., to enable customer engagement (CE)) within e-commerce (Culnan et al., 2010), however there exists significant theoretical limitations and empirical gaps on how value propositions and their impacts are systematically studied within social media marketing. Furthermore, the significance of value propositions as a basis for mediating and shaping the two-way dialogues (i.e., feedback) which takes place on such marketing platforms as in Twitter presents an opportunity to generate empirical evidence from publicly available two-way data (i.e., brand value propositions and the feedback of these propositions from customers). This is the central phenomena explored in this thesis.

This thesis seeks to expand the conceptual understanding of value propositions in social media which "remains poorly researched" (Skålén et al., 2015) and aims to provide a practical construct (i.e., a taxonomy) which can be used to objectively quantify the different types of value propositions used by brands within social media. So far, such a construct is missing in the literature. Moreover, this research goes further by situating value propositions between two contexts of communicational use (i.e., the brand and the consumer) to construct a practical representation of co-creation which is derived based on the marketing of content. Formally, these two contexts of content creation are termed as Marketer-Generated Content (MGC) and User-Generated Content (UGC). As yet, researchers and practitioners lack a grasp of how value propositions are standardised in digital marketing (i.e., MGC, UGC) and this furthers the difficulty of examining the heterogeneous efforts of brands within contextual and content-rich marketing communications. Furthermore, social media to date has been equated as a marketing value proposition (Constantinides & Fountain, 2008; Schaupp & Bélanger, 2013; Durga, 2014), in other words, as a business opportunity to reach new markets. The position that social media is a conduit, e-channel or medium (Klein, 1998) to disseminate one's value propositions in an embedded (i.e., content-laden) form, is only taken rarely. This presents significant restrictions to the richness of data available for research, such as underestimating the level of topical detail in social media dialogues (e.g. what value propositions are present) and the degree to which certain market offerings diffuse in conversations over others (i.e., product details vs. promotions).

The motivation to establish a taxonomy (or framework) to categorize value propositions in social media content can help develop knowledge for audiences such as academics, practitioners and researchers. For academic scholars, the developed approach can structure conceptual understanding of brand value propositions and content co-creation and aid in unearthing and extending marketing knowledge from unstructured sources. For marketing managers, the data-driven insights from modelling can support the identification of 'embedded' marketing logic (e.g. does a Tweet contain goods or service related information?) or stimulating variables (i.e., value proposition) which triggers engagement in noisy e-channel environments. Finally, for data scientists and researchers who are concerned with building

generalizable tools and techniques, this research provides a software system that can be used to provide descriptive, diagnostic and predictive insights based on the data available on value propositions and the corresponding feedback from the customers.

In this PhD thesis, the aim is to uncover the value propositions which lay hidden behind unstructured data in Twitter communications and enumerate the 'embedded' value propositions that are deliberately communicated and disseminated using strategic content (Tsimonis & Dimitriadis, 2014; Ashley & Tuten, 2015). Strategies used by different brands can be unearthed using the developed taxonomy. Also, models that employ the taxonomy to predict strategic outcomes for brands (e.g., identifying value propositions that are received more favourably by the customers are developed).

The objective of this chapter is to provide a general introduction on the research domain and specify the aims, constraints, assumptions, boundaries and significance of this thesis. In Section §1.1, an overview of the research objective of identifying value propositions from unstructured text (situated in the domain of content marketing) is provided. An example of a brand (Starbucks) is used to illustrate how value propositions are at the core of a brand's marketing strategy. Within Section §1.2, the data analysis approach is outlined which frames propositional exchange between social media producers and consumers. Moreover, this section establishes what constitutes the encoding of value propositions and details based on the selected research approach, the constraints which follow such an adopted technique. In Section §1.3, the area in which this work contributes to is specified, based on the identified research gap of value propositions in empirical practice, followed by a discussion of the assumptions which surround the subject matter. Then, in Section §1.4, the three research questions posed by this work which correspond to the studies forming the thesis contributions are outlined. Last, in Section §1.5 the significance of this PhD thesis and its impacts on both theory and practice is defined.

### 1.1 Business Problem and Research Aim

Data helps businesses make better decisions about their customers and allows them to shape the value propositions they take to the market. Data gathered by businesses are in both structured and unstructured formats. Traditionally, this data has been structured as they tended to come from a transaction-oriented system (i.e., orders, customers, products), which maintains a clear structure that makes for easy indexing and searching. The patterns of the customer fitted the structure of data generated in relational models and data was based on the limited requirements of the brand (i.e., 'over-the-counter' or online transactions). Structured data comprises of only 5% of all data generated (Cukier, 2010; Gandomi & Haider, 2015), and although estimates vary, a general rule of thumb is that 80% of data generated in the world is unstructured (IBM, 2012) where there is no underlying structure to the data collected (e.g., textual feedback in surveys,

Tweets and blog posts). The irony here is that much of valuable enterprise knowledge lies outside the fixed boundaries of the corporate database and remains dormant in various unstructured formats (e.g., posts such as emails, photos, videos, blogs containing text, video, audio and comments from readers) where marketing knowledge is rapidly created and exchanged by human-generated sources using the world wide web.

Even though structured data still plays a functional role in commercial business models (Enders & Jelassi, 2000), it has been augmented by the digital transformation of the internet, which has broadened the reach of firms to communicate their value propositions and opened up avenues for unstructured feedback (e.g., facilitating customer engagement in the form of eWOM) to be generated about the brand. Digital unstructured sources contain business insights on consumer patterns which had not been previously recognised nor had held value. As data about the brand grows outside of the firm and is shaped by customers (i.e., co-creation takes place), it has become a growing research agenda for researchers and practitioners alike (Inmon & Nesavich, 2007; Park & Song, 2011) to build business intelligence around unstructured sources which could aid the business in best serving its community (i.e., designing value propositions which meet customer wants) and quickly reacting to bottom-up feedback (e.g. redressing negative comments) in two-way environments (Aschbacher et al., 2009). This establishes the business problem of the two worlds which surround the business, the known (i.e., structured) and the unknown (i.e., unstructured). Now let us focus the discussion on the research aim of identifying value propositions in unstructured data which forms the focus of thesis.

One of the reasons why the coffee giant Starbucks has been successful in the international market is because it understands how to consistently and boldly communicate its unique "Starbucks experience" through its value propositions (Aaker & Joachimsthaler, 2012). This information is embedded in both conventional retail and digital outlets such as, shop displays, website content and the Starbucks app. Such a structured presentation of product information (and their value propositions) in these outlets aids in analysing the impact of customer actions and this information can be used to strategically design value propositions (e.g., removing products which are ignored by the customers). Starbucks explicitly outlines its brand value propositions by conveying functional benefits of their products (i.e., premium products, trained baristas, free wifi, central heating) and is the first point of differentiation which is copied by competitors (e.g., by serving similar products). Starbucks also communicates emotional benefits of its products which outline psychological differentiation (Barrena & Sánchez, 2009) and builds a positive feeling for consumers, for example staff wearing name badges, and customers having their names written on coffee orders (e.g., Mark) rather than numbers, by also offering fair-trade products or by allowing donation to charitable causes. Lastly, Starbuck as a personality is a strong symbol that is relatable to international audiences regardless of its products and these are conveyed in self-expressive benefits (i.e., supporting veterans,

gender pay equity, commitment to professional and comfortable meeting environments). These are some of the promises (i.e., *value propositions*) that Starbucks makes as a core of its marketing strategy and it uses these benefits to drive the branding of its structured communications with customers (Ballantyne et al., 2011; Truong, Simmons, & Palmer, 2012) in forms both offline and online through physical and online ordering systems. Value propositions for Starbucks, objectifies and quantifies the value on offer to the market and also keeps Starbucks accountable to the needs of its customers. Everything that Starbucks is doing is building a set of value propositions (i.e., providing promises of benefit), and these communicated propositions initiates the entire process of value creation (e.g. by reinforcing values through multiple channels to embed values within customers and elicite customer feedback on these propositions), and this is why value propositions are central to Starbucks' marketing strategy (particularly for brand differentiation).

As one may see, the outlets mentioned above (physical and online ordering) provide a structured form of data. However, what remains to be well-understood in the existing literature is how value propositions are conveyed in unstructured sources such as social media and the nature of feedback they attract (as a part of the value co-creation cycle), which are increasingly being adopted to build trust with the brand and develop points of interaction and attachment for prospective customers in the era of social media. Research remains limited on how value propositions are practically used in digital marketing and this hinders the different types of insights that can be obtained (descriptive, diagnostic and predictive insights from data analytics (Siegel, 2013; Herschel et al., 2015)). Thus, focusing on the unstructured data to mine value propositions and further using that information for creating strategies for organisations comprises the research aim of this PhD thesis. This research when utilised in practices would provide competitive edge based on unstructured data (Dey et al., 2011) for businesses like Starbucks who actively produce brand messages in e-channels such as Twitter. Thus, this research aims to cut through the noise of unstructured social media and build useful and structured knowledge that can support managerial decision-making.

## 1.2 Research Approach and Constraints

In this research, the challenge of building a value proposition structure is approached by using the inherent semantic language embedded within unstructured communications disseminated on social media. The approach employed is the pragmatic technique of *lexical analysis*, which "offers a natural bridge between the in-depth coding of qualitative data and the statistical analysis of quantitative data by offering an automated means of coding" (Bolden & Moscarola, 2000). In the lexical analysis used in this thesis, tokens are used to segment the subject matter (i.e., value propositions) using n-gram words (i.e., programmatically operationalized using regular expressions) present in sentences. This general practice of analysing the text embedded within documents has been used for specific purposes such as the identification of speech acts

(Searle, 1969; Austin, 1975) that demonstrates the richness of meaning embedded in narrations in communication. In this research, lexical analysis is employed to analyse Twitter communications.

The logical sequence of the approach followed in data collection and analysis at a very high-level in this thesis is as follows: a) First, brands' market content (i.e., MGC) on the e-channel of Twitter containing marketing logic (i.e., value propositions) that is available in the public domain which is extracted. b) Second, community members' response to brand tweets (i.e., MGC) which is also extracted and analysed for the embedded positive and negative sentiments in their content (i.e., posted UGC). c) Third, the tweets are parsed based on linguistic methods (including lexical analysis mentioned above) to identify value propositions and sentiments, thus converting unstructured data into the structured data which is then analysed. d) Last, brand tweets and the corresponding customer tweets are contextually grouped (i.e., every one-to-many relationship that exists in a thread of conversation between MGC and UGC was logically ordered) and analysed. Statistical analysis was then conducted to unearth the relationship between brand value propositions embedded in MGC and how these are received by customers (the UGC) containing measurable outputs such as likes, retweets and sentiments expressed. While this description is at a very high-level indicating the approach employed, a detailed description is provided in the methodology chapter (see Section §3.3) of this thesis.

Using an example of a brand message (i.e., MGC) shown in Figure 1 from the McDonald's brand, the conceptual task of identifying brand value proposition is described. In the brand message shown, tokens or phrases are used which denote marketing logic embedded within the Tweet such as Product (e.g., smoothie), Price (e.g., dollar) and Time (e.g., Friday). These words (e.g., smoothie) that denote implicit value dimensions (e.g., Product) are declarative, machine-readable and semantics-rich. However, due to the unstructured nature of tweet messages, the explicit link to the value propositions is unclear (i.e., one has to infer these value propositions explicitly). Because of this, the underlying marketing strategy used by different brands in conveying their value propositions, remains hidden to outside observers. One of the goals of this thesis is to not only make the identification of value propositions of brands more explicit through the taxonomy developed but also to identify the strategies adopted by brands in embedding those values. This is operationalized in the form of a software system which will be presented and analysed in chapter 7.



Figure 1: MGC example by @McDonalds

Next, an example of a thread of discussions (brand tweets and the corresponding customer response tweets) is presented to briefly present the empirical approach employed to extract data in a structured format from these proposed to practically text-mine both MGC and UGC sources. In this research a practical value taxonomy containing 15 value propositions is proposed to bridge the knowledge gap between the conceptual and the empirical (to be presented in detail in chapter 4). The value propositions considered in this work are Product, Price, Place, Promotion, Social, Sport/Entertainment, Emotion, Informative, Question, Time, Health, Hiring, Charity, Weather and Eco-friendly. These value proposition dimensions were sourced from the Marketing and social media content literature and validated for empirical use in the three phases which comprise the methodology of this PhD thesis (see Section §3.3). An empirical corpus of 9700 tokens (phrases) was developed and this allowed for the identification of value propositions to be empirically grounded (i.e., associated phrases to different value propositions) within unstructured sources. Figure 2 shows how content co-creation in MGC and UGC conversations are compartmentalized. It can be observed that on the left of the figure, McDonald's is tweeting about a day of culinary importance (i.e., NationalSandwichDay) to build appeal for the consumption of their products. The brand extensively uses references to Product offerings (e.g., burgers, sandwiches, and Big Mac) to articulate cases in which value is offered to the target audience, and this links back to the message theme of commemorating the day by consuming one of their products. Additionally McDonald's uses a strong emotional appeal (e.g., Happy, agree, delicious) as well as a 'call-to-action' in the form of direct question (?) to motivate discussion. Below the brand message, the 15 different brand value propositions are shown in the form of a binary vector (i.e.,

1's and 0's) as captured by the Tweet, where 1 represents the presence and zero represents the absence of each of the 15 value propositions within the unstructured text.

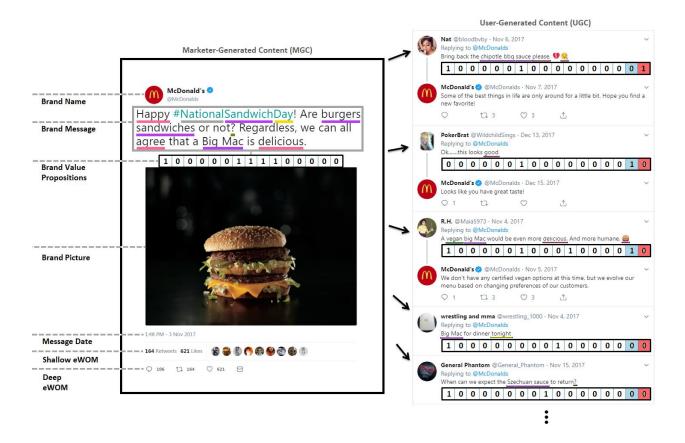


Figure 2: MGC and UGC example by @McDonalds

The responses (UGC) from the consumer community of the brand is shown on the right. The value dimensions in each response is also encoded using 0's and 1's following the same approach described above. What can be observed is that value propositions are being mirrored and reciprocated in the discussion of community tweets. In other words if a brand communicates a proposition, it is more than likely that the community will respond with the same value propositions that are included in the original message. Moreover, when a more detailed analysis is conducted, it can be observed that additional knowledge in co-created dialogues is visible which is outside the control of the brand. For example, it can be observed that a community tailored value proposition in Health (e.g., request for a vegan burger instead of a BigMac) is proposed by a consumer which exemplifies differentiation in what the user base wants (i.e., healthy options are solicited by some users). Moreover, sentiment analysis is also employed to unearth the structure of valence (shown in boxes in blue and red on the right where the blue box represents positive and red box represents negative sentiment with values of 0 and 1 representing presence and absence of these

sentiments). This allows for an analysis of value propositions based on positive and negative sentiments encoded within messages, and these characteristics can significantly aid strategic decision-makers.

The use of computational linguistics to the study of value propositions embedded in the text has certain constraints and at the same time offers some unique strengths. A discussion of the approaches employed by the thesis would be incomplete without an examination of these qualities within the context of this thesis; as such, this forms the focus of what is considered below.

The first constraint to the research approach is with the statistical rank-frequency of tokens (phrases) used in communications. Social media by design consists of dialogues which are dynamic in nature, and yet tends to reflect a systematic frequency distribution which is common to human language (i.e., that words vary in frequency of use). This is simply the principle that few very high-frequency words tend to occur more often within tokens in text (e.g., Free, Love, Stupid) while many low-frequency words tend to have fewer counts in the corpus as they are less often used in natural text (e.g., Turducken, Contemptible, Ojai). This is known in the literature as the 'long-tail' phenomenon (Anderson, 2006; Piantadosi, 2014), and is a statistical constraint as to the range and population of words which add utility to the research approach. This is a constraint as the adopted approach is a supervised technique, which assigns data labels based on a limited set of textual tokens. This impacts the results by limiting the coverage of fringe (i.e., long-tail) vocabulary used within the marketing of content which is infrequent, yet bound to the fixed size of recognizable data labels. Second the research approach utilises a bag-of-words (BOW) approach which is indifferent to the order and grammatical structure of words in the document. Traditionally NLP techniques have involved some form of structural analysis within text processing (e.g., grammar trees). However, due to the semantic scope (i.e., segmenting words based on their meaning rather their order), the grammar and structural meaning between tokens in information extraction is discarded as this is arguably an independent subject matter (Thompson, 2013) of its own (cf. going through form rather than meaning). This does however present an ontological constraint which limits the depth of dimensional linguistic classifications used within the vocabulary of unstructured documents. Lastly, in the research approach is human-induced errors (Lindquist, 2009) in the data generated by speakers. This is because there is no hard-coded integrity constraints (e.g. checking proper grammar use when posting online) when linguistic data is entered in online dialogues and this is primarily due to a lack of standardisation in unstructured text. Although documents can be cleaned or 'adjusted' to normalise textual representations, the intended meaning may be presented by different actors using different terminology and this represents a quality constraint to the research approach adopted particularly if all terminology isn't captured in the bag of words approach that assigns a particular category or label for a tweet based on words in a corpus.

The strength of the research approach is its scalability (i.e., ability to handle large amounts of data) in unearthing a structure to value propositions from streams of unstructured marketing data. It is a fair inference (Eskimez et al., 2016) that giving a human coder the manual task of analysing an extremely large set of communication documents, the performance of the task would vary when compared to the performance of an algorithm-based classifier that produces deterministic results. The onset of mental fatigue and task disengagement (Hopstaken et al., 2015) would reduce the performance of a human coder. This research approach is a computational method, which offers a scalable solution that handles voluminous data generated in social media. Second, the research approach builds a theoretical bridge which explains the relationship between the hidden structure of marketing stimuli (i.e., value propositions) and consumer engagement it triggers (i.e., eWOM). This is a product of the research approach that is valuable to both practitioners and researchers in inferring brand-specific competitive advantage based on marketing communications in which the output (i.e., target metrics such as likes and retweets) is better understood and utilised for designing strategic imperatives. Lastly, it is well-understood in the social science literature (Zerbe & Paulhus, 1987; Peltier & Walsh, 1990) that collecting feedback from consumers in surveying environments can introduce social desirability bias which can lead to misleading results due to "ego-defensive or impression management reasons" (Fisher, 1993). Twitter is recognised for its ability to attract instantaneous and voluminous scrutiny of the brand (Chamlertwat et al., 2012), and this can encourage consumers to vocalise feedback using their sentiments and be more candid than in traditional paper-pencil surveys (Neubauer & Malle, 1997) which can be expensive, interruptive and not publicly selective.

### 1.3 Research Gap and Assumptions

In recent decades, a theory of value co-creation has emerged in marketing which has revolutionised the way in which firms have conceptualised value from a 'thing' to an on-going relationship. This is the Service-Dominant (S-D) logic of marketing. The theory challenges the notion that products and services are inherently embedded with value, rather value is only realised within the mind of the consumer (i.e., value is subjectively perceived by the beneficiary). In such a customer-oriented perspective of value creation, the focal firm engages in value co-creation with the customer who is the ultimate renderer of value. S-D logic therefore argues that firms "cannot deliver value, but only offer value propositions" (Vargo & Lusch, 2008). This relationship-oriented mindset to 'market with' customers shifts the focus of business strategists to generating objective and compelling value propositions (Frow & Payne, 2011), as these proposals potentially add value to the "consumers" value -creating processes, where value emerges...and is perceived by them" (Grönroos, 2000). As the theory of S-D logic has grown since 2004, the authors have recognised the importance of the "two-way information flow" (Lusch & Webster Jr, 2011) in their conceptual theory

and have increasingly pointed towards Web 2.0 information technology platforms (Lusch & Vargo, 2009; Lusch, Vargo, & Tanniru, 2010; Vargo & Lusch, 2017) as methodologies in which to effectively establish and build relationships and dialogues with potential customers. The authors argue in their paper on 2025 research horizons that the era of big data analytics enables "the analysis of user-generated content and social media" and also that the data is "...analyzed with computational linguistic tools to capture sentiments" (Vargo & Lusch, 2017). Without going as far as to describe how social media can foster co-creation environments (Mangold & Faulds, 2009) for brands to market their value propositions, the authors build a substantive case for the theoretical employment of value propositions within social media marketing, however fall short of explaining how they are empirically grounded or defined in practice.

This work is inspired and motivated by the work of Vargo and Lusch, and is positioned to address the above-mentioned gap between the theoretical conceptualisation and empirical practice of forming and sharing value propositions. The research gap explicitly addressed in this thesis is the lack of an approach to extract structured knowledge on value propositions from textual data present within digital marketing platforms such as Twitter. Beyond extracting knowledge about the presence of value propositions, this research also focuses on centreing value propositions as the explaining factor (e.g., independent variables in the regression context) for brand differentiation. The approaches this thesis employs to fill the gap is interdisciplinary in nature as it combines methodological approaches in literature from both marketing and information science disciplines.

As this research combines multi-disciplinary material, it is important to spell out the assumptions, limitations and delimitations (boundaries) of the PhD thesis. The major assumption in this work is that brands have a strategy for producing value propositions (i.e., statements of benefit) in content marketing. According to the Content Marketing Institute (CMI), 86% of B2C brands use content marketing (Content Marketing institute, 2018), with social media posts being the most popular and effective form of content. The CMI also reports that 38% maintain a documented strategy for their content, while 36% report strategy not being documented. Also, few if any metrics on business strategy (i.e., value propositions) embedded within social-media content have been explicitly documented in the extant literature. The second major assumption is that consumers (referred interchangeably as potential customers) through the technology medium and interaction with content, build trust with the brand (i.e., a co-created relationship and sentiment) and this has a significant effect (Hajli, 2014; Colliander et al., 2015) on purchase intention (Prendergast et al., 2010; Rishika et al., 2013; Goh et al., 2013; See-To & Ho, 2014; Martínez-Navarro & Bigné, 2017; Seifert & Kwon, 2019). While the purchase intention of users aren't usually available in the feedback the users provide, the response contains co-creation content – i.e., the customers' perceptions which can then be analysed for insights. Third, this research refers to the terms brand tweets, MGC and

Business-to-Consumer (B2C) messages interchangeably and denotes the content which originates from the control of the brand. Customer tweets, UGC and (Customer-to-Business) C2B messages are also interchangeably used to refer to the content produced in response to brands which is in the control of the consumer. Also, UGC and Comments are used synonymously for the same eWOM consumer action. Additionally the eWOM metrics of brand messages have different levels of customer engagement (i.e., referred to in this thesis as shallow and deep CE - see Figure 2). Numeric totals of likes, shares and comments are reach-based eWOM metrics that represent the counts of customer likes, shares and comments for a particular post. Comments are the textual feedback received for a tweet which can be both represented as a total (i.e., total number of comments for a brand tweet) and as a linguistic statement (comment text which is analysed). Two other metrics were included in this work, which were the positive and negative valence that was computed from community tweets (summing the 1's in tweets were sentiment was present, and 0 in cases for absence). This work assumed these metrics are useful embedded metrics representing customer engagement based on prior studies.

The first boundary of the research design in terms of data collection is that the research focused on top-10 coffee brands, and also focused just on one marketing quarter (i.e., 3-months of B2C and C2B messages) for the analysis of two-way communications. Second, the number of dimensions of value propositions potentially embedded in tweets was initially drafted at 15 variables (based on literature survey and a bottom-up content analysis) with bespoke propositions to be coded by a Delphi panel. Following the first research question which evaluated the internal validity of the value taxonomy, the final number of dimensions of the value taxonomy was confirmed and the 'Other' dimension was excluded from computational analysis (details discussed in chapter 4). Third, this research targeted three reach-based dependent variables (Like, Share and Comment) which were collected alongside tweets for the purposes of predictive modelling. In addition, two sentiment-based dependent variables were derived from the linguistic characteristics of Comments and these are positive and negative valence. Thus, this work predicted five outcome variables. Third, the responses of surveys from participants of the student cohort involved a close-ended 5-point Likert scale on a 21-item scale based on prior work to evaluate the VAT system developed (Davis, 1985; Brooke, 1996). In addition to close-ended survey responses, the managers also answered six open-ended questions about the marketing strategy of their business which was collected using open-ended interviews. Therefore the boundary of collected knowledge in surveys was restricted to the surveyed items. Lastly, this work does not pursue the task of theory building. But instead, using some of the premises of the S-D logic it aims to provide *empirical understanding of marketing content* based on the mindset of value co-creation, particularly using two foundational premises of S-D logic (principles 6 and 7)

which are discussed further in chapter 2. Next, the discussion succinctly presents the boundary of research work in the form of research questions in the next section.

### 1.4 Research Questions

This section covers the main research questions that are posed in this thesis and the reasoning that justify their inquiry.

The value taxonomy comprised of 15 value propositions presented in detail within chapter 3 is the subject of the first research question (RQ) posed in this thesis. RQ1 relates to measuring the internal validity of the research construct (i.e., value taxonomy) that is used to identify value propositions in tweets. The idea was to evaluate the process by which subject experts (coders) performed the same task using the same taxonomy (i.e., method). This qualitative study needed to be inclusive of open-ended inputs (i.e., suggestions for value propositions other than the 15 identified in this work), as well as measure consensus among human coders on the provided taxonomy. The validation technique chosen was the Delphi method and the measure to capture consensus was the Kappa ( $\kappa$ ) statistic (McHugh, 2012), which examined the similarities between independent classifications. The justification for using the Delphi technique is that it has been widely used in interdisciplinary research (Jolson & Rossow, 1971; Adler & Ziglio, 1996; Xue-yi, 2007) and in the context of this thesis, the Delphi panel was constructed from PhD experts in both the Department of Marketing and Information Science. In RQ1, the thesis asks:

# RQ1. How can different value propositions embedded in Social Media data be drafted to form a validated taxonomy?

Following convergence and consensus amongst the Delphi panel members on the research construct, the next phase was to utilise the taxonomy on longitudinal empirical studies of social media data. This comprises the core of the PhD research which extracts insights from MGC and the corresponding UGC data on value co-creation. The main research questions and the two specialised sub-questions (RQ2a, RQ2b) which correspond to insights from both sides of dialogue (MGC and UGC) are given below. The justification for breaking up the question into two sub-questions was to isolate the unique insights obtained from different sources of communication (MGC vs. UGC).

# RQ2. How can the value taxonomy developed be used to offer insights into the value co-creation process?

**RQ2a.** How can the taxonomy be used to unearth insights from brand value propositions?

# RQ2b. How can the taxonomy be used to unearth insights in customer value propositions and consumer sentiments in response to brands?

Finally, the last phase of research involved software development of a 3-Tier Marketing Information System (MkIS) which in real-time extracted structured information from unstructured Twitter data and stores it in the form of a data warehouse which can be queried to obtain results. Research techniques developed as a part of answering RQs 1 and 2 were embedded in the software system called VAT (<a href="http://value.otago.ac.nz">http://value.otago.ac.nz</a>). This system was used as an interface to generate feedback from potential users of this research. In this last phase, participants were asked to partake in a qualitative study (i.e., conducted using face-to-face interviews, and administering online questionnaires) on their perceptions of the utility of three aspects of the developed system (analytics features of the system, usability and usefulness). The third research question posed in thesis this is:

#### RQ3. How can software based on a value taxonomy be developed and tested for utility?

### 1.5 Significance to Theory and Practice

The main contribution of the PhD thesis is that it bridges a research gap on how brands communicate their value propositions and demonstrates the utility of these propositions in generating eWOM outcomes. This work adopts a bottom-up communication-grounded approach, which conjoins contexts (MGC and UGC) in which marketing messages are analysed to identify value propositions which stimulate discourse.

There are both conceptual (knowledge) and practical contributions that this research contributes to, and this will be of utility to two main stakeholders namely researchers and practitioners.

#### 1.5.1 Knowledge contributions

First, this work contributes a conceptual method (a knowledge contribution) in building intelligence from unstructured content marketing, which can guide theory building in academia. This thesis has proposed an approach that extracts structured knowledge about value propositions that are embedded within brand and customer communication in social media. The importance of this work to theory is that it contextualizes S-D logic in social media (through providing empirical evidence to foundational principles relating to value co-creation) and extends the boundary of human knowledge on value propositions (i.e., the taxonomy) and co-creation theory (i.e., utility of value propositions in MGC and UGC) within digital marketing. Specifically, this work interprets the co-creation theory in marketing and applies a data-driven quantitative approach to understand the nature of value propositions in two-way unstructured social-media datasets. This work contributes to 'theory-in-use' by exposing structure otherwise implicit to communication and extracts an explicit structure for the purposes of predictive modelling which aids decision-makers and

researchers. Also, this work produces a research construct (i.e., value taxonomy) based on value propositions, which allows new knowledge to be generated from different contexts of its use. This PhD thesis demonstrates the applicability of the taxonomy on two-way datasets in two independent years (i.e., 2015, 2018) from the top coffee brands in the world and provides evidence of generalizability to top car brands in 2018. Second, this research contributes several empirical models whose results can be used as a basis to support decision-making based on voluminous two-way data.

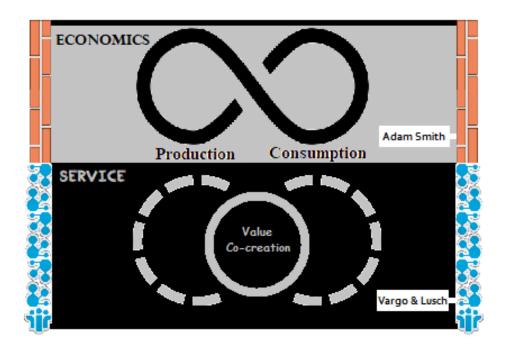
#### 1.5.2 Practical contributions

This research contributes to interdisciplinary work which combines traditional marketing methods (i.e., surveys) with Natural Language Processing (NLP) techniques and produces a research corpus that can be utilised for research purposes (see Appendix G). It also contributes a software system (a Marketing Information System) called VAT (<a href="http://value.otago.ac.nz">http://value.otago.ac.nz</a>) that is able to unearth the value propositions embedded in social media marketing. The software system developed based on research outcomes helps to identify value propositions, compare value propositions across brands to study differentiations and also predict what value propositions are of utility to customers. These insights can be turned into actions in the next iteration of value embedding in marketer-generated tweets. This developed system can be used by practitioners to gain competitive advantage by understanding how their brand compares to that of their competitors in practice.

## 1.6 Summary

The research presented in this thesis investigates the nature of embedded value propositions in marketing communication that takes place on Twitter. This research studies co-creation that begins with brand posts (i.e., MGC) and the corresponding customer feedback (i.e., UGC). This research is inspired by the S-D logic perspective, particularly focusing on value co-creation by quantifying and analysing value propositions conjointly in both contexts (MGC and UGC), in order to obtain valuable insights that can inform a brand's communication strategy. The rest of the thesis describes how this is achieved.

# **Chapter 2 – Literature Review**



"Brands cannot create value alone, but only offer value propositions" – Vargo & Lusch

### 2 Literature Review

### 2.1 Introduction

The objective of this chapter is to provide a comprehensive overview of the one-way and two-way theories of value and draw upon the major works discussing value propositions, which have recently emerged within the literature. In Section §2.2 a historic roadmap on how the representation of value has changed based on the adopted theoretical lens used by scholars is provided, highlighting the key works in the on-going debate on value creation. In Section §2.3.1 the establishment of value based on production and exchange (i.e., ownership) in economic markets is examined within the Goods-Dominant (G-D) logic paradigm. Section §2.3.2 elaborates on the modern paradigm of viewing value based on a co-created consumption experience derived by the consumer as posited by Service-Dominant (S-D) logic researchers. Section §2.4 presents the purpose of value propositions within the co-creation process of content marketing and Section §2.5 examines the notion of customer engagement (CE) in the context of Twitter. In Section §2.6, the research

gap of identifying and extracting value propositions in e-channels is identified and the three research questions which address this gap in the literature are discussed. Lastly, Section §2.7 provides a summary as to the broad context in which this work sits within the literature.

## 2.2 A Timeline of "What is Value?"

Fundamental to marketing has been the notion of value, which is the basis of exchange within markets. The phrase value is a common term in the vocabulary of most people, but the meaning may differ based on the discipline and context of its use (e.g., Marketing, Economics). In economics, value is "the material or monetary worth of something" (Oxford Dictionary, 2019) while for marketing, value is "the importance, worth, or usefulness of something" (Oxford Dictionary, 2019). The traditional view of value (Smith, 1776; Say, 1836) which emerged from neoclassical economics primarily aimed to explain the market price (i.e., exchange value) of goods and services within society. For a long time, economists believed that value is objective (i.e., value is based on goods), and that production dimensions of commodities (i.e., raw materials, labour) endow the physical good with value. Modern economists (Stigler, 1950) however, argue that value is now subjective (i.e., value is embodied in experience), and that the value of a good or service is measured by the perceived utility or satisfaction (i.e., use value) provided by the consumer. It is important to acknowledge the conceptual shift in the source of value, from being a commodity controlled by the firm, to being a perceived experience rendered by the consumer. This paradigm shift of value being in the eye of beneficiary (Vargo & Lusch, 2004; 2008) is at the heart of the adopted perspective implemented by this research work. In this thesis, value is a utilitarian notion developed by a consumer's co-participation (i.e., experience) in a brand's cycle of communicative interactions (Grönroos, 2000).

Presented in Figure 3 is a roadmap of the seminal works which have contributed to the definition of value from being one-way to two-way and concerted a supporting argument for a dominant view of value in the literature. It is observable that two schools of thought have fundamentally shaped current understandings of value, the G-D and S-D logic of value. The G-D logic of value can be traced to the economist Adam Smith who argues in *The Wealth of Nations* that economic units of output (i.e., Goods such as wine, nails, salt) are the source of value. Adam Smith and his neoclassical predecessors (Vargo & Morgan, 2005) entrenched a prevailing economic view in markets that consumers are exogenous to value creation (i.e., "consumption is the sole-end and purpose of production" (Smith, 1776)), and that the purpose of the firm is economic productivity and profit maximisation. With the end of the industrial revolution and the advent of mechanization, the seeds of the G-D paradigm were set in the materialistic objective of firms to focus on the mass manufacturing of products (Sheth et al., 2000).

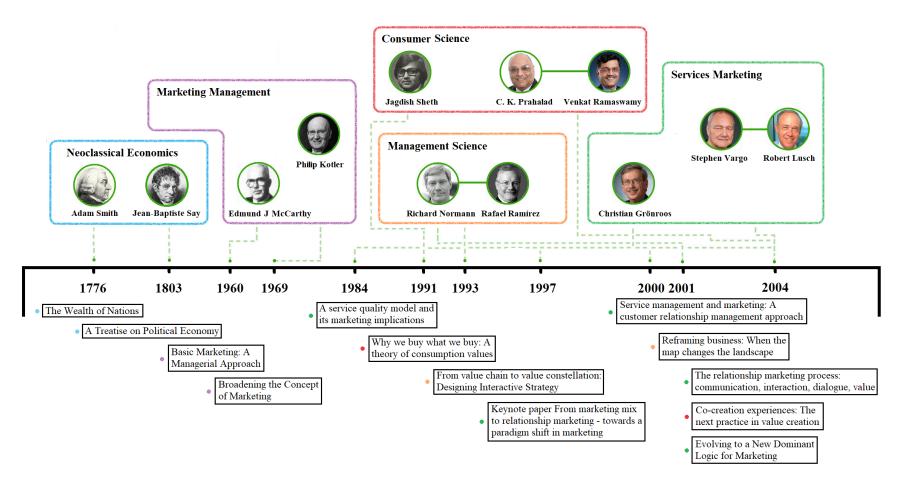


Figure 3: Timeline of seminal works on value creation

Marketing as a discipline only began to develop under the guidance of scholars such as Edmund J. McCarthy, who was a founding face in marketing management (McCarthy, 1960). McCarthy was the first to develop a conceptual framework to design value from the point-of-view of marketing decision-makers. In his model of a marketing mix, four controllable variables (i.e., Product, Price, Place, Promotion - 4 P's) are used to guide a firm to generate an optimal offering (i.e., value proposition) to sell to a target market. This marketing model is pervasive to this day and criticised as an "unchallenged basic model of marketing" (Grönroos, 1997), nevertheless, its contribution to the discipline of marketing in designing a successful value offering has been profound. As Day acknowledges, "the 1960s were the era of marketing's widest influence and greatest promise" (Day, 1992), primarily because the discipline consolidated around four variables of control. The fundamental shortcoming of the marketing mix is that it has been locked into a one-way interpretation of value creation, which resides inside the firm. Additionally, the marketing mix is dependent on a product (i.e., good or service) to bring value to the market through a necessary sales function (i.e., transaction), in other words marketing was formulised as the process of marketing-to an audience. In effect, McCarthy's marketing mix forwarded the hidden economic argument that was the status-quo by offering a manufacturer-centric model to manage value.

The debate for the next fifty years has been fragmented into independent academic bodies (i.e., associations, conferences, books, journals), which together would build a justified case for a customer-centric model of value. In the second half of the 20<sup>th</sup> century, two transitions are evident in the history of the marketing literature. First was a growing understanding and integration of consumer behavioural science (Howard & Sheth, 1969) in business strategy (Normann & Ramirez, 1993) and the second was the post-industrial growth of societies from goods-manufacturing to services-based economies (Buera & Kaboski, 2012). The impasse on the debate of value came in the form of a divisive article, which criticised how "the classic marketing mix, the seminal literature, and the language of marketing all derive from the manufacture of physical goods" (Shostack, 1977). An agenda for a new theory of value based on intangible exchange (Rushton & Carson, 1989) was made and it was the services marketing sub-discipline which staged the formal challenge (Berry & Parasuraman, 1993).

The Service-Dominant (S-D) logic of value arose in the 21<sup>st</sup> century and directly challenged the perspective that value is objectively measured by monetary worth (i.e., exchange value). Rather, the S-D paradigm argues that the experiential and intangible utility rendered by consumers from products and services, is the underlying measure of value (i.e., use value). For decades, the customer in marketing was seen as an end or "destroyer of value" (Lusch & Vargo, 2009; Edvardsson et al., 2011), but in Vargo and Lusch's theoretical framework of value (co)creation, consumers are argued to be its source. The significance of the new theory of value was not only that the configuration of roles were reversed to always include the consumer and

producer, but it was that consumers no longer bought value, simply because they created it. This refocuses marketing strategy back to the idea of value offerings, as "customers do not buy goods or services: they buy offerings which render services which create value" (Gummesson, 1993). S-D logic in other words, formalises the marketing process as marketing-with an audience (i.e., an on-going relationship), where brands can add potential value to the consumers value creation process through the abstract mechanism of value propositions, and what customers do with value offerings is ultimately upto them. The conceptual contribution of S-D logic to marketing has been on theory building, as it is the most-cited work in the Journal of Marketing since the start of the 21<sup>st</sup> century. Much is yet to be written about the implications of S-D logic (Vargo & Morgan, 2005) from an empirical viewpoint, but what is evident to businesses in the history of the marketing literature, is the importance of value propositions to marketing theory.

In the following sub-sections each marketing logic is discussed, with the support of practical examples and systematically reviewed to set up the concrete background to value propositions, which is the main focus of this thesis.

### 2.2.1 Goods-Dominant (G-D) Logic of Value

The Goods-Dominant logic of value is as old as the establishment of the first free-market economies and the longest tradition in the history of marketing (Hollander et al., 2005; Shaw & Jones, 2005; Sánchez & Iniesta-Bonillo, 2007). The core concept of marketing revolves around the exchange process (Alderson, 1957; Bagozzi, 1975; Hunt, 1976; Houston & Gassenheimer, 1987) between a producer and consumer, which configures the transfer of value between market actors. In the G-D logic, physical commodities (i.e., goods) are the basis of exchange. Producers manufacture goods and then target and push their value to the customer. The core postulation of the G-D paradigm is the outlook that value creation is dependent on the production and distribution of goods (i.e., that to create value a tangible output is required). This theory of value began the paradigm debate by adopting a dominant view of the two conceptual measures of value which goes back to antiquity. Exchange value (i.e., 'value-in-exchange'), which is the nominal price of a good or service on the open market (Monroe, 1973) and use value (i.e., 'value-in-use'), which is the utility provided by a good or service which differs from consumer-to-consumer.

The review of the value literature starts with the G-D logic, which conceptualises value in line with the 'value-in-exchange' perspective; defined by the American Marketing Association (AMA) as "the amount of money or goods actually paid for a product or service" (Kuzgun & Asugman, 2015). This mindset of value is based on the foundation of microeconomic maximisation theory (Carman, 1980; Arndt, 1983; Webster Jr, 1992), according to which firms "chooses both its inputs and its outputs with the sole goal of achieving maximum economic profits" (Nicholson & Snyder, 2012).

The G-D orientation of the market was born in the 18<sup>th</sup> and 19<sup>th</sup> century through the practice of mass production, afforded by the productivity emerging out of the industrial revolution (1860 - 1920). The father of economics, Adam Smith forwards in his book The Wealth of Nations that the fundamental basis of exchange is the economic good (i.e., that which production makes). Adam Smith's political and economic analysis of value presented a thesis on product-centricity, were value is "the power of purchasing other goods which the possession of that object conveys" (Smith, 1776). Smith is reasoned to have selected the dominant view of 'value-in-exchange', in support of "convenience, given his national wealth standard, rather than a personal (or national) wellbeing standard" (Vargo & Akaka, 2009). His visionary essay on a model for economic growth, introduced general principles which have shaped contemporary social science; including both economics and marketing. He devised microeconomic practical theories which as a consequence lead to the institutionalisation of mass production (Sabel & Zeitlin, 1985). The first is the division of labour (Romer, 1987) – the principle of optimising manufacturing output and the second is economies of scale (Edwards & Starr, 1987) – the principle of reaching levels of production which decrease unit costs of output. Smith believed that specialisation of manufacturing was productive and his philosophic beliefs translated to economic heuristics which would entrench and establish what would later be known as the G-D logic. The outcome of his work, was the standardisation of the notion of value to economic goods (Smith, 1776; Marshall, 1890; Bell, 1953; Schumpeter, 1954); units which render some functional utility (Sheth et al., 1991; Babin et al., 1994; Schmitt, 1999) such as meeting the demand for bars of chocolate or pairs of shoes and thus stimulated the exchange process. Smith's philosophic contribution to marketing was a focusing of marketing thought towards the production-side of exchange, were oversupply of economic units (i.e., tangible units of output) meant surplus tangible gains (i.e., exchange value) for the firm, frozen in the inventory of goods.

Adam Smith modelled what is currently conceived as a *two-way interaction* between producers and consumers (i.e., the producer-consumer dyad), as just *one-way exchange* (i.e., that producers are the source of value, and consumers the end). This, in the words of Prahalad and Ramaswamy, "firms decide the products and services they will produce, by implication they decide what is of value to the customer. In this system, consumers have little or no role in value creation" (Prahalad & Ramaswamy, 2004). Strictly speaking in G-D logic, value creation is linear and resides solely with the producer as they embed value (as in 'value-in-use') during the value-adding service of manufacturing and production (Keith, 1960; Porter, 1979; Porter & Millar, 1985; Normann & Ramírez, 1998). The created product acquires its worth through ownership exchange (i.e., 'value-in-exchange') and maintains a hidden worth in its usefulness (i.e., 'value-in-use'). In this system of value creation, the producer is charged with supplying 'intermediary' operand resources (e.g., grain, gold, saffron, water – the raw material) to meet market demand (Epple,

1987). Operand resources are a tangible "resource to which something is done to in order to produce an effect" (Barnes et al., 2009), they "require some action to make them valuable" (Vargo, 2007) and are typically "acted upon; they are static and usually inert" (Lusch, Vargo, & Wessels, 2008). These static products form the inventory of supply (Priem, 2007) which sits dormant and in surplus until sold in exchange (i.e., transactions) and used up for utility under consumption (e.g., unitised, destroyed).

The G-D producer's only purpose is to make surplus goods and sell them (see Figure 4) in the form of tangible operand resources (Constantin & Lusch, 1994). The brand's aim is to secure an exchange of ownership (e.g., a transaction of goods-for-money) and in doing they propose 'value-in-use' as a hedonic lure (i.e., the value proposition of utility) to satisfy a market demand. The underlying target for the G-D producer is not really meeting demand but rather leveraging the good to generate economic profit (i.e., money as 'value-in-exchange') from consumers (Levy, 1959; Hirschman & Holbrook, 1982). The consumer on the other hand, has few options but to accept goods which marginally meet their demands, as they cannot create or customise value for themselves and so sacrifice their money for ownership of value.

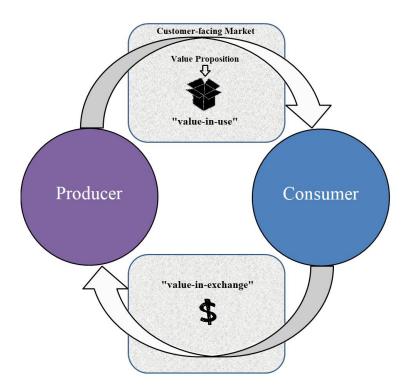


Figure 4: The G-D logic of marketing exchange

G-D thinking was popularised further and emboldened by John-Baptiste Say in Say's *Treatise on Political Economy*, which guided further marketing thought towards mass production. Say believed in a circular flow understanding of an economy, accordingly production is the source, precedes and constitutes its own demand. For example, if goods are produced then profit is generated from that production, then profit

eventually serves as demand for future goods and so on. He states, "I do not see how the products of a nation in general can ever be too abundant, for each such product provides the means for purchasing another" (Say, 1836). The view of Say is that value is created by producing rather than consuming; that the role of consumption is to use up value and that consumption follows on from production. His interpretation of economics had implications on industrialists such as Henry Ford, who capitalised on production to source market demand for Ford's Model T vehicle, in which buyers materialized for cars who would have previously demanded horses. Ford's adoption of the assembly line is a testimony to how the G-D paradigm can yield a standardised, low cost, high utility product widely available to the market. Say's thinking although criticised to be circumstantial (Kates, 1998), placed supply over demand and deviated from Smith as he examined value based on the consumer-side notion of utility. In a review of G-D logic, its reported that "Say's (1821) notion of utility...and the desire of economic philosophers' to turn economics into a legitimate science in the Newtonian tradition, products, with embedded utility, represented by price, became the foundation for marginal utility theory and neo-classical economics. And thus the goods-centered model became the dominant paradigm for the business-related disciplines that followed" (Vargo & Akaka, 2009). The manufacturer-centric model of value suggests that "value is added through industrial processes, embedded in goods, distributed, and then realized in exchange in a transactional manner" (Kowalkowski, 2010). This preeminent economic thinking of traditional markets has fundamentally influenced the very structure of markets on which the discipline of marketing was born.

Marketing theory emerged at the start of the 20<sup>th</sup> century with the introduction of the marketing mix, which is the dominant marketing framework still taught and used today (Frey, 1956; 1957; McCarthy, 1960; Borden, 1964; Howard & Sheth, 1969; Kotler & Levy, 1969; Van Waterschoot & Van den Bulte, 1992; Van Waterschoot, 2000). It became "the fundamental foundation and the tie to the standard economic model" (Vargo & Lusch, 2004) and a means for businesses to systematically articulate their differentiation of value (i.e., by defining an assortment of value propositions as compared to competitors). McCarthy believed that in order to create value, a brand must adapt their perspective to the 4 P's and when all elements of the marketing mix are propositioned, brands can maximise the value they offer to a target market using this model. Explicated in the model is a forwarded assumption that value is a fixed one-way delivery system (Lanning & Michaels, 1988) controlled by the firm and pushed to the market. The marketing mix has played a pivotal role in installing the implicit thinking that value is production-side, output (i.e., operand) exchange, and to its credit has built a pathway for marketers but not markets.

*Product* is the primary vestige of the G-D logic, whereby 'value-in-use' is encased in the form of a tangible and tradable commodity (Lai, 1995). *Price* is a quantification of "what is given up or sacrificed to obtain a product" (Zeithaml, 1988) and is deliberated within an environment of 'reference' prices (i.e., market

'exchange values'). Monroe's research thread in the literature (Monroe, 1973; Rao & Monroe, 1989; Dodds, Monroe, & Grewal, 1991) looked specifically at how price maintained a negative effect on perceived value (Christopher, 1982). *Place* incorporates the distribution strategy of the product (Kotler & Gertner, 2002) and links to the space the product is exchanged. *Promotion* is direct provocation, meaning that it leads to immediate exchange or, more generally, to desirable forms of immediate, overt behaviour fitting an immediate exchange in a situation. This can be done conventionally through communication (i.e., value-informing propositions in advertising) or physically through product aesthetics (i.e., tangible dimensions in packaging). Promotion aims to increase demand for the product, and consists of inducing partners to facilitate exchange immediately. It tackles 'barriers to acting' such as physical and psychological inertia barriers, risk barriers, or competitive barriers from close substitutes (Beem & Shaffer, 1981). This provocation of immediate exchange implies that promotion is situational or contextual (Sheth et al., 1991) in the sense that it is carried out on a non-routine basis during short and designed periods of time. The marketing mix is strategically aligned to the traditional one-way model of value, by organising resources external to customers in a theoretical frame which shapes the unit of output (i.e., the product) towards a targeted (i.e., push-oriented) exchange of ownership (i.e., sales transaction). It is argued that a "dominant logic can be considered as both a knowledge structure and a set of elicited management processes" (Prahalad & Bettis, 1986), and the ensemble marketing mix has become such a product-centric framework, which has been built on top of a microeconomic model of the market.

A classic example of a product seen through the paradigm of the G-D logic, is Coca-Cola. In 1886, an Atlanta-based pharmacist by the name of Dr. John S. Pemberton invented Coca-Cola. First sold in soda fountains (i.e., pharmacies) in the United States, where the product positioned itself as a nutritional tonic but quickly developed into a symbol of American values (Aaker et al., 2001) going into World War II. In brief, Coke reflects the concept of American consumerism (i.e., enjoying oneself, being care-free), they offer a good but in reality they sell an experience (i.e., the 'value-in-use' of good times). There is an invitation which comes with Coke to live vicariously, and this is carefully constructed by the Coca-Cola Company in their use of symbols (e.g., the Christmas season, association with the colour red, pop culture and silver screen placements and international venue sponsorships – FIFA, Olympics) so that consumers see beyond the bottle they buy.

From a marketing mix perspective, the product of Coca-Cola, is a fundamental determinant to the brand and a focus for corporate branding and communication. Coke is a Fast-Moving Consumer Good (FMCG) - a quick consumable good, which is age, sex and race independent (Kohli, 1997), and in many cases it is susceptible to product extension (e.g., Diet Coke, Sprite, Fanta). Most obvious to the case of Coca-Cola, is that their product is the core value proposition (see Figure 5).

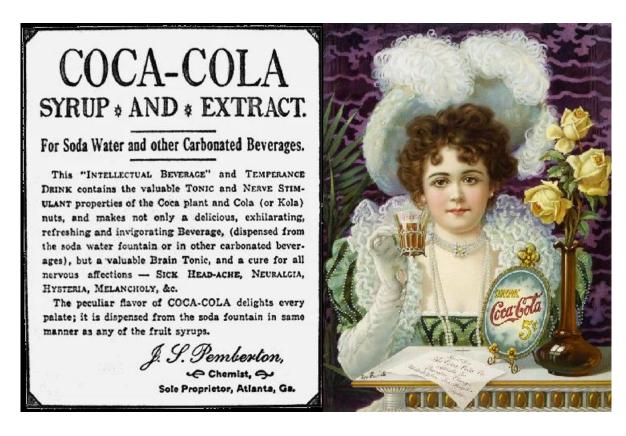


Figure 5: Coca-Cola Product value proposition (Left), Coca-Cola Promotion advertisement (Right). Source: https://commons.wikimedia.org/wiki/Coca-Cola

In the case of Price, Coke is an affordable product so much so that it is the longest documented example of a "sticky" price (consistent proposition of 5¢) in modern history (Levy & Young, 2004). The economic backdrop of the industrial revolution and post-World War II advancements helped Coca-Cola get from 9 glasses per day at launch (1886), to 2 billion servings per day (2019). The economist Daniel Levy recently discusses Coke's case in a NPR interview, saying "Coca-Cola had to push volume to be more profitable; it couldn't have adjusted its price. And so it did, it very powerfully pushed volume. At one point they were associated with the military, there were Coca-Cola bottling operations on every single continent except Antarctica during World War II. All there to make sure that our soldiers could always get a Coca-Cola in a bottle, or at the fountain, for a nickel" (NPR, 2019). How this relates to value creation, is that the product held a perceived economic closeness in society (i.e., was cheap) and helped to breakdown economic barriers of access for buyers and differentiated itself from luxury alternatives.

In the case of Place, Coca-Cola using successive 'proprietary' bottle contracts to serve in specific locations, proliferated their products in the international market (Levitt, 1993). The places' to transact sales with Coca-Cola products are vending machines, centrally located in cities and designed to take single coins (i.e.,

 $5\phi$ ) and trade a single product. In 1950, these vending machines were estimated to be around 460,000 within the United States and after 70 years this measure is estimated to be at 7 million.

In the case of Promotion, Coca-Cola used a promotion strategy which ignored the product entirely. Instead, Coca-Cola focused vigorously on building an emotion-based word of mouth (WOM) campaign on the brand. They did this through marketing slogans (1979: *Have a Coke and Smile*. 1989: *Can't Beat the Feeling*. 2001: *Life Tastes Good*. 2009: *Open Happiness*. 2011: *Life Begins Here*. 2016: *Taste the Feeling*) which associated a perceived positive emotion (Thomson et al., 2005) with the tangible product. The WOM advertising campaign along with physical promotional memorabilia (i.e., marketing artefacts), were designed to make Coke a consumable brand, something that consumers could identify with and value.

When all the 4 P's are employed by Coca-Cola, the strategy of generating positive perceptions with the brand over competitors (e.g., Pepsi) comes into play (i.e., that the 'value-in-use' is potentially superior). Coca-Cola uses the marketing mix to improve brand equity (Yoo et al., 2000; Rust et al. 2004) (i.e., the perception of the brand regardless of their products) and respectively uses the good (i.e., Coke) to absorb and unpack the value on offer (i.e., as 'value-in-exchange'). What is seldom discussed is what enables multi-national corporations like Coca-Cola to achieve this state of success; it is the underlying G-D mindset which laid the foundation for such productivity and capacity of scale. For example, without assembly lines they would be limited to the amount of labour available, without the most competitive price they would segment their audience, without bottling contracts Coke would lose its international presence, and without mass production of advertising and promotional broadcasting the perceptions associated to the value of the brand would have been inferior. More recently, Coke has focused on a debranding campaign, removing their brand name off bottles, and replacing it with 150 of the most common names in a region, and these social names act as emotional cues for customers and is an example (Lynch & De Chernatony, 2004) of an increase in 'value-in-use' on offer.

The Coke example above provides concrete instantiation of the G-D logic that embodies the four dimensions of the traditional marketing mix, which organises value in the product-centric mindset. In the following sub-section, the S-D logic of value is elaborated and the underlying key principles required in understanding this mindset.

#### 2.2.2 Service-dominant (S-D) Logic of Value

The rise of service industries (1960s – 2000s) and a customer-oriented view of marketing is well documented, due to changes in the globalisation of markets, improvements in economic gentrification following World War II (Ghani & Kharas, 2010), shifting consumer demand (Buera & Kaboski, 2012) and

the introduction of consumer electronics (Gray, 1992). Marketing began to observe shifting demand from consumption of goods, to consumption of market services' (and the beneficiaries thereof). Moreover, a number of disruptive frameworks from consumer research began to propose new points of view in determining value; most notable is Sheth et al's (Sheth, Newman, & Gross, 1991) Consumption Value Theory (CVT).

Sheth's CVT framework argued for value being determined by the consumers' perceived point of choice, specifically revolving around their consumption process. The theory is multi-dimensional, utility-based, contextual and a one-way representation of value determined by the consumer. Three axiomatic propositions form the theory, specifically that 1) consumer choice is a function of multiple consumption values, 2) consumption values make differential contributions to contextual situations of choice and 3) consumption values are independent. These consumption values comprising CVT are: functional (i.e., utilitarian attributes), social (i.e., association attributes), emotional (i.e., affective attributes), epistemic (i.e., knowledge attributes), and conditional (i.e., situational attributes).

Although CVT alluded to a shift of consumer-derived value creation and appropriately integrated their context, the theory did not propose a unified model of the market which acknowledged the producers in markets. This therefore was its defining drawback, and a point of learning for works which sought to harmonise the old (i.e., goods), with the new (i.e., service). Service was to be the notion which offered such a unified representation of value creation between both a producer and a consumer (Normann, 2001).

Service is defined as "processes that provide time, place, form, problem-solving or experiential value to the recipient" (Lovelock et al., 2004) were production and consumption blur together and are integrated in a relationship. This is opposed to the exchange of goods were production and consumption are disconnected. Examples of a service include transport, accommodation and health care were intangible economic activities are exchanged over a service encounter. A service is distinctively unique to marketing in 'value-in-exchange' (i.e., customers are part of, but do not take ownership of entities in the service encounter) and 'value-in-use' (i.e., customers perceive unstandardized use value in participating within the service encounter), but these would never be acknowledged until the drafting of S-D logic. Instead, the synchronous (i.e., two-way) nature of services' were truncated to meet the tangible goods market as an oddity, which was that "services are units of output of a special type of good, that is, an intangible good" (Kohler et al., 2016). For example, the revised framework of Booms and Bitner's (1981) introduced the 7 P's model, which included people, process and physical evidence (Booms & Bitner, 1981) to the classical marketing mix, increasing adoption by marketers (Rafiq & Ahmed, 1995), and supplementing the literature by normalising service on the basis of a goods foundation or within a goods-dominant logic.

In a definitive step towards the end of the goods-service debate (Fisk, Brown, & Bitner, 1993) and in breaking free from goods (Shostack, 1977; Deshpande, 1983), a dichotomy between goods and services was established in the IHIP framework (Zeithaml, Parasuraman, & Berry, 1985). The authors identify that a intangibility, service can exhibit characteristics of heterogeneity, inseparability production-from-consumption and perishability. The conceptual framework for service characteristics is useful for identifying a service but is criticised on being "knowledge accumulated from goods marketing" (Lovelock & Gummesson, 2004). The quintessential question in marketing came to a head, as to what was going to be the general case, the good or the service. The precedent in argument for a general-purpose model of the market which harmonised both and bases itself on the consumer's concealed value (i.e., 'value-in-use') became the grounding for a new two-way logic of value, one that would challenge marketing's established way of thinking.

The architects of S-D logic are Vargo and Lusch (2004) who initially synthesised the theory of a unified market within a number of theoretical axioms beginning in 1994. Their two-way theory of value, in *Evolving to a New Dominant Logic* galvanised vast bodies of academic research (see Figure 6), including: core competency theory, relationship marketing, services marketing, experience marketing and consumer culture theory.

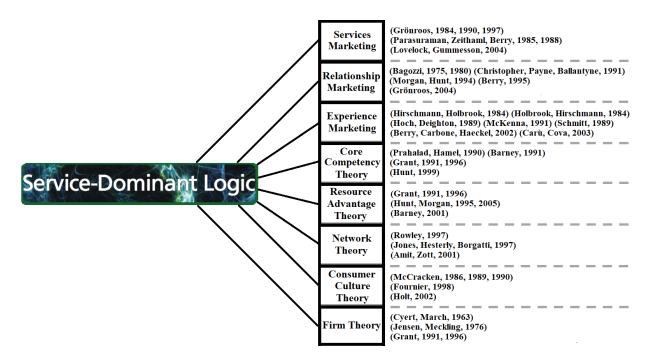


Figure 6: S-D logic academic theory integration

The fallacy or mistruth identified by Vargo and Lusch is that goods are not in the first instance bought because of their tangibility (i.e., 'value-in-exchange'), but for the intangible service (i.e., 'value-in-use')

that the good can provide. In essence the mindset that has been established in marketing is the opposite way around. Put in past terms, "the importance of physical products lies not so much in owning them as obtaining the services they render" (Kotler, 1973). Underlying the premise of S-D logic, is an economic law argued by philosopher Claude-Frédéric Bastiat; that all economies can be seen as 'service-for-service' exchange. This mindset not only could be applied retrospectively (i.e., to agrarian markets of farmers and fishers who provide underlying service) but also is compatible with markets of digital consumers who gain on-going value through technology-resourced services (e.g., eBay auctions, Intel microchips). The service-abstraction is crucially relevant to modern day economic markets, as it does not commoditise value to only units which can be held, but also to that which can be intangibly taught, experienced or trained (e.g., farming and fishing).

The S-D paradigm believes that the fundamental basis of exchange (i.e., value) is centred on a co-created phenomenological experience (i.e., 'value-in-use') between the brand and the customer. The encapsulation of a service encompasses the resources that one brings to the market and exchanges for another's service (e.g., goods, money, intangible skills). The base abstraction in markets is the service (singular) and value is seen from the service-centred perspective of the beneficiary in the collaborative process of service-for-service exchange with the brand. For example, an individual using the Uber app would generate their own value of the service not on the basis of cost exchange but on the basis of a number of contexts in which the service is co-created (e.g., driver, car, music, cost). The S-D logic of value conceptualises value in line with the 'value-in-use' perspective (cf. in G-D logic, the conceptualization was aligned with 'value-in-exchange'). The theory grounds itself on "a broader focus on partnerships, relationships, networks, value-creation, and value constellations" (Lusch, Vargo, & Tanniru, 2010). It moves to re-align that "focus is not on products, but on the consumers' value -creating processes" (Grönroos, 2000). The central argument being made is that service is the general case and goods an appliance to that service, transitioning marketing "from the means and the producer perspective to the utilization and the customer perspective" (Gummesson, 1993).

The theory of S-D logic introduced a new notion as an input into value creation, and it is called operant resources (Prahalad & Hamel, 1990; Constantin & Lusch, 1994; Heene & Sanchez, 1997; Hunt, 1999). Operant resources are specialised competencies (i.e., knowledge and skill) of a service provider which are by design invisible and intangible. It is through application of operant resources (the intangible) acting on operand (tangibles) resources, in which a competency (Prahalad & Hamel, 1990; Barney, 1991; Hunt, 1999) confers value to the beneficiary.

Take for example a village nestled at the bottom of a mineral-rich mountain. The wealth of the village (i.e., the value it generates) depends on how much steel and iron (i.e., operands) they can trade to the neighboring city. The neighbouring city is developed and has advanced service industries such as education, banking and health care, but little to no raw resources (steel or iron). Therefore demand between the village-city is high as each has some resource the other has limited access to and desires. The village has a single blacksmith, his knowledge (i.e., operant) of forming functional tools (e.g., picks, axes) takes generations to learn and experience. The blacksmith's skill is a form of higher-order resource, which without; the village would be unable to produce and trade goods to the city. This is an example of the blacksmith providing a service which continuously creates value for the village. The S-D mindset explains economic growth of markets for both tangible sources of value (i.e., the village via operands), as well as intangible sources of value (i.e., the city via operants). In the following discussion of the maxims of S-D logic, the village-city metaphor will be used to illustrate the instantiation of the service-centric mindset.

S-D logic on the grounds of theory argumentation, uses an axiom system to lay out its foundation. This method is done to broaden the organisational interpretation of its use and also allows room for new rules to be added, as Vargo and Lusch indicate "S-D logic has been, and continues to be, further consolidated, extended, and elaborated" (Vargo & Lusch, 2016) as an evolving theory.

The S-D paradigm of marketing formally introduces five axioms ( $\Phi$ ) and defines service as "the process of using one's competence for another party" (Vargo & Lusch, 2004).

The first principle ( $\Phi \to 1$ ) states: "Service is the fundamental basis of exchange". This tenet directly contradicts the mind-set that value is embedded or laden within physical objects (i.e., goods). It forwards the notion that, why we exchange is to co-create an experience from the service of others (i.e., create value for ourselves and the service provider).  $\Phi 1$  defines that what we take to the market is our service, our specialised competencies (operants) which represents our firm's competitive advantage and unlocks 'value-in-use' for our customers. Goods are a distribution mechanism (i.e., appliances) for our service. Goods are platforms for our services and our services are platforms for experiences (i.e., beneficiary 'value-in-use'). In the example presented above, when the city purchases iron and steel for their infrastructure, it is by extension rendering the service offered by the village blacksmith who facilitates a position of power in the market. Obviously his value ('value-in-use') is masked. Inversely, the city can trade using engineers, doctors and teachers (i.e., operants) to grow abundant markets and offerings.

The second principle  $(\Phi \rightarrow 2)$  states: "Value is co-created by multiple actors, always including the beneficiary". This tenet elucidates that before any value can be created, we must always include the customer. The customer is the value creator, and shares a selective relationship with the brand.

Traditionally, the customer had no role in the production of value creation, as they were relegated to the role of purchasing and then consuming. Now, we 'reintegrate' the boundaries of producer and consumer (Lovelock & Gummesson, 2004), with emphasis on the customer's value creation process. Φ2 defines that we can no longer create value alone, we co-create it. The only offerings the firm can make are value propositions, which can add potential value to the customer's co-creation process. The firm can only offer value propositions (Vargo & Lusch, 2004), and what the customer does with that proposition (i.e., consuming, contributing and creating) is entirely up to them. In the village-city example, the emergence of training schools within the village would mean that the educator (e.g., blacksmith) as well as the educated (e.g., students), share in a co-created service value (one which is Intangible, Heterogeneous, Inseparable and non-itemizable).

The third principle ( $\Phi \rightarrow 3$ ) states: "All social and economic actors are resource integrators". This tenet formally terms market service actors as resource-integrating actors. It advocates that any actor within a network of exchange, seek to integrate and create value (via operand/operant integration). Therefore, value (co)creation is the interactive result between multiple beneficiaries (static or otherwise) co-creating a value experience.  $\Phi 3$  defines a systemic notion of holistic value creation, whereby resource integrators within a service ecosystem are forced in general to exchange in order to produce value for one another. What this idea indicates is that within any market, customers lack the ability to integrate resources that they want (i.e., are limited to value creation from their own sphere of resources). The S-D firm, combines their offerings of resources with that of the customer; to uniquely offer a platform of experiences shared by the brand and its consumers. In the village-city example, this can be construed in the student taking his new found knowledge from the school to a hamlet which is economically poor, but a settlement which highly values the value creation process (or service) that the newfound blacksmith can now offer.

The fourth principle ( $\Phi \rightarrow 4$ ) states: "Value is always uniquely and phenomenologically determined by the beneficiary". This tenet proposes that in addition to the utility of the service provision, the perceived value from the consumer's point of view, may in fact not be the same use value the service provider envisioned. Accordingly, "until an offering is used there is no value, and that phenomenologically, consumer experiences and perceptions are essential to determining that value" (Chen, 2011). Customers independently re-purpose and shape their own experience, and also play a role in the co-creation of others.  $\Phi 4$  defines that value via the eyes of a consumer, takes on an experiential dimension which includes perceived marketing semiotics (e.g., value propositions, brand belief system, social belief system, emotional belief system) which are an input to the context of value creation. In the village-city example, there is only so much knowledge the original village blacksmith can teach. Value in S-D logic is

idiosyncratic, experiential and contextual, some of his students quit, failed and succeeded; all interpretations of value are unique experiences for the beneficiary.

The fifth principle ( $\Phi \rightarrow 5$ ) states: "Value co-creation is coordinated through actor-generated institutions and institutional arrangements". This tenet positions that S-D theory recognises contextual rules-sets and different aggregations of complexity, unlike G-D theory. Interactions occurring at the micro-level (single transaction), meso-level (markets) and macro-level (society) maintain a hierarchical relationship, with rules of conduct which influence the ultimate 'value-in-use' (i.e., resource integration) created.  $\Phi 5$  defines that exchange is a normative act and consumers are not 'end-users'; they are intelligent resource integrators who interface via "codified laws, informal social norms, conventions" (Vargo & Lusch, 2016) with other service actors in order to meet shared contextual objectives. Last and full circle in the village-city example, the student becomes the master and teaches in his own smithing institution with guidelines for future artisans to standardise the service and grow the conventions of business practice.

For so long as marketing existed, consumption was treated as a "black box" (Grönroos, 2006). Practitioners by way of an economic paradigm were designed to 'make and sell' using the G-D logic. Consumers on the other hand were designed to buy, use and get more units of output. This manufacturer-based model (G-D logic) is heavily criticised mainly because it never included the customer within the marketing equation. Today, S-D logic provides a unified accord for business scholars regardless if a physical good is involved in the exchange. Actors become a service for other actors (i.e., 'service-for-service' exchange ( $\Phi$ 1)) and interface with "other systems by value propositions" (Vargo, Maglio, & Akaka, 2008). Based on the S-D mind-set, customer-facing value propositions (e.g., goods, service, information) made available to resource integrators, hold the key to objectifying and quantifying value offerings within the market.

An S-D illustration of value co-creation is presented below (see Figure 7). At the centre of the diagram is the consumer's value creation process (i.e., their integration and creation of 'value-in-use'). This process of the customer's experience merges the roles of production and consumption which was traditionally separate entities, now simultaneous in an on-going cycle of value co-creation. Resources (both operand and operant) are external inputs into the operation of value creation for the beneficiary. Last and most important in this literature review, is value propositions, which define the communicative practice between service actors. As S-D logic argues, brand value propositions (i.e., statements of benefit) are the only interface for the firm ( $\Phi$ 2) to manage the shaping of the customer's value creation process.

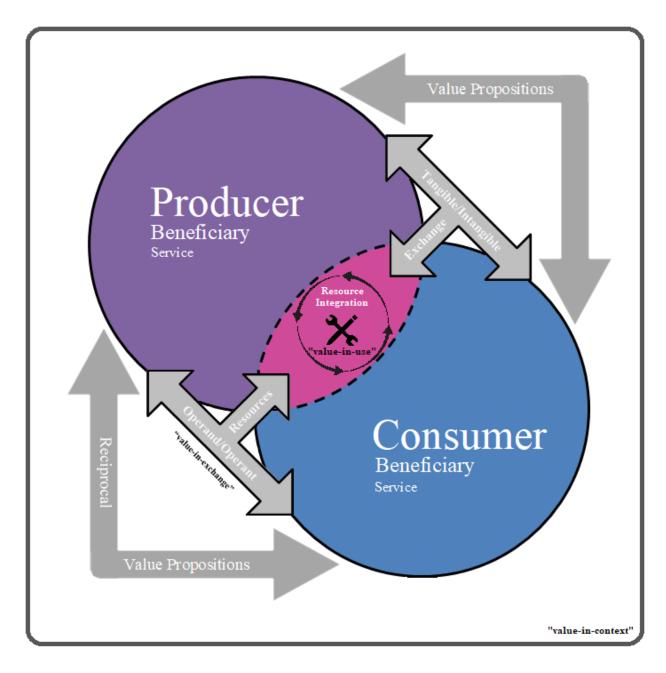


Figure 7: The S-D logic of marketing exchange

A conceptual comparison between these two concepts (logics) as inferred through the literature review is presented in Table 1.

Value Dimension	G-D Logic	S-D Logic
Structure of exchange	'Market to' (i.e., one-way)	'Market with' (i.e., two-way)

Product	Good	Service experience
Price	'Value-in-exchange'	Value proposition
Place	Value-adding dimension	Value proposition
Promotion	Value-adding dimension	Value proposition
Driver of value	Profit maximisation and marginal utility (i.e., monetary units)	'Value-in-use' where the value is inferred by the customer in different ways (i.e., can be monetary, emotional, social, etc.)
Purpose of value	Increase wealth and satisfy demand	Maximise consumer's value through the co-creation process
Purpose of producer	Manufacturer of units of output	Value facilitator (i.e., Service provider)
Purpose of consumer	Passive purchaser	Resource Integrating actor (i.e., prosumer)
Transfer of resources	Operand resources	Operant/Operand resources

Table 1: Different lens in G-D and S-D paradigms

Based on the major debates in discussions of marketing, it is noted that the logic used by the marketer (G-D or S-D logics) has largely impacted the way they market. With the relatively new logic of S-D offering a foundation for viewing value propositions as the interface for service-for-service exchange  $\Phi 1$ , the applicability of this theory to pull-oriented digital communications on social media within the methodology of content marketing is discussed in the next sub-section.

# 2.3 Value Propositions in Content Marketing

Two foundational premises from S-D logic are examined as useful first principles in this work. First is Axiom 2 ( $\Phi$ 2) or premise 6, which states that value is co-created by multiple actors, always including the beneficiary. Second is premise 7, which states brands cannot deliver value, but only offer value propositions.

Regarding the first premise examined in this work, co-creation can be illustrated as a dyadic stage of interaction, whereby actors participate collaboratively to meet some shared end. The assembly (i.e., measure) of this co-created interaction has taken many forms within the literature, both qualitative and quantitative. In Human-Computer Interaction (HCI) works such as that of Kohler (2011), interviews and avatar observation analysis was used in virtual environments to design and test co-creation from the beneficiaries point-of-view, namely on the platform of Second Life (Kohler et al., 2011). Existing works have also used questionnaires (Pappas et al., 2017), netnography (Pongsakornrungsilp & Schroeder, 2011) and empirical case study (Echeverri & Skålén, 2011) to uncover the notion of co-creation within dyadic provisions. Few works have focused in on content marketing (Koivisto & Mattila, 2018), which is the domain where this research unearths the notion of content co-creation. In doing so, this research uses units of content from the brand and customer, to frame a shared experience between marketing actors.

Regarding the second premise examined in this work. Value propositions are a core principle to S-D logic, as they are the key communicative mechanism between market actors, objectifying the value on offer. Storbacka (2012) defines it as "the firm's suggestion to the customer on how its resources and capabilities, expressed as artifacts (goods, service, information, and processual components, such as experiences), can enable the customer to create value" (Storbacka, 2012). Value propositions are clear statements in competitive spaces which articulates the "points of difference" (Anderson et al., 2006; Lindič & Marques da Silva, 2011) or beneficial outcomes (Aaker, 2012) for customers, and thus is an informational intangible input to the beneficiaries to enable the co-creation of value (Vargo & Lusch, 2008). To date however, value propositions offered to the customers have remained a non-concrete phenomena (Goldring, 2017; Vargo & Lusch, 2017), "poorly researched" (Skålén et al., 2015) with "surprisingly little published research" (Ballantyne et al., 2011). Although marketing scholars agree that value propositions are "a promise about potential future value creation" (Grönroos & Ravald, 2011), the literature remains underdeveloped with empirically micro or mid-range research (Weick, 1989) which bridges S-D logic and communicates 'theory-in-use' (Brodie, Saren, & Pels, 2011).

The principle that value propositions are a communicative practice (Ballantyne et al., 2006, 2011) and a "value-supporting process" (Grönroos, 2008), shifts the discussion to the sub-discipline of marketing communications (Du Plessis, 2015), in which a proposition is designed to become "a communication tool that firms use to position themselves vis-à-vis competitors" (Skålén et al., 2015). This therefore means that value offerings are an objective persuader in the relationship with stakeholders, a basis for selection of one brand over another and a marketing mechanism within the customer's process of information integration (Korkman et al., 2010; Holttinen, 2014). Because of the S-D paradigm, no longer are value propositions limited to tangible units of goods and services, but also inclusive of strategically designed information

(Porter & Millar, 1985; Eaton & Bawden, 1991; Freiden et al., 1998). The analysis of value propositions in practice, hence points to the examination of the area of content marketing where brand messages are continually produced for and consumed by, online audiences in a cycle of brand building.

Content marketing, is a prevailing marketing strategy which uses the "creation, dissemination and sharing of free content" (Rancati & Gordini, 2014) to build trust and attachment based on a customer's need for information. Marketing has shifted from interrupting the audience (i.e., outbound marketing), to drawing the audience in (i.e., inbound marketing) using information they actively seek and content marketing is at the forefront in this transformation from push-to-pull (Belch & Belch, 2003) in getting the word out about market offerings. Fundamental to the methodology is the idea that messages are two-way dialogues, stages for participants in the online space (i.e., potential customers) to co-create content (i.e., exchange "bit-based objects" (Koiso-Kanttila, 2004)) facilitated by the brand. The brand in effect, is in control of publishing Marketer-Generated Content (MGC), while consumers emergently engage with such content using User-Generated Content (UGC). Brands through the sequence of content co-creation become storytellers (Herskovitz & Crystal, 2010; Pulizzi, 2012; Gensler et al., 2013) in digital marketing who build awareness, confidence and stewardship in virtual communities and reinforce the co-creation of value via the exchange of information.

Today more than ever (Duggan & Brenner, 2013; Perrin, 2015), virtual communities such as business pages have become important spaces for brands to communicate the value propositions of their value (Kozinets & Handelman, 1998; Kozinets, 1999, Rheingold, 2000; Wikström & Ellonen, 2012; Andzulis et al., 2012; Rihova et al., 2013; Agnihotri et al., 2016). According to the Content Marketing Institute (CMI), which benchmarks statistics of the practice in annual surveys, 86% of B2C brands use content marketing (Content Marketing institute, 2018) with 38% reporting a documented strategy, while 36% report strategy not being documented. Moreover, analytics software such as Google Analytics is used by 85% of practitioners to manage their content, with social media content dominating the type of content produced by brands as reported by 96% of practitioners. What's more is that social media is not only the most popular content platform (Facebook-97%, Twitter-84%), but one of the most effective at helping organizations achieve specific objectives (i.e., increased audience engagement, increased number of leads) (Content Marketing institute, 2018). Although it is clear that content marketing helps businesses connect with and establish co-created relationships with prospective customers within online spaces revolving around content, to the best of my knowledge the topic of quantifying value propositions has so far seen little investigation within the literature that scrutinizes what is embedded within the content created. Research works to date have been inundated with high-level conceptual representations of value propositions, rather than developing business strategy from an emergently bottom-up perspective. One such bottom-up methodology is lexical

analysis (Gavard-Perret & Moscarola, 1996), which uses a computational ability to identify linguistic tokens that are contextually used to refer to marketing logic (i.e., value propositions). This primarily is the area where this thesis contributes to within the structure of content marketing.

### 2.4 Twitter, Customer Engagement and eWOM outcomes

Twitter has become one of the most widely used e-channels in marketing (Content Marketing institute, 2018) and has bucked the trend of the traditional one-way broadcast model. The Twitter platform fosters digital environments by "acting as a conduit for information...that celebrates greater involvement in the brand experience, encouraging the introduction of people to communities whose interactions build greater value and trust in the brand" (de Chernatony & Christodoulides, 2004). The work of Singaraju et al., (2016) puts forward the idea that "the role of social media platforms...is to provide a technological platform that exposes its modular resources to facilitate higher order resource formations through the active participation of non-intermediary actors (i.e. customers and firms)" (Singaraju et al., 2016). Such e-channel environments or business pages on Twitter build standardised profiles of brands, which contextualise the value of the business (Culnan et al., 2010) and provide gratification for the needs of online audiences to stay connected (Korgaonkar & Wolin, 1999). Twitter itself is an infrastructural pipeline, but in conjunction with the digital content it maintains, is a rich data source to analyse different forms of marketing exchange (Rowley, 2008; Holliman & Rowley, 2014) by way of customer engagement (CE).

Only in the recent years have brands and brand communities been conceptualised as dyadic actors in co-creation (Prahalad & Ramaswamy, 2004; Merz, He, & Vargo, 2009; Ind, Iglesias, & Schultz, 2013). Conversations are one such way in which dialogues (i.e., two-way flows) help shape relationship quality and customer brand loyalty (Erdoğmuş & Cicek, 2012; Clark & Melancon, 2013; Hajli et al., 2017; Dessart, 2017) within Twitter. The ubiquitous uptake of digital technologies has further incorporated and empowered the consumer (Pires et al., 2006; Labrecque et al., 2013). Paradoxically the consumer is a more trusted source (Park & Lee, 2009; Goh et al., 2013) to communicate on behalf of the brand, and within the context of co-produced communications, this takes the form of electronic word of mouth (eWOM) which is a primary productive target in digital marketing. As evidenced by a Nielsen survey, 92% of consumers around the world say that they trust earned media content (Nielsen, 2012), such as eWOM from services such as Twitter, compared to the third that trust paid one-way advertisements.

The relationship between a brand and its followers exists both "individually and communally" (Christodoulides, 2009), with co-created participation (i.e., community practices using MGC and UGC) affecting the "past, present, and future dispositions" (Chandler & Lusch, 2015) of those consumers involved (Hudson et al., 2012; Schivinski & Dabrowski, 2016). Social media has changed "the scale and

form of human association and action" (McLuhan, 1994) and marketers are still coming to terms with what this means for CE and how co-created practices on social media creates value in itself (Schau, Muniz Jr, Arnould, 2009; Laroche et al., 2012; Hollebeek et al., 2014). Informed understanding of the literature which aligns with the co-creation mindset, would assert that from the top-down Twitter brands need to communicate MGC which aligns with the brand's values (Aaker, 2012), offer compelling value propositions (Payne & Frow, 2014) and also create, stimulate and maintain CE (Dessart et al., 2015). Contrarily from the bottom-up, consumers generate responses in the form of eWOM (e.g., Like, Share, Comment) to represent feedback (Bruns & Stieglitz, 2014) to marketing stimuli offered by the brand through MGC content (i.e., brand posts). In so doing, co-developed eWOM metrics have become a key modality (Van Doorn et al., 2010) to measure CE within the context of e-channels and is an emerging area of development within social media research (Sashi, 2012; Barger et al., 2016).

Customer Engagement (CE) is defined as "a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., a brand) in focal service relationships" (Brodie et al., 2011). Many metrics exist for research to lead to an "actionable language" (Brodie et al., 2013) which signifies CE, including bookmarks, clicks-per-view, subscriptions and duration of visit. Most significant is the fact that these measures of CE represent "behavioural manifestation toward the brand or firm that goes beyond transactions" (Verhoef et al., 2010). In this thesis, the grounding context is social media (Duncan & Moriarty, 2006; Straker et al., 2015); therefore, CE in this work is captured through a three-fold system of consumer actions (Tsai & Men, 2013; Swani et al., 2013; Sabate et al., 2014; Tafesse, 2015) which supports and drives dialogues in social media; namely Liking (i.e., consuming), Sharing (i.e., contributing) and Commenting (i.e., creating). These three forms of engagement (i.e., modalities) or eWOM outcomes establish a ladder of involvement for consumers and are contextual content-level metrics to measure the effectiveness of marketing stimuli provided through MGC.

This research motivated by prior scholarly works (Muntinga et al., 2011; Lagun & Lalmas, 2016), delineates eWOM outcomes based on the semantic depth encoded within the CE metric. The number of Likes and Shares are examples of shallow CE which denote reach-based numeric totals. These are termed as shallow CE metrics because these are generated quickly (on the fly) and may not require deep thought. While the third metric number of Comments denotes a shallow measure of reach, each of the comments also contains semantically deep insights such as consumer sentiments and contextual statements regarding value offerings. Thus, the deep CE metrics in this work considers the context of the consumer as expressed in their comments (i.e., text in the response tweets), which is generally lost in aggregate metrics as in the number of Likes, Shares and Comments (Shen & Bissell, 2013; Lee et al., 2018). As sentiments have been an important research angle in the literature, shown to directly impact participation in value co-creation and

trust with the brand (Seifert & Kwon, 2019; Hollebeek & Macky, 2019), this work proposes two deep CE metrics referred to as positive and negative valence (Park & Lee, 2009; Lee & Youn, 2009; Roy et al., 2017). The eWOM dependent variables examined in this research are presented below in Table 2, where a description, purpose and Return on Investment (ROI) are scrutinized for each separate target variable.

eWOM	Like	Share (i.e.,	Comment	Positive	Negative	
		Retweet)		valence (+ve)	valence (-ve)	
Description	Represents the	Represents the	Represents	Represents	Represents	
	enjoyment of	sharing of	replying to	whether the	whether the	
	content	content to a	content	content is	content is	
		social network		positive	negative	
Purpose	Ranks content	Captures the	Captures	Measures the	Measures the	
-02	and is used to	scale of social	word-of-mouth	community	community	
<b>O</b>	segment an	propagation	generation and	sentiments	sentiments	
	interested		allows values	which are	which are	
	audience in the		and sentiments	positive	negative	
	conversation		to be conveyed			
ROI	Increases the	Scales up the	Generates	Generates	Generates	
	'placement'	diffusion of	discussion of	opportunity	opportunity to	
	distribution of	content in the	content for the	for brand	analyse	
	content in the	social network	brand	messages to	negative	
	newsfeed	(Brown &	(Kozinets et	influence	discourses	
	(Lipsman et al.,	Reingen, 1987)	al., 2010)	pre-purchase	about the	
	2012)			intention	brand	
				(Kumar et al.,	(Rim & Song,	
				2016)	2016)	
					_010/	

Table 2: Description, Purpose and ROI of eWOM target variables

With the co-creation cycle of content marketing discussed and the configuration of Twitter eWOM outcomes detailed as measurable CE, the next sub-section outlines the research gaps within the extant literature. The research questions are contextualized in more detail, before grounding within the methodology how this thesis delivers solutions to such gaps. The next section also presents the structuring of the work that has been followed in terms of various phases.

# 2.5 Research Gaps within the Literature

While theoretically-driven research on value co-creation and value propositions have seen abundant coverage in the literature, few research works have actually aimed to ground or implement the first

principles of S-D logic (relating to value propositions) in real-world marketing practice. This research aims to bridge this by making empirical contributions of value co-creation by quantifying direct evidence of the presence of value propositions along various dimensions and demonstrating the utility of those propositions for strategic decision-making in organisations.

Towards this goal, the first research question in this thesis relates to the taxonomy instrument that is developed that identifies various value propositions from unstructured data. Also, the developed taxonomy has to be validated in order to legitimise further use. For this purpose, the Delphi method was employed which allowed for a shared understanding of value propositions to be established through iterative, open observations of empirical data. These aspects are addressed by the first research question posed by the thesis which is:

# RQ1. How can different value propositions embedded in Social Media data be drafted to form a validated taxonomy?

With a value taxonomy validated by way of consensus, the next objective is to empirically investigate how value propositions are exchanged through longitudinal marketing communications, in particular demonstrating the insights obtained through the analysis of results. For this process, a two-way data set is created that contains MGC and UGC (Goh et al., 2013) exchanges for brands; these data artefacts are linked through a relational context and hence can be studied to investigate both marketing stimuli (MGC) and feedback (UGC). To demonstrate the utility of the value taxonomy to offer insights from brand tweets and customer tweets, the second research question is posed which comprises two sub-parts:

#### RQ2. How can the value taxonomy developed be used to offer insights into the value co-creation process?

RQ2a. How can the taxonomy be used to unearth insights from brand value propositions?

# RQ2b. How can the taxonomy be used to unearth insights in *customer value propositions* and consumer sentiments in response to brands?

In today's digital business environment, data analytics tools play a central role in analysing business performance (substantiated by CMI (Content Marketing institute, 2018) and eMarketer (eMarketer, 2017)) in supporting managerial decision-making for marketing practitioners (Alavi & Leidner, 2001; Bjørnson & Dingsøyr, 2008). Within this business realm, marketing data analytics has gained scholarly attention as it concerns obtaining insights that can inform marketing decisions based on data obtained from different sources (e.g., tweets) and turning this into marketing business intelligence which can then be acted upon. This thesis contributes to the development and evaluation of a Marketing Information System (MkIS) called Value Analytics Toolkit (VAT), which embodies techniques implemented as functionalities in the

system that can be used by practitioners. This offers the opportunity to gain external feedback for the research by making knowledge obtained from two way datasets (e.g. comparisons of brands on different value propositions and predicting which value propositions may help generate a net positive sentiment). At present, no software system exists which provides such a perspective on value propositions within digital marketing, thus the final research question which is posed:

#### RQ3. How can software based on a value taxonomy be developed and tested for utility?

In this work, to answer the above-mentioned questions, the Twitter API is used as a source of publicly available two-way dialogues within brand communities. Each of the presented questions correspond to three phases of research which are outlined in further detail within the methodology chapter (see Section §3.3).

## 2.6 Summary

Although conceptual frameworks such as S-D logic exist that offer principles on co-creation, no concrete operationalisation (in the empirical form) exist within the literature. While the literature also provides conceptual definitions of value propositions as being statements of benefit, few works have attempted to ground empirically various propositions embedded in 'brand communities' (MGC and UGC) within the context of digital marketing. This thesis aims to contribute towards bridging this gap by posing three questions which concern, a) the development and validation of the value taxonomy b) deriving insights obtained by applying the taxonomy to MGC and UGC and c) the evaluation of the utility of the software developed based on items indicated in items a and b. The methodology to answer these questions is elaborated in the next section.

# **Chapter 3 – Methodology**



"First we build the tools, then they build us" - Marshall McLuhan

# 3 Methodology

## 3.1 Introduction

The objective of this chapter is to outline the methods, tools and techniques utilised in this thesis to identify value propositions within a 3-phase methodology structure. Phase one relates to study one, phase two incorporates studies two to five and phase three relates to study six. In this thesis, both quantitative and qualitative techniques were used, and Twitter was the chosen as the platform to investigate the six research studies. Study one in this work relates to the internal validation of the research construct developed (i.e., the

taxonomy), study two relates to a content analysis of MGC from the top-10 coffee brands in 2015. Study three relates to modelling the co-creation of content using MGC and UGC in top-10 coffee brands. Study four relates to replicating the modelling of co-creation in top-10 coffee brands within a different time period (i.e., in 2018 compared to the 2015 dataset used in studies two and three). Study five, relates to replicating the modelling of co-creation in another marketing domain using the top-10 car brands within 2018, thus demonstrating the scalability of the research work. Study six relates to the external validation of the approach using practitioners. Towards outlining the research methodology, this chapter begins by describing the motivation for choosing top brands to investigate value propositions in content marketing in Section §3.2. In Section §3.3, the 3-phase methodology is defined which frames the structure of research which was conducted, with phase one focusing on constructing a value taxonomy (a categorization of values), and testing its validity using the Delphi method (see Section §3.3.1). Phase two, applies the value taxonomy technique (in studies 2 - 5) to empirical datasets of brand and customer tweets for top-10 brands (see Section §3.3.2). Then, Section §3.3.3 presents the methodology for the evaluation of the utility of value taxonomy by way of a web-based application (VAT) which extracts and presents value propositions for brands using the Twitter API. This interface allowed for the collection of qualitative feedback which was used to evaluate external validation from end-users. The outcomes of the 3-phase methodology are presented through four result chapters (chapters 4 - 7) highlighting insights that were obtained from social media. Chapter 6, specifically focuses on the empirical modelling of the content co-creation cycle (i.e., stimuli as MGC and feedback as UGC), and thus presents the most significant outcome in this thesis. Lastly Section §3.4 concludes by summarising the methods employed.

# 3.2 The Top-10 Brands Considered to Investigate Value Propositions

Coffee is one of the most widely consumed beverages in the world (Fredholm et al., 1999) and one of the world's most traded market commodities, according to MIT's Observatory of Economic Complexity<sup>1</sup>. Coffee is a type of highly tangible product, with a short shelf life and a high turnover rate, termed in the marketing literature as a category of Fast-Moving Consumer Goods (FMCG) (Ramesh & Advani, 2005). In particular, the demand for the product and the consumption behaviour (Solomon et al., 2012) surrounding the market commodity, has lead scholars to study the impact of coffee on marketing research (Kozinets, 2002; De Pelsmacker et al., 2005; Gallaugher & Ransbotham, 2010; Kaplan & Haenlein, 2010; Javornik & Mandelli, 2012; Tu, Wang, & Chang, 2012; Tsimonis & Dimitriadis, 2014). With such popularity in economic exchange, coffee establishes a commercially reliable frame to conduct research on the values' that coffee offers to the market. As such coffee brands also offer other products (e.g. Starbucks offering

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<sup>1</sup> https://oec.world/en/profile/hs92/0901

products other than just coffee); hence this work considers all these products that were discussed in tweets. This research uses coffee brands as the main domain of investigation by exploring the Twitter accounts of the top-10 coffee brands in the world as a candidate case study (MBASkool, 2015) and therefore is the central domain of focus throughout this thesis (see Figure 8). Each of the top-10 coffee brands presented in Table 3, were the subject of observation and inquiry for the purposes of this research work. Table 3 presents the brands identified based on market revenue, and the associated Twitter handle for each brand's business page.



Figure 8: Top-10 Coffee Brands in 2015

Brand name	Twitter handle name	Twitter URL	Market Revenue
Starbucks	@Starbucks	https://twitter.com/Starbucks	24.72 billion U.S
Tim Hortons	@TimHortons	https://twitter.com/TimHortons	3.29 billion U.S
Dunkin Donuts	@dunkindonuts (@DunkinDonuts – this was used between 2015 - 2016)	https://twitter.com/dunkindonuts	1.32 billion U.S
Panera Bread	@panerabread	https://twitter.com/panerabread	2.795 billion U.S
Costa Coffee	@CostaCoffee	https://twitter.com/CostaCoffee	1.7 billion U.S
Peet's Coffee	@peetscoffee	https://twitter.com/peetscoffee	800 million U.S

Caribou Coffee	@cariboucoffee	https://twitter.com/cariboucoffee	500 million U.S
	(@Caribou_Coffee –		
	this was used between		
	2015 - 2016)		
The Coffee Bean	@TheCoffeeBean	https://twitter.com/TheCoffeeBean	485 million U.S
Au Bon Pain	@AuBonPain	https://twitter.com/AuBonPain	38 million U.S
McCafe	@McCafe (inactive as	https://twitter.com/McCafe	4 billion U.S
	of Nov 2015)		
	,		

Table 3: Top Coffee brands, Twitter handles and Market revenues

In addition to coffee brands, this thesis also delivers evidence of generalizability by sampling the top-10 car brands in the world (MBASkool, 2019) based on the same selection criteria (reported in study five) which employs the methodology developed to the market domain of automobiles<sup>2</sup> which has also been the focus of marketing investigation within the literature (Algesheimer et al., 2005; Baltas & Saridakis, 2009; McCorkindale, 2010; Chen et al., 2011; Tu et al., 2012; Abrahams et al., 2013; Wang et al., 2015; Tafesse et al., 2015; Mahrous, 2016; Culotta & Cutler, 2016).

# 3.3 The 3-Phase Methodology

The methodological design of this thesis is organised into three phases, and these phases are structured to be sequential (i.e., build on one another). This section provides an overview of the objectives of each phase and outlines the methods required for the investigations undertaken. The sub-sections (see Sections §3.3.1 - 3.3.3) within this section, provide a detailed description of each of these three phases. An overarching structure of the methodology is presented below in Figure 9.

The objective of phase one is to use a comprehensive literature review to establish an informed understanding of the organising principle (i.e., value propositions) being analysed in content. This sets the scene to propose a bottom-up framework to build insights for the marketing literature, (i.e., the taxonomy of value propositions) which is discussed further in the next sub-section (see Section §3.3.1). Before proceeding with experimental studies, the fine-grained model of value propositions needed to be evaluated by experts in the first instance in order to establish a consensus on the phenomena being examined and to measure the accuracy of observers through their use (i.e., open coding) of the instrument. In developing

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<sup>&</sup>lt;sup>2</sup> https://oec.world/en/profile/hs92/8703

such a concrete taxonomy, human participants were needed to build an objective measure of accuracy through collective subjective measures. This therefore required ethical approval and was one of the early tasks in this thesis in order to conduct the qualitative experiments (for studies one and six) with accordance to the ethics committee. Following ethical approval, the draft value taxonomy was orchestrated as the coding scheme within the Delphi study, and the study used Cohen's Kappa ( $\kappa$ ) statistic to measure the Inter-Rater Reliability (IRR) of classifications between independent coders. The study participants comprised of a multi-disciplinary panel of academic experts from the University of Otago from both the Departments of Marketing and Information Science. The outcome of the phase resulted in discrete measures of consensus ( $\kappa = 0.96$ ) which assured near perfect consensus by human coders on the same task of classifying value propositions in brand tweets.

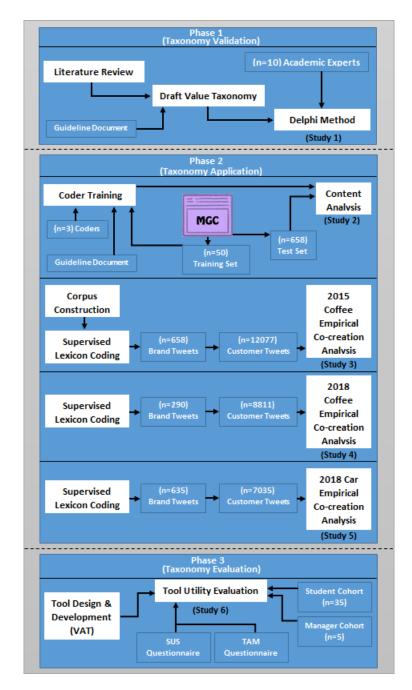


Figure 9: The 3-Phase Methodology Structure

The objective of phase two was to transition from exploration to application. In this phase of research, empirical datasets were used to generate quantifiable evidence and insights from MGC and UGC datasets. Quantitative analytics (Koch, 2015) was carried out on the data at three levels, descriptive (i.e., value propositions), diagnostic (i.e., the impact of value propositions on positive (+ve) and negative (-ve) sentiments) and predictive analytics (i.e., predict which value propositions when embedded is required for positive eWOM outcomes using regression-based approaches).

Study two began by training three independent coders in performing a content analysis using the guideline document developed in the first phase of research and a training sample of brand tweets (n=50). Following the training procedure between coders and the mediator (i.e., thesis author), content analysis was conducted on a 3-month period of brand tweets (n=658). For each coder involved, the study sample was divided into three equal-portion sub-samples for each independent coder to complete and then the mediator completed the entire sample. Comparisons were then made between coders and IRR scores were measured for those involved in the study. The outcomes of the study aimed to identify differences in value propositions embedded in tweets, identify differences in value propositions amongst brands and lastly to predict if certain value propositions stimulated user interest (i.e., Likes, Shares).

Study three extends the investigation of MGC (i.e., brand tweets) by integrating the input of UGC (i.e., customer tweets that are provided in response to brand tweets). The third study made two advancements in this research thesis. First, it introduced the context of sentiments in responses (i.e., positive and negative feedback in the form of comments to a brand message) from customers and second, the study introduced an automatic classification of tweets based on lexical coding (Dhaoui et al., 2017). In this developmental stage of research, a corpus was introduced based on Linguistic Inquiry and Word Count (LIWC) (Tausczik & Pennebaker, 2010) in order to develop a computational method that identifies value propositions based on token keywords, which is not limited to the scalability issues as in the manual tagging method, specifically in light of the volume of responses to brand messages. A bag-of-words (BOW) based methodology was employed. The IRR scores between the automatic method and manual method of classifying value propositions in samples from study one ( $\kappa = 0.91$ ) and two ( $\kappa = 0.90$ ) were found to be relatively similar in accuracy between lexical-based automatic coding and open coding (human-coding) approaches.

Study four replicated the configuration of co-created content (i.e., MGC and UGC) that was studied prior, however changed one factor which was the time duration of sampled tweets. In study four, a two-way dataset from 2018 was analysed to determine if value propositions exhibit similar or different trends to that of what was present in 2015, the dataset used in studies two and three (i.e., if different trends are observed this may be due to their differentiation strategy over time or the evolution of strategies over time). The outcome of the study, was an examination of the passage of *time* on value propositions, and how this indicates certain behaviours of business practice therein employed within the same brand on both brand awareness (i.e., value propositions) and engagement (i.e., eWOM metrics).

Study five replicated the configuration of co-created content as before, however sampled brands that are in the marketing domain of top car brands. In study five, a two-way dataset from 2018 of the top-10 car brands was analysed to determine how the context of a different industry differs as compared to what has been

observed in coffee brands. The outcome of the study was an examination on the generalizability of the value taxonomy to a different market domain, and uncovered in what ways business strategy across domains remained similar or different.

The objective of phase three was to assess the perceived utility of the developed value taxonomy approach by embedding its process within an accessible web application (i.e., online product). The developed Value Analytics Toolkit (VAT) can be used by marketing professionals and students interested in insights on marketing data analytics. The MkIS adopted the value proposition design lens and embedded the computational corpus from the prior phase to a three-year period of tweets collected directly from the Twitter API, accessed through a data warehouse. The surveys drawn from the literature (21 closed-ended questions) and interviews (6 open-ended questions) comprised the method, which structured the data collection for the end-user study. The evaluators of the system comprised of two cohorts. The first was students in an academic setting (i.e., via postgraduate workshops) and the second was marketing managers in a commercial setting (i.e., via business meetings). In total, 35 student participants who had postgraduate knowledge in either marketing or information science represented the student cohort, while 5 marketers contributed to reviewing the system and also provided open-ended responses on how their organisations considered and communicated value propositions as a part of their marketing strategy. The evaluation of results from the 40 participants focused on the insights that VAT demonstrated through analytics, usability and usefulness. Each participant was assigned five tasks and asked to independently use VAT to support their decision-making and then report their evaluations of the system through an online surveying tool which collected their feedback to the study. A tutorial to VAT, the task-sheet for the study and the survey for respondents have been included in the appendices of this thesis (see Appendix J - L).

Next, each study of the thesis is discussed in order to provide a detailed account of the methodology used to obtain the research outcomes.

## 3.3 Phase 1 (Internal Validation)

Phase one relates to the design and the evaluation of the main analytical instrument (i.e., value taxonomy) used throughout this research and the human observation experiment conducted to review its suitability (fit-for-purpose). The first study of this research is thus aimed to propose a draft taxonomy of value propositions guided by the literature and then use a Delphi panel to obtain construct validity from its use (i.e., evaluation) in classifying value propositions. The advantage of the Delphi method as a validation technique preserves annonymity of the panelists and provides the freedom to express observer thoughts while also allowing them to hear group feedback through the facilitator (i.e., thesis author). The objective of this study was to measure the areas of agreement/disagreement amongst experts using the value taxonomy

and examine whether other dimensions of value propositions need to be supplemented based on suggestions provided.

### 3.3.1 Study 1 - The Delphi Study

Study one comprised of a taxonomy formation process and a Delphi method (Dalkey & Helmer, 1963; Linstone & Turoff, 1975). The method has been used consistently within the literature to garner measures of consensus in the absence of reliable knowledge (Fink et al., 1984). Below the methodology for the two within the first study is given. The first part of study is about the design of the research construct, and the second part describes how a Delphi panel uses the construct to validate the taxonomy. This study answers RQ1 which notes: **How can different value propositions embedded in Social Media data be drafted to form a validated taxonomy?** 

The typology or taxonomy of 15 value propositions that was proposed to the panel, was derived from common marketing dimensions found in the literature. Table 4 shows the 15 value dimensions considered in the thesis, what is presented is the identifier (Column 1) and name (Column 2) for each value proposition dimension, a definition of the dimension relating to content (Column 3), and the literature which supports its inclusion in research works (Column 4). To begin, the taxonomy integrates the 4 P's (dimensions 1 - 4 shown in Table 4) of the traditional marketing mix namely, *Product, Price, Place* and *Promotion* as these have been tried-and-tested within the literature (Grönroos, 1997; Van Waterschoot & Van den Bulte, 1992; Yoo et al., 2000; Van Waterschoot, 2000; Constantinides, 2006). Based on a comprehensive survey of the value dimension and value classification literature shown in Table 4, it is clear that specific consumer-side experiential dimensions (dimensions 5 - 8 shown in Table 4) have been commonly adopted in research works (e.g., social value, entertainment value, emotional value, informative value) in the extant literature (Sheth et al., 1991; Bagozzi et al., 1999; Ang & Low, 2000; Sweeney & Soutar, 2001; Petrick, 2002; De Vries et al., 2012; Seraj, 2012; Aaker, 2012; Witkemper et al., 2012; Shen & Bissell, 2013; Larivière et al., 2013; Cvijikj & Michahelles, 2013; Ashley & Tuten, 2015). Also additional works in social media consistently contained question and time dimensions (dimensions 9 - 10 shown in Table 4) to attribute informational content (Jansen et al., 2009; Harper et al., 2009; Efron & Winget, 2010; Dacko, 2012; Lee et al., 2018) in conversations. Last was dimensions (11 - 15 shown in Table 4) obtained through bottom-up content analysis of the sampled twitter data and were common dimensions identified in typologies currently adopted in social media marketing research (Coursaris et al., 2013; Coelho et al., 2016; Kwok & Yu, 2016), namely the dimensions of health, hiring, charity, weather and eco-friendliness. These dimensions were based on the emergent observation of social media marketing, and draws inspiration from existing works (Lee, 2008; Joos, 2008; Brown & Vaughn, 2011; Lovejoy & Saxton, 2012; Gibbs et al., 2015; Taecharungroj, 2017).

#	Value Dimension	Definition	Literature support
1	Product	Tweet relates to named products, either tangible commodity or intangible service	Borden, 1964; McCarthy, 1960; Van Waterschoot & Van den Bulte, 1992; Sweeney & Soutar, 2001; Constantinides, 2006; Zwass, 2010; Cvijikj & Michahelles,
2	Price	Tweet relates to pricing (reference/actual) or method of purchase (\$,£, Free, Sale, Mastercard)	2011; Coursaris et al., 2013; Larivière, et al., 2013; Shen & Bissell, 2013; Ashley & Tuten, 2015; Kwok & Yu, 2016; Lee et al.,
3	Place	Tweet relates to location, distribution or place of access to the product/service (California, Texas, New York)	2018
4	Promotion	Tweet relates to product/service promotional appeal (BOGO, free, save, % off)	
5	Social	Tweet relates to interactive association (family, friends, school, office, church)	Booms & Bitner, 1981; Rafiq & Ahmed, 1995; Sweeney & Soutar, 2001; Carlos Fandos Roig et al., 2006; Sanchez et al., 2006; Rintamäki, 2006; Tynan & McKechnie, 2009; Cho & Huh, 2010; Zwass, 2010; Edvardsson et al., 2011; Seraj, 2012; Larivière, et al., 2013; Ashley & Tuten, 2015; Lee, Hosanagar, & Nair, 2018
6	Sport/Entert ainment	Tweet relates to organised entertainment (NHL, NBA, FIFA)	Zhang et al., 1996; Dobni, 2007; Waters et al., 2009; Zhang et al., 2010; Jae Ko et al., 2011; Crowther & Donlan, 2011; Witkemper et al., 2012; De Vries et al., 2012; Cvijikj & Michahelles, 2013; Vila-López & Rodríguez-Molina, 2013; Larivière, et al., 2013; Shen & Bissell, 2013; Lee et al., 2018
7	Emotion	Tweet relates to expressions of affective state in regards to a product/service/brand (love, hate, cry, ♥, ☺)	Holbrook & Batra, 1987; Zeithaml, 1988; Parasuraman et al., 1988; Grönroos, 1997; De Ruyter et al., 1997; Bagozzi, Gopinath, & Nyer, 1999; Ang & Low, 2000; Sweeney & Soutar, 2001; Petrick, 2002; Carlos Fandos Roig et al., 2006; Sanchez et al., 2006; Sandström et al., 2008; Tynan & McKechnie, 2009; Jansen et al., 2009;

			Zwass, 2010; Sinha et al., 2011; Schmitt, 2012; Coursaris et al., 2013; Larivière, et al., 2013; Ashley & Tuten, 2015; Taecharungroj, 2017; Lee et al., 2018
8	Informative	Tweet relates to informational resources (For more info, Introducing, Coming Soon)	Aaker & Norris, 1982; De Ruyter et al., 1997; Ang & Low, 2000; Sweeney & Soutar, 2001; Sharratt & Usoro, 2003; Harper et al., 2009; Waters et al., 2009; Jansen et al., 2009; Dann, 2010; Zwass, 2010; Kwon & Sung, 2011; Lovejoy & Saxton, 2012; Seraj, 2012; Larivière, et al., 2013; De Vries et al., 2012; Cvijikj & Michahelles, 2013; Coursaris et al., 2013; Ashley & Tuten, 2015; Kwok & Yu, 2016; Taecharungroj, 2017
9	Question	Tweet relates to a direct question (?)	Agichtein et al., 2008; Harper et al., 2009; Jansen et al., 2009; Harper et al., 2009; Dann, 2010; Efron & Winget, 2010; Zwass, 2010; Cvijikj & Michahelles, 2011; Malhotra et al., 2012; De Vries et al., 2012; Coursaris et al., 2013; Ashley & Tuten, 2015; Kwok & Yu, 2016; Taecharungroj, 2017
10	Time	Tweet relates to time, date, or schedule (Day, January, 2018)	Kotler, 1967; Zeithaml, 1988; Parasuraman et al., 1988; Treacy & Wiersema, 1993; Grönroos, 1997; Petrick, 2002; Dacko, 2012; Coursaris et al., 2013; Lee et al., 2018; Alwash et al., 2016; 2019
11	Health	Tweet relates to state of physical, mental, and social well-being	Lone et al., 2009; Culotta & Cutler, 2016; Alwash et al., 2016; 2019
12	Hiring	Tweet relates to career opportunities with the brand	Joos, 2008; Brown & Vaughn, 2011; Lovejoy & Saxton, 2012; Gibbs et al., 2015; Alwash et al., 2016; 2019
13	Charity	Tweet relates to philanthropy with the brand (Donate, philanthropy, charity)	Waters et al., 2009; McCorkindale, 2010; Zwass, 2010; Lovejoy & Saxton, 2012; Coursaris et al., 2013; Ashley & Tuten, 2015; Kwok & Yu, 2016; Lee et al., 2018; Alwash et al., 2016; 2019

14	Weather	Tweet relates to weather conditions Hirshleifer & Shumway, 2003; Coursaris
		et al., 2013; Alwash et al., 2016; 2019
15	Eco-friendly	Tweet relates to practice of Lee K., 2008; Culotta & Cutler, 2016;
		environmental-friendliness (EarthDay, Ottman, 2017; Alwash et al., 2016; 2019
		biodegradable, ecological)

Table 4: Value Taxonomy literature source

The Delphi panel was constructed using 10 experts (Male=7, Female=3) with the PhD accreditation. The 10 academic experts were from the Department of Information Science (n=5) and Marketing (n=5) within the University of Otago. They spanned a wide range of cultural ethnicities (8 different countries) and years of expertise (mean = 11 years). Their background of expertise were in the areas of: customer experience (2 cases), entrepreneurship education, marketing (2 cases), software engineering, computer science, information systems and data science (2 cases). These Delphi panellists will be referred in this thesis as panellists A - J (i.e., the 10 experts). The first five experts [A, B, C, D, E] are from the marketing background, the second [F, G, H, I, J] are from Information Science. The experimental dataset was 20 brand tweets coded using an online-surveying tool (i.e., SurveyMonkey) and this has been included in this thesis (see Appendix B).

To begin the Delphi study, the value taxonomy was made available to the multi-disciplinary panel in the form of a guideline document containing tweet examples of value dimensions seeded in content (see Appendix A). The panellists had input in two rounds of the study. In the first round, panellists used the taxonomy to classify 20 brand tweets. Then, each panellist was told the total agreements/disagreements (round two) and were shown the result of the agreement from the group and were asked if they might change their position on those items they disagreed with. This formed the second round. They also had the option to add more value propositions than the 15 that was provided. The results of all of these were tallied in order to validate the results. The final post-feedback open coding of results from the sample identifies as having excellent agreement based on Kappa static measure (Landis & Koch, 1977) using the value taxonomy on the task of identifying value propositions in brand messages.

# 3.4 Phase 2 (Application of Value Taxonomy)

Phase two shifts from an explorative tone of research to an empirical scrutiny. Four different studies (2 - 5) were conducted in this phase. Study two of phase two, takes the marketer's point of view in the sphere of influence and isolates the investigation of value propositions in Marketer-Generated Content (MGC). This study operationalized the drafted and validated taxonomy on samples of content marketing from the top-10 coffee brands (Rowley, 2008).

### 3.4.1 Study 2 - Manual Content analysis of MGC

Study two established the marketing quarter scope (August - October of 2015) to sample the content of marketers for the top-10 coffee brands. The content analysis was driven to answer three marketer-sided research questions that are a subset of RQ2a which investigates **How can the taxonomy be used to unearth insights from brand value propositions?** The sub-questions posed are:

- i): Are there differences in the different types of values embedded in tweets?
- ii): Are there differences in values expressed in tweets across brands?
- iii): Can certain values embedded in tweets predict whether user interest is stimulated (e.g. through retweeting or being liked)?

With the research questions grounding the angle of investigation on MGC, the thesis employed the content analysis procedure which was sequential in nature called the *Collect-Define-Classify-Analyse* methodology (see Figure 10).

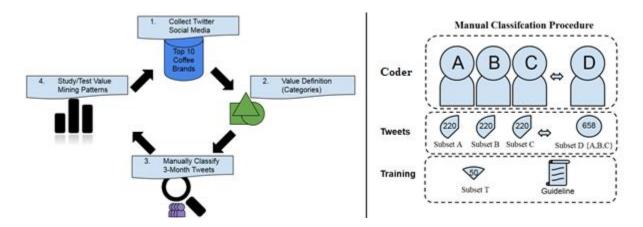


Figure 10: Content Analysis (Collect-Define-Classify-Analyse) Methodology

The first element of the methodology (i.e., collect) pertained to data collection for the brand tweets during the study time frame. Next, the research construct was drafted (i.e., define), along with a guideline document to provide examples of value dimensions embedded in social media tweets. Next was the classification procedure (i.e., classify) shown to the right of Figure 10. Prior to open coding on the test set, each of the three coders (see Appendix C) were trained on a sub-sample (n=50) which resulted in excellent agreement ( $\kappa > 0.9$ ). Then the test set (n=658) was split to each coder (n=220) and independently coded by each evaluator (see Appendix D). Last was the analysis of results (i.e., analyse) which measured the IRR scoring between coders, checked for statistical significance (i.e., Levene's test, one-way ANOVA and paired-wise t-test) and also generated regressions on how value dimension variables predict user interest (i.e., Like, Share). The study facilitator (D) measured all agreements with evaluators (A, B, C) in

post-coding interviews and resolved 100% of disagreements in coder classifications. The IRR score representing agreements was measured using Cohen's kappa coefficient. The kappa values for the three pairs of evaluations (AD, BD and CD) were 0.93, 0.85 and 0.84 respectively, suggesting strong agreement as kappa values higher than 0.8 are considered to have "excellent agreement beyond chance" (Fleiss et al., 1981).

Study two focused on extracting insights from values communicated in brand tweets (i.e., so called B2C or MGC messages). It utilised 4 variables from Sheth et al's (1991) consumption values (i.e., high-level framework) derived from the 15 variables (see Section §5.2 for further detail) from the value taxonomy (discrete-level framework). These aggregate CVT variables were used to answer sub-question three (iii) which predicted which variables in regression models impacted user interest (liking and sharing of the brand tweets).

Multiple regression was employed to identify the values of the variables in the model (i.e., the standardised regression coefficients and beta values). The independent variables in the regression equations were the 4 variables pertaining to Sheth's CVT dimensions, namely functional, social, emotional and epistemic values. The dependent variables in regressions were Like's and Shares (i.e., retweeting), which measured how the independent variables in brand tweets impacted performance metrics (Moro et al., 2016), the likes and shares of tweets. The regression equations for the two target variables are given below:

Like-based eWOM computed using total likes  $(\hat{y}) = \beta_{product, price, eco}$ Functional +  $\beta_{social, sport, hiring, charity}$ Social +  $\beta_{emotion}$ Emotional +  $\beta_{informative, question}$ Epistemic

Share-based eWOM computed using total shares  $(\hat{y}) = \beta_{product, price, eco}$ Functional +  $\beta_{social, sport, hiring, charity}$ Social +  $\beta_{emotion}$ Emotional +  $\beta_{informative, question}$ Epistemic

It can be observed that dimensions from the value taxonomy are utilised in modelling CVT variables, which are the predicting variables for the behaviour of target dependent variables. Coding classifications for each of the value propositions were represented as binary vectors (i.e., 1's and 0's indicating the presence or absence of a value proposition, for example the value of Product is set to 1, if the product value proposition is present) alongside the sample of brand tweets. The equations above reveal which value propositions predict the respective eWOM outcomes (likes and shares).

## 3.4.2 Study 3 - Lexical coding of MGC and UGC

Study three extended the scope of the study by considering feedback of the customers (i.e., so called C2B or UGC messages) of the top-10 coffee brands for the same period considered by the previous study (August - October of 2015). This study introduced the method of lexical analysis within the context of UGC, seeking

to answer four consumer-sided research questions as a subset of thesis RQ2b which investigates **How can** the taxonomy be used to unearth insights in customer value propositions and consumer sentiments in response to brands?. These sub-questions answered by this study are:

- i): What values propositioned by brands attract more interest (volume of responses) from the community?
- ii): What is the nature of sentiments expressed in response tweets?
- *iii): What brand value propositions influence shallow customer engagement (i.e., number of Likes, Shares, Comments)?*
- iv): What brand value propositions influence deep customer engagement (i.e., positive and negative valence)?

Study three comprised of two objectives. First, is the aim of modelling the complete feedback loop (i.e., stimuli as MGC and UGC as feedback) occurring within brand tweet dialogues, in order to predict five eWOM outcomes (i.e., Like, Share, Comment, Positive valence, Negative valence). Second, is the objective of building an automated coding method using the lexical semantics embedded within a tweet's text. To achieve the first objective, every brand tweet (n=658) analysed in study two was logically tied to its comments via Tweet ID for all one-to-many conversation relationships, linking groups of corresponding community response tweets (n=12077) to their respective stimuli. While brand tweets can contain 15 dimensions from the value taxonomy, customer tweets in addition to the 15 dimensions from the value taxonomy, can have 2 possible categories of sentiments, namely positive and negative sentiments (see Table 5).

Sentiment	Definition	Sentiment Example	Literature support
Category			
Positive	Reply to brand tweet which contains positive sentiments	@Starbucks Thanks for adding more vegan options! Keep up the good work!	Friman & Edvardsson, 2003; Kim & Hovy, 2004; Goetzinger et al., 2006; Pang & Lee, 2008; Huang et al., 2013; Ordenes et al.,
Negative	Reply to brand tweet which contains negative sentiments	@Starbucks I have an issue being charged two different prices from two different stores for the same drink. WTH is up with that?	2014

**Table 5: Customer sentiment categories and examples** 

The focus of study three was to combine relational exchanges of value propositions in marketing messages (i.e., the feedback loop) and leverage the role of sentiments (i.e., consumer emotions (Bagozzi et al., 1999)) to produce *descriptive*, *diagnostic* and *predictive insights* in marketing dialogues. In so doing, this research introduced an automated classification approach to identify these value propositions and sentiments based on a dictionary corpus (Pak & Paroubek, 2010) which applied lexical coding within the co-created cycle. Thus, study three expands the theoretical scope to include customer feedback, and introduces a supervised lexical method.

The feedback loop discussed in the first objective is presented as a conceptual model in Figure 11. This content marketing model is not only used in study three, but also studies four and five. The examination point of this research is the marketing stimuli (i.e., MGC) which is controlled by the brand in a top-down fashion. Following the dissemination of stimuli, bottom-up emergent engagement from the community is generated as the feedback to this source. These engagements are quantified in eWOM metrics and attributed as meta-data which is derived from marketing content. In this research, five eWOM metrics are investigated. Customer engagement is examined at a *shallow level* from the customer feedback (i.e., number of Likes, Shares, Comments) based on all the explicit actions received for a brand tweet and at a *deep level* (i.e., net positive and negative community valence). Note that the valence (positive and negative) is derived from the response tweets which is hidden within comments received. This feedback loop establishes the scope of descriptive, diagnostic and predictive insights generated on value propositions.

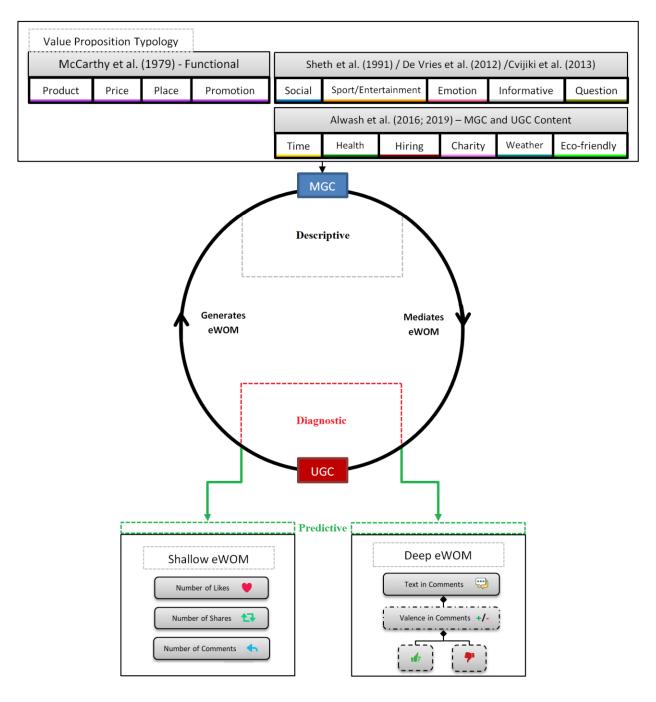


Figure 11: Transactional model of Content Co-creation

The research corpus discussed in the second objective totalled 9700 tokens, which was used in the automation of the classification of propositions and sentiments in marketing tweets. Binary encoding was the main method used in the NLP technique, converting semantic text to binary indicators. The lexical-level coding (i.e., 1 or 0) of value propositions and sentiments in the sample represented the information extraction process and involved classifying segments of text to generate structured dimensions being communicated.

A bag-of-words (BOW) methodology was used to construct (see Appendix F) a BOW for each of the 15 value dimensions and 2 sentiment categories. Feature engineering was employed to source features using both text mining (Barbier & Liu, 2011; Aggarwal & Zhai, 2012; Kundi et al., 2014; Guerreiro et al., 2016) and content analysis. The NLP technique employed involved the use of LIWC (Riff et al., 2019) as a starting point (see Appendix E), and open source NLP libraries (e.g., NLTK, StanfordNLP, OpenNLP) to support the identification of tokens (i.e., n-grams) for integration as labelled data into the research corpus. The samples of brand and customer tweets were also broken down quantitatively, to n-gram frequencies using industry software (e.g., RapidMiner, GATE) to strengthen coverage of widely used tokens and ideograms (e.g., \$, TM, ©) in marketing conversations. Lastly, affect words from LIWC which related to the emotion dimension, were categorised further into each of the sentiment categories (positive and negative) examined in this work.

Following the lexical analysis of both brand and customer tweets, five eWOM metrics were predicted using multiple regression. The regression equations for these five eWOM outcomes are provided below, whereby the predicting variables are the 15 value propositions from the value taxonomy, and the predicted variables were the eWOM metrics. In the case of targeted shallow metrics (number of likes, shares and comments), the value propositions embedded within each brand tweet in the dataset are used in predicting a reach-based numeric sum, namely Likes, Shares and Comments generated automatically from the brand post by Twitter. For the two deep metrics, every customer tweet needed to be classified for embedded valence and this was then aggregated per brand post as a targeted sentiment-based numeric sum.

```
Like-based eWOM for a brand computed using total likes (\hat{y}) = \beta_{product} Product + \beta_{price} Price + \beta_{place} Place + \beta_{promotion} Promotion + \beta_{social} Social + \beta_{sport} Sport + \beta_{emotion} Emotion + \beta_{informative} Informative + \beta_{question} Question + \beta_{time} Time + \beta_{health} Health + \beta_{hiring} Hiring + \beta_{charity} Charity + \beta_{weather} Weather + \beta_{eco} Eco
```

 $Share-based\ eWOM\ for\ a\ brand\ computed\ using\ total\ shares\ (\hat{y})\ =\ \beta_{product}Product\ +\ \beta_{price}Price\ +\ \beta_{place}Place\ +\ \beta_{promotion}Promotion\ +\ \beta_{social}Social\ +\ \beta_{sport}Sport\ +\ \beta_{emotion}Emotion\ +\ \beta_{informative}Informative\ +\ \beta_{question}Question\ +\ \beta_{time}Time\ +\ \beta_{health}Health\ +\ \beta_{hiring}Hiring\ +\ \beta_{charity}Charity\ +\ \beta_{weather}Weather\ +\ \beta_{eco}Eco$ 

```
\label{eq:comment-based} \begin{aligned} &\text{Comment-based eWOM for a brand computed using total comments } (\hat{y}) = \beta_{product} Product + \beta_{price} Price + \\ &\beta_{place} Place + \beta_{promotion} Promotion + \beta_{social} Social + \beta_{sport} Sport + \beta_{emotion} Emotion + \beta_{informative} Informative + \\ &\beta_{question} Question + \beta_{time} Time + \beta_{health} Health + \beta_{hiring} Hiring + \beta_{charity} Charity + \beta_{weather} Weather + \beta_{eco} Eco \end{aligned}
```

Positive valence based eWOM for a brand  $(\hat{y}) = \sum_{i=0}^{n \ (c-tweets)} + Valence = \beta_{product} Product + \beta_{price} Price + \beta_{place} Place + \beta_{promotion} Promotion + \beta_{social} Social + \beta_{sport} Sport + \beta_{emotion} Emotion + \beta_{informative} Informative + \beta_{question} Question + \beta_{time} Time + \beta_{health} Health + \beta_{hiring} Hiring + \beta_{charity} Charity + \beta_{weather} Weather + \beta_{eco} Eco$ 

```
Negative valence based eWOM for a brand (\hat{y}) = \sum_{i=0}^{n} \frac{(c-tweets)}{-Valence} - Valence = \beta_{product} Product + \beta_{price} Price + \beta_{place} Place + \beta_{promotion} Promotion + \beta_{social} Social + \beta_{sport} Sport + \beta_{emotion} Emotion + \beta_{informative} Informative + \beta_{question} Question + \beta_{time} Time + \beta_{health} Health + \beta_{hiring} Hiring + \beta_{charity} Charity + \beta_{weather} Weather + \beta_{eco} Eco
```

A summary of the brand-wise parameters in study three is presented for the 2015 dataset in Table 6. It can be observed that Column 1 details the brand being examined. Columns 2 and 3 define the number of brand tweets and the ratio of the comments per brand message across the sample. Columns 4, 5 and 6 are shallow eWOM metrics for the sample and columns 7 and 8 represent deep eWOM metrics embedded within UGC feedback and extracted using the linguistic corpus.

Brand	Brand	Comments	Comments	Shares	Likes	Positive	Negative
	Tweets	per Tweet	(♡)	(tl)	(♡)	(6)	(T)
Starbucks	76	66.11	5024	74137	247120	3950	733
Dunkin Donuts	106	25.11	2662	13488	25751	2047	181
Tim Hortons	127	24.26	3081	5705	14121	2133	448
Panera Bread	56	6.86	384	1634	9358	245	92
The Coffee Bean	39	14.41	562	1413	2628	472	23
Costa Coffee	39	2.72	106	460	1599	81	12
Caribou Coffee	78	1.86	145	458	1604	104	8
Peet's Coffee	49	1.65	81	342	576	71	4
Au Bon Pain	83	0.23	19	5	15	12	3
McCafe	5	2.6	13	121	345	10	1

Table 6: Brand Tweets, Customer Tweets and eWOM outcomes for top coffee brands in 2015

An example of a two-way dialogue encoded from the 2015 sample is presented in Figure 12. This illustration shows both the co-created configuration of content and empirical segmentation conducted practically within study three. As can be observed, the MGC example focuses on a product (i.e., the mention of PumpkinSpiceLatte) and an emotional appeal (i.e., using the word smile). These value propositions are encoded in a binary vector below the brands message. As presented, 'Smile' identified in text encodes a 1 in the dimension of Emotion, while Product is classified in two instances of text through 'PumpkinSpiceLatte' and 'PSL' and is encoded with a value 1, lastly Place is identified through the feature of 'miles', resulting in 3 out of 15 dimensions encoded (i.e., occurrence of a total of three 1's in the binary encoding). The responses to this brand message (UGC) are shown on the right of the figure. It can be observed that the responses from the community reciprocate these values in their response tweets, additionally contributing consumer sentiments (the last two binary digits in the encoding which is highlighted in blue and red representing the presence and absence of positive and negative sentiments respectively). This binary encoding is used for creating the five empirical models presented above.

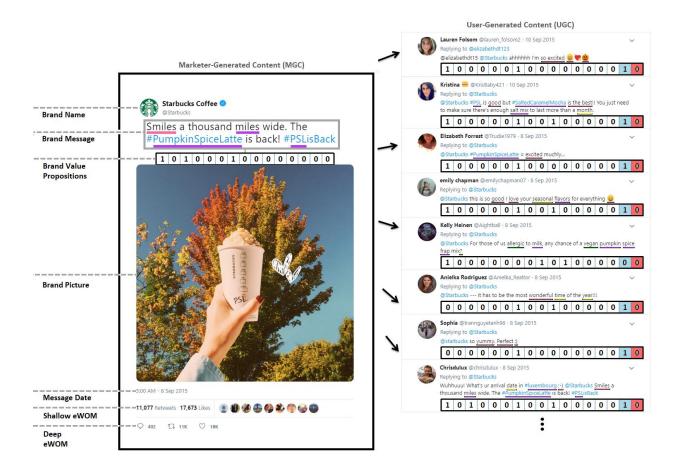


Figure 12: MGC and UGC example by @Starbucks in 2015

#### 3.4.3 Study 4 - Investigating Value Propositions across Time

Study four advances the generalizability of the methodology proposed by sampling the co-creation of content (i.e., MGC and UGC) for the same top-10 coffee brands in a different year. This study aimed to investigate the nature of value propositions across time and examine the influence of temporal phenomena on social media marketing between 2015 and 2018. This study on value propositions across different marketing quarters, seeks to answer a co-creation research question as a supplement to RQ2. This study poses the following question:

i): What insights on value propositions can be obtained by analysing different marketing quarters? Study four comprised of a single objective, to analyse the co-creation of content for patterns of similarity or difference. In order to achieve this objective, brand awareness (i.e., value propositions), engagement (i.e., eWOM metrics) and the results from predictive models were analysed comparatively across quarters using statistics and visualisations. A summary of brand-wise parameters in study four is presented for the 2018 dataset in Table 7. The outcomes of social media marketing in 2018, as given in the parameters in Table 7 are similar to that given in Table 6. Columns 2 outlines the MGC examined, Column 3 describes the ratio between content created from brand and customers and Column 4 details the amount of UGC produced for each brand. Columns 4 - 5 describe the Shares and Likes generated by the brand and Columns 6 - 7 detail the amount of positive and negative valence generated for each brand.

Brand	Brand	Comments	Comments	Shares	Likes	Positive	Negative
	Tweets	per Tweet	(♡)	(D)	(♡)	<b>(</b> b)	<b>(</b> 7)
Starbucks	22	98.2	2161	26539	99856	659	338
Dunkin Donuts	61	41.3	2519	11909	41495	571	395
Tim Hortons	48	22.7	1092	9358	25846	402	138
Panera Bread	55	38.9	2139	6250	47065	574	288
The Coffee	33	3.9	130	485	1995	49	15

Bean							
Costa Coffee	13	48.2	627	1361	6368	201	68
Caribou Coffee	14	4.9	68	133	933	28	6
Peet's Coffee	39	1.3	51	80	397	14	3
Au Bon Pain	5	4.8	24	7	29	11	2
McCafe	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 7: Brand Tweets, Customer Tweets and eWOM outcomes for top coffee brands in 2018

An example of a tweet thread sampled in the marketing quarter of 2018 is presented in Figure 13. It can be observed that although the structural configuration of content remains the same (i.e., the 15 value dimensions are being studied), the embedded content of the message may differ. In the below example, the marketing message relates to a new store opening for Starbucks in Italy. This appeal based on place, differs from the product appeal shown in Figure 12. For instance, it can be observed that time is a newly introduced dimension in the brand's message (e.g. 'decades'). These "points of difference" (Lindič & Marques da Silva, 2011) in value propositions quantified over different time periods is what study four aims to highlight.

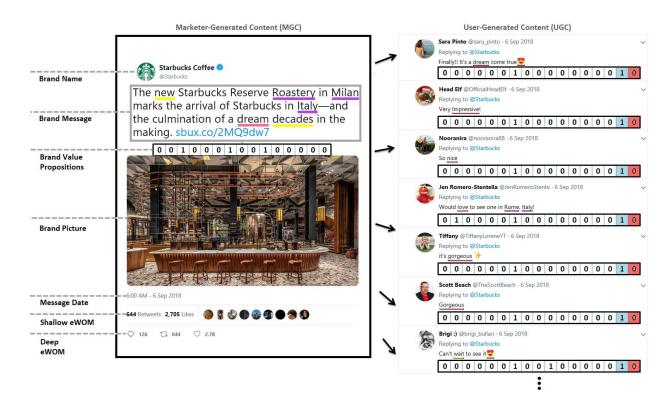


Figure 13: MGC and UGC example by @Starbucks in 2018

#### 3.4.4 Study 5 - Investigating Value Propositions across Domains

Study five further advances the generalizability of the methodology proposed by sampling the co-creation of content (i.e., MGC and UGC) of a different marketing domain for the top-10 car brands. As the literature has widely studied automobiles as luxury products, this established the motivation to apply the value taxonomy to this domain. Study five aimed to investigate the nature of value propositions within the *car* domain for the same quarterly period within 2018. This study on value propositions across different marketing domains, seeks to answer a co-creation research question that supplements RQ2. Thus, this study inquires:

i): What insights on value propositions can be obtained by analysing different marketing domains? Study five comprised of a single objective, to analyse the co-creation of content across marketing domains, specifically focusing on car brands in the automobile industry so as to contrast the results from coffee brands, thus demonstrating the scalability of the approach proposed by the thesis across domains. In order to achieve this objective, brand awareness (i.e., brand value signatures), consumer sentiments and the results from the predictive models were analysed comparatively between these two domains in order to identify comparisons and differentiation. The top-10 car brands were identified using the same criteria as in former studies and these brands are given in Table 8.

Brand name	Twitter handle name	Twitter URL	Market Revenue
Toyota	@Toyota	https://twitter.com/Toyota	272 billion U.S
Volkswagen	@VW	https://twitter.com/VW	269 billion U.S
Ford	@Ford	https://twitter.com/Ford	160 billion U.S
Honda	@Honda	https://twitter.com/Honda	141 billion U.S
Hyundai	@Hyundai	https://twitter.com/Hyundai	88 billion U.S
BMW	@BMW	https://twitter.com/BMW	23 billion U.S
Mercedes Benz	@MercedesBenzUSA	https://twitter.com/MercedesBenzUSA	23 billion U.S
Audi	@Audi	https://twitter.com/Audi	66 billion U.S
Chrysler	@Chrysler	https://twitter.com/Chrysler	124 billion U.S
Mazda	@MazdaUSA	https://twitter.com/MazdaUSA	31 billion U.S

Table 8: Top Car brands, Twitter handles and Market revenues

The brand-wise attributes for both domains examined in 2018 is shown in Table 9. It can be observed that in the coffee domain, market share (i.e., revenue rank) tends to correspond to digital eWOM rank measured by reach of marketing messages (see Columns 3 and 4). While the car domain tends to exhibit less support for this (revenue based rank and eWOM rank are quite different).

Brand	Domai n	Marke t Rank	eWO M (Share ) Rank	Brand Tweet s	Commen ts per Tweet	Commen ts (\$\sigma)	Share s (T)	Likes (♡)	Positiv e (b)	Negativ e (🖓)
@Starbucks	Coffee	1	1	22	98.2	2161	26539	99856	659	338
@DunkinDonuts		5	2	61	41.3	2519	11909	41495	571	395
@TimHortons	-	2	3	48	22.7	1092	9358	25846	402	138
@panerabread		3	4	55	38.9	2139	6250	47065	574	288
@CostaCoffee	1	4	5	13	48.2	627	1361	6368	201	68
@TheCoffeeBean		6	6	33	3.9	130	485	1995	49	15

@CaribouCoffee		7	7	14	4.9	68	133	933	28	6
@peetscoffee		8	8	39	1.3	51	80	397	14	3
@BMW	Cars	6	1	110	19.5	2145	25819	17276 1	957	379
@AudiOffical	1	8	2	88	12.6	1111	8701	67404	399	136
@Toyota		1	3	121	6.3	758	4695	19849	289	169
@Honda		4	4	76	8	610	4013	17251	248	220
@MercedezBenzU SA		7	5	40	5.8	232	3133	18680	173	17
@Chrysler	-	9	6	85	4.1	348	2880	18903	183	46
@Ford		3	7	17	49.4	840	2356	8943	251	276
@VW		2	8	32	4.8	153	770	3605	66	48
@MazdaUSA		10	9	21	7.2	152	743	2553	63	48
@HyundaiUSA		5	10	45	15.2	686	719	2265	215	131

Table 9: Digital Marketing outcomes for top-10 coffee and car brands in 2018

In study five, the same processes conducted in studies three and four, were replicated. The only additional step was to extend the bag-of-words corresponding to the cars domain to identify value propositions (e.g. Product). These words were identified using text mining and content analysis respectively. Examples of tweets encoded using the coding procedure is shown in underlined words (e.g., Kit Kat) within both marketing domains as shown in Table 10.

Dimension	Coffee Example	Car Example	N-grams
			identified
			for
			phrases
			in both
			domains
Product	@dunkindonuts The Kit Kat Coolatta,	@Chrysler Make a splash.	1646
	equally as good in your left hand as	#ChryslerPacifica #Hybrid	
	your right.		
	#InternationalLeftHandersDay		
Price	@TheCoffeeBean Your receipt, our	@HyundaiUSA Woo! @usnews has	294
	treat! Bring your receipt back same	ranked the #HyundaiKona as the	
	day after 2 pm and get 50% off any	BEST new #SUV under <u>\$</u> 20,000:	

	beverage.		
	□ Available now through September 15th at participating US locations.		
Place	@TimHortons <u>Kenya</u> 's only hockey team had nobody to play. So, we brought them to <u>Canada</u> for a game.	@MazdaUSA We're taking the top down and looking for adventure in a MX-5 Miata. All the way from San Diego to Seattle! Let us know your favorite stops along the way. #MiataSummer #FeelAlive	1241
Promotion	@peetscoffee Happy #NationalCoffeeDay! Receive 25% off all beans in coffeebars and on http://Peets.com	@HyundaiUSA Want to amp up the excitement of March Madness? Tune in to SiriusXM for a Free 2 Air promotion, March 18-24.	259
Social	@Starbucks Happy Father's Day to the dads who just want a big ol' cup of coffee, please. Nothin' fancy, just a large black coffee—none of the sweet stuff—plain black coffee.	@VW I've got two boys and two girls so it'll eventually get passed down to them, owner John S. and his #MK2 #Jetta	742
Sport/Entert ainment	@cariboucoffee Congratulations to  @Coach_Fleckand our friends at  @GopherFootball on an incredible start to the season last night! Get your bag of Gopher Blend, in stores or online, and 10% of proceeds will go back to  @UMNChildrens	@Ford Fall in #Texas means the @StateFairOfTX and FOOTBALL! Football Imagine rolling up to your tailgate in one of these bad boys. Who do you root for?	629
Emotion	@TimHortons # <u>Happy</u> Halloween – stay safe, stay full, and stay <u>spooky</u>	@AudiOffical <u>Indulge</u> in something that provides you with <u>pleasure</u> , <u>satisfaction</u> , and ease. We call this sheer luxury.	1483
Informative	@Starbucks We're excited to announce that we're expanding @Starbucks Delivers with @UberEats, available throughout the U.S. by early 2020! Learn more: http://sbux.co/2Od5SbD	@Honda Honda is giving cars the ability to see through and around buildings to reduce traffic collisions with new Smart Intersection technology. Learn more here: https://honda.us/2Qzq6si	333

Question	@peetscoffee Have you tried Kenya Nyeri yet? Grab a pound or two of this prized, plush single-origin coffee while you can! Available now in stores and online: http://bit.ly/KenyaNyeri  @TimHortons #SmileCookie week is	@VW Big weekend at Big Euro. What was your favorite ride? Let us know in the comments! #vwlove  @BMW Timing is everything. The	602
Time	1 day away. From tomorrow until Sept. 22, grab a Smile Cookie and your full dollar helps support over 500 local charities.	#BMWi3s takes only 42 minutes to 80% charge on quick charging stations.	002
Health	@panerabread Smoothies so <u>fresh</u> , so <u>clean</u> . What's your fave?	@VW For the past 25 years,  @AmericaSCORES has helped 130,000 kids improve their academics, physical fitness, and teamwork skills. Why? To inspire future generations to #DriveBigger http://go.vw.com/KidsScore	190
Hiring	@Starbucks We are proud to announce we have reached our goal of hiring 25,000 veterans and military spouses.  These partners (employees) have made us a better company and inspired our new commitment to hire 5,000 veterans and military spouses annually	@Ford We are proud to employ more USA hourly workers and build more vehicles in the USA than any other automaker and we're continuing to grow our USA lineup with new trucks, SUVS, Hybrids and Full EVS	54
Charity	@Starbucks We make a difference when we come together. Please join us in donating now to @RedCross to help those affected by #HurricaneFlorence.	@Toyota Comedy ensues when #Camry gets some TLC at a charity car wash on tonight's season finale of @PlayingHouseUSA at 10/9c	131
Weather	@panerabread Now we can really start dressin' #FirstDayofSpring	@MercedesBenzUSA Sun, rain or snow, there's nowhere a G can't go. #GClass #MercedesBenz #Mercedes Jared Stern	340
Eco-friendly	@peetscoffee Coffee can be a powerful means of doing good. Enjoy	@Toyota See how one great idea cut chemical use by over 80%, reduced	114

	15% off our entire collection of	plastic waste AND improved	
	coffees dedicated to our support of	quality all at the same time:	
	communities and the environment at	https://toyota.us/34WJ7gr	
	origin. Promo code: <u>15PLANET</u>		
Positive	Replying to @dunkindonuts On my	Replying to @MercedesBenzUSA	659
	second batch might buy two sets so I	<u>I'm a fan</u> of Mercedes, but	
	don't run out <u>love them</u> and <u>they are</u>	unfortunately I won't make money for	
	well made #dunkin	this perfection in my whole life, you	
		are number one in the world, I'm	
		proud of your team. 💌	
Negative	Replying to @TimHortons Really	Replying to @VW #moredeadly VW	975
	<u>disappointed</u> this year with the	response when I asked IF I should	
	pumpkin spice muffin! Had no taste	drive my car with a faulty Takata	
	& hardly no filling which is different	airbag? THEY HAVE NO OPINION.	
	than other years. I won't be	I have this on voice-recording. VW	
	purchasing it again this season. Why	won't stand behind their product, can't	
	change a good thing?	fix a recall, won't give a loaner. Your	
		company does not value it's	
		customer's lives.	

Table 10: Coding dimensions, Tweet examples and Corpus tokens

As with the prior studies of phase two where MGC and UGC are logically coupled for the coffee domain, the same method is applied to the car domain. This is illustrated in Figure 14 were the co-created dialogue remains structurally identical to that of the coffee domain, however semantically is unique in its own right, for example notable negative consumer sentiments is present in customer feedback (see values on red blocks on the right had side of the figure).

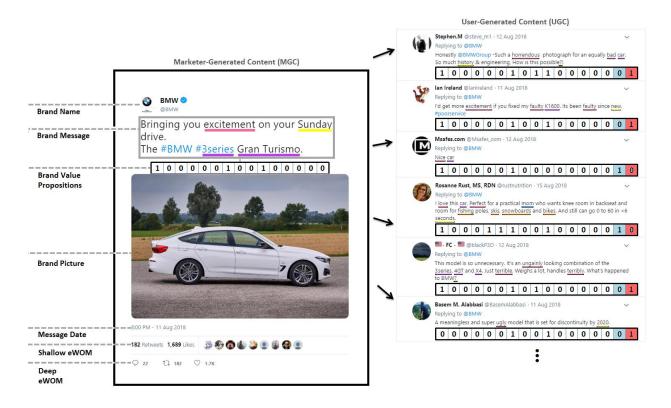


Figure 14: MGC and UGC example by @BMW in 2018

#### 3.5 Phase 3 (External Validation)

Phase three shifts from an empirical scrutiny to the validation of the software developed based on research methods and outcomes in phases 1 and 2 of this research. This can also be viewed as the acceptance testing of the research outcomes. In the final stage of research, two external audiences – academics and industry practitioners who are the end-users of this research examined the utility of a MkIS designed on the basis of value propositions. The research instrument (i.e., value taxonomy) was embedded within this software developed called Value Analytics Toolkit (VAT), along with collected datasets and the bag-of-words representing specific value proposition dimensions. The end-user evaluations is important because it validates the utility of the research instrument, and the methods employed (e.g. structuring of propositions and also models developed), which inform decision-making. The ability of a software tool to inform decision-making is subjective (i.e., context-specific) and can differ from person-to-person; however, through a systematic survey, a general external consensus can be measured by examining the perceived utility of its use. In order to bridge understanding between academia and industry, subject-matter experts within marketing management are required to properly critic the supportive utility of the approach, and also articulate how industry strategies are employed in managing content in practice and how this software can be of assistance in that context. Study six of this research is hence conducted in two parts. First, the study aims to build a 3-Tier system which is used to offer data mining insights on value propositions in social

media, and secondly the study evaluates the utility of the system through a qualitative survey of end-users. The 21-item survey used by participants was drawn from the literature, specifically the Technology Acceptance Model (Davis, 1985) and System Usability Scale (Brooke, 1996) questionnaires. The survey examined three core domains of the software tool, namely the utility of the *analytics features*, its *usability* and *usefulness*. The objective of this study was thus to evaluate the utility of the software tool from the real-life stakeholders (academics and practitioners).

#### 3.5.1 Study 6 - VAT Development and Evaluation

Study six comprised of two processes, first a marketing system was designed and then it was evaluated. The design of the Value Analytics Toolkit (VAT) can be depicted as a 3-Tier (i.e., persistence tier, business features or behaviour tier, presentation tier) data pyramid as shown in Figure 15. The persistence tier is the source of knowledge for the application and respectively corresponds to the data that is accessible within the system. The behaviour tier corresponds to the problem-solving modules of the system and organises the knowledge which is accessible by the system. Lastly, the presentation tier handles requests from the end-user interface and presents the visualisation of knowledge to be acted upon by clients as practical wisdom.

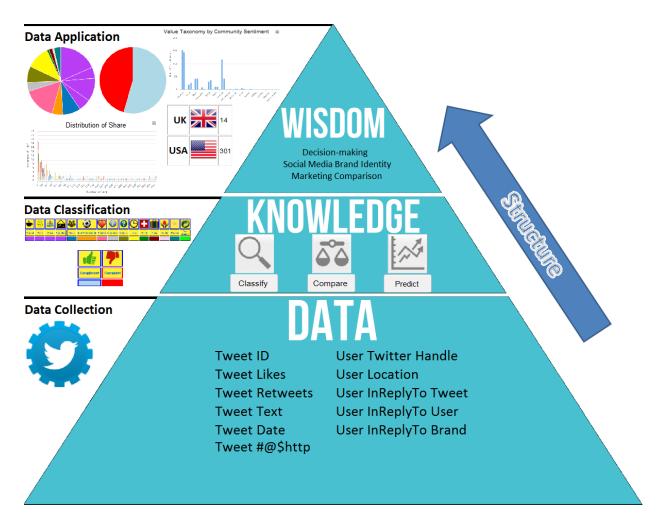


Figure 15: Data Pyramid of the Value Analytics Toolkit

Each layer of abstraction to the MkIS adds to the structuring of data. At the bottom of the pyramid is the fixed data schema (see Table 11) or persistence tier which is the foundation on which data mining techniques are operated upon. This level of abstraction represents the static data model, which defines the boundaries of domain knowledge. Column 1 defines the attribute within the data schema, Column 2 outlines the fixed data type and Column 3 provides the definition of the attribute being captured.

Table Attribute Name	Attribute Type	Attribute Description
TweetBrand	Nvarchar(50)	Unique name identifier of the discussed Twitter Brand
TweetID	BigInt	Unique number identifier of the Tweet
TweetInReplyToStatusId	BigInt	Foreign Key to original TweetID being replied to

TweetInReplyToUserId	BigInt	Foreign Key to original UserID being replied to
TweetInReplyToScreenName	Nvarchar(50)	Foreign Key to original User Name being replied to
TweetUserLocation	Nvarchar(100)	Geographic location as reported by the User
TweetCreatedAt	Nvarchar(20)	UTC time when Tweet was created
TweetUserScreenName	Nvarchar(50)	Unique name identifier of the Twitter User
TweetLikeCount	Int	Number of User Likes for the Tweet
TweetRetweetCount	Int	Number of User Shares for the Tweet
TweetText	Nvarchar(150)	UTF-8 text of the Tweet

Table 11: Value Analytics Toolkit Database Schema

Microsoft SQL Server 2008 was used as the Database Management System (DBMS) to persistently store tweets. As the nature of tweet text (i.e., content) contains rich and varied Unicode characters such as ideograms, emoticons and foreign language characters (e.g., £, \$\mathcal{J}\$, \$\otin\$), it is important to distinguish the SQL specification adopted and this is SQL-92 which uses UCS-2 to encode stored text. Implementing Unicode in MS SQL Server requires adopting the 'N' (National Language) scheme where data types are prefixed by an N character (e.g., Nvarchar). This is demonstrated in the Java application (see Figure 16) which was used to collect data from the Twitter API for a 3-year period and transform these tweets into the schema mentioned above. Four key steps were used in the source code for data collection. First, the OAuth step enabled developer permissions to access the Twitter API. Second, the JDBC step uses a Java MS SQL Server driver to establish a connection to the DBMS. Third, the API step provides the parameters of the Twitter handle to collect tweets. Lastly, in the data management step the retrieved tweets from the Twitter API, is marshalled into the low-level schema which was persistently used to store data for VAT.

```
TwitterPoller class to request Twitter API data from a developer and
      transfer to specified MS SQL Server for persistent storage
* Gauthor Mostafa Alwash
       The Class Inducerculer (
private final static String CONSUMER_KEY = "Your Consumer Key";
private final static String CONSUMER_KEY_SECRET = "Your Consumer Secret Key";
private final static String ACCESS_TOKEN = "Your Access Token";
private final static String ACCESS_TOKEN = "Your Access Token";
                                                                                                                                                                                                                                                                                                                                                                                                                 OAuth Step -
                     tic void start() throws TwitterException, IOException, ClassNotFoundException, SQLException, ParseException {
[twitter.setOAuthConsumer(CONSUMER_KEY, CONSUMER_KEY_SECRET);
                    RequestToken requestToken = twitter.getOAuthRequestToken();
twitter.setOAuthAccessToken(new AccessToken(ACCESS_TOKEN, ACCESS_TOKEN_SECRET))
                                                                                                                                                                                                                                                                                                                                                         JDBC Step -
                    Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver"
String connectionUrl = "Your Database Details";
Connection con = DriverManager.getConnection(connectionUrl);
                                                                                                                                                                                                                                                                                                                                                   Connection & Preperation for Relational DBMS
                                                                                                                                                                                                                                                                                                                                                            Request API Step -
                    Statement statement = con.createStatement();
                                                                                                                                                                                                                                                                                                                                                          Configuring Brand & Time Parameters for API Request
                    Query query = new Query("Starbucks since:2017-12-01 until:2017-12-02
                                                                                                                                                                                                                                                                                                                                                      Data Management Step -
                    Twitter twitter = new TwitterFactory().getInstance();
QueryResult result = twitter.search(query);
List<Status> tweets = result.getTweets();
                                                                                                                                                                                                                                                                                                                                                     Marshalling Requested Data to Storage
                                (Status tweet : tweets) [
statement.executeDpdate("IMSERT INTO Twitter_Tweet Values ('Starbucks',""+tweet.getId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"",""+tweet.getInReplyToStatusId()+"","+tweet.getInReplyToStatusId()+"","+tweet.getInReplyToStatusId()+"","+tweet.getInReplyToStatusId()+"","+tweet.getInReplyToStatusId()+"","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+","+tweet.getInReplyToStatusId()+",+tweet.getInReplyToStatusId()+",+tweet.getInReplyToStatusId()+",+tw
```

Figure 16: VAT Data Collection Source code

In order to operate higher levels of abstraction (behaviour and presentation tiers) within VAT, the data warehouse interfaced with the persistence tier using SQL commands (see Figure 17) which was the retrieving protocol that satisfied the three modules of features offered in the behavioural tier of VAT.

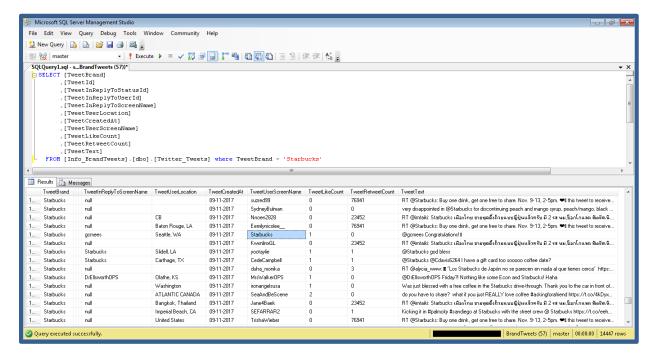


Figure 17: Brand tweets, Retweets and Reply examples

VAT offers three operations or functions for end-users to gain insights. First is the classify function, which benchmarks the value propositions of brand tweets by adding structure through the value taxonomy and also applies sentiment analysis to customer tweets corresponding to a brand. Second is the compare

function, which contrasts market competitors (i.e., two brands) using the prior classification and organises benchmarks (i.e., brand value propositions, consumer sentiments, eWOM outcomes) to identify strategic points of differentiation between brands. Third is the predict function, which utilises multiple linear regression to generate predictive models in VAT, where the independent variables were the binary vector coding of brand value propositions in brand tweets and the dependent variable was favourable eWOM outcomes in the form of positive community valence.

Last in outlining the design of VAT is the presentation tier, a low-fi (see Appendix H) and hi-fi (see Appendix I) prototype illustration of VAT has been included within the appendices of this thesis. The presentation tier was implemented using Google Web Toolkit (GWT). GWT was the development engine which allowed for the application layer of VAT to be designed in Java, then compiled, translated and optimised into JavaScript which is what end-users perceive in their web browser. The benefits of GWT allowed for real-time debugging (i.e., JavaScript's Edit-Refresh-View model), backwards compatibility with Java APIs and extensive online support in Google developer forums. Eclipse IDE 3.6 (Helios) with the GWT plugin was used to design, develop, maintain and deploy VAT to a web server. End-users of the system accessed the web application through a hosted website (http://value.otago.ac.nz) which displays a main menu in order to request the three operations of insight using VAT. The purpose of the presentation tier is to interface with end-users to capture functional requests (i.e., use cases) pertaining to the three capabilities of VAT and report the results of requests within browser. Asynchronously the interface is updated following user-driven requests, which trigger interactions with behavioural and persistence layers in VAT to satisfy the demands of the user. This encapsulates the architecture of VAT and the design of a MkIS based on value propositions. A tutorial of VAT has been provided in the appendices of this thesis to walkthrough the use cases for each of the systems three operations – classify, compare and predict (see Appendix J). Next, the qualitative evaluation from end-users of VAT is discussed.

The research instrument used to measure perceived utility from two cohorts was a 21-item questionnaire drawn from the systems engineering literature, namely the Technology Acceptance Model (TAM) from the HCI domain, and the System Usability Scale (SUS). The 21-item questionnaire also asked about the effectiveness of VAT's analytics functions and this is presented in Table 12.

Dimension	Acronym	End-user Question
	for each	
	item	

	ALT1	The system provides managers with information from different stakeholders'
		viewpoints (brand managers and customers)
	A L TO	
	ALT2	The system graphics (e.g. graphs) provides easily understandable information
	ALT3	The system helps managers to understand various dimensions of value
		propositions offered by brands
Analytics	ALT4	The system helps managers to understand the differences between the value
		propositions offered by two brands
	ALT5	The system can be useful in generating new insights into value propositions of
		brands (e.g., differentiation in value propositions in brands) that may assist
		brands in improving future value propositions
	SUS1	I think that I would like to use this system frequently
	GLIGO	
	SUS2	I found the system unnecessarily complex
	SUS3	I thought the system was easy to use
	SUS4	I think that I would need the support of a technical person to be able to use this
		system
Usability	SUS5	I found the various functions in this system were well integrated
	SUS6	I thought there was too much inconsistency in this system
	SUS7	I would imagine that most people would learn to use this system very quickly
	SUS8	I found the system very cumbersome to use
	SUS9	I felt very confident using the system
	SUS10	I needed to learn a lot of things before I could get going with this system
	TAM1	Using the system in my job would enable me to accomplish tasks more quickly
	TAM2	Using the system would improve my job performance
Usefulness	TAM3	Using the system in my job would increase my productivity
		, , , , , , , , , , , , , , , , , , ,

	TAM4	Using the system would enhance my effectiveness on the job
	TAM5	Using the system would make it easier to do my job
	TAM6	I would find the system useful in my job

Table 12: VAT 21-item Questionnaire

Two cohorts comprised the evaluators of VAT, the first cohort is postgraduate students and the second cohort is marketing managers. The questions which encapsulated observations of VAT's utility were answerable using a 5-point Likert scale which ranged from Strongly Disagree, Disagree, Neither, Agree and Strongly Agree. In addition to the 21 close-ended questions, 6 open-ended questions were asked exclusively to the marketer cohort in interviews to increase the level of feedback knowledge that could be obtained and also introduce different perspectives to the investigated phenomenon which provided data triangulation. Interviews with industry professionals were recorded and transcribed for use in statistical software (i.e., SAS text miner). The data source of transcoded verbal sentences (n=127) from interviews allowed for a multi-method investigation (Denzin, 1978; Patton, 1999) on the system's utility, and helped to identify significant themes that emerged from marketers' feedback in the context of the 21-item scale. The interviews were aimed at determining what insights from VAT the marketing managers found important in practice, and what parts of the software they wanted to see developed further and gave marketers an opportunity to describe how their organisation define value propositions and also outline how they collected consumer feedback. The questions that were asked to managers were:

- 1. How do you employ Social Media Marketing in the industry/profession that you work in?
- 2. In your organisation, how do you design value propositions and how do you obtain feedback from customers?
- 3. What existing analytical tools have you used for Social Media Marketing?
- 4. What features of the tool presented would be most beneficial to you as a brand manager?
- 5. Compared to the tools you may have used, what are the strengths of the features within the presented tool?
- 6. If available as a product (free or paid), would you and your organisation obtain value from using this tool?

To be more specific, the tool was first evaluated using students in an academic setting (i.e., through three postgraduate workshops) where respondents had backgrounds either in marketing or information science domains. These students were taking courses offered at the fourth year or above (e.g., digital marketing and software engineering), and this cohort was made up of 35 students. Each respondent was asked to complete

a task sheet which requested five tasks to be completed using VAT and this document has been included in the appendices of this thesis (see Appendix K). Then after completing the five tasks using VAT's features, the respondents were asked to then independently provide their assessments using an online surveying tool (i.e., SurveyMonkey) which presented the 21-item research scoring scale for evaluators.

Study six then collected evaluations from the marketer cohort, who had specific knowledge of social media activities in their organisations. Five marketing managers participated in providing feedback on VAT and presented an overview of how their organisations considered and communicated value propositions as a part of their marketing strategy and also outlined how their business collected feedback from their audiences. Interviews were conducted within professional settings (i.e., business meetings) at the site of the organisation. The same workflow as in the prior cohort was adhered to; however, an open-ended section followed after their use and evaluation of VAT which allowed the practitioner to freely communicate their organisations strategy in social media marketing.

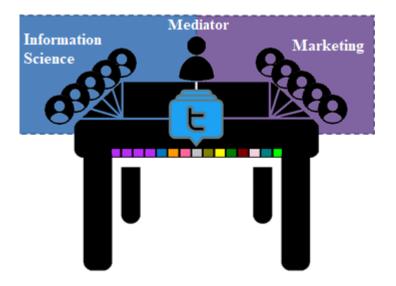
The evaluation of results from these 40 participants (35 students and 5 industry participants) focusing on VAT's perceived utility across three domains (i.e., analytics, usability, usefulness) structuring the outcomes of study six. Lastly, the analysis of respondent results followed the data science workflow (Field, 2013), involving data checking (i.e., grouping), cleaning (i.e., transforming labels), and computing totals (i.e., finding aggregate scores across the three domains). Data checking required ensuring that each recorded data-item was present (i.e., non-null) and had a valid 1 - 5 range, this included transforming text to numeric representations (e.g., SD=1, N=3, SA=5). Next item scorings needed to be flipped for reverse-scaled questions which are negatively framed questions (e.g., I found the system unnecessarily complex vs. I found the system simple to use) to values which were positively framed questions; these related to items SUS2, SUS4, SUS6, SUS8. Then domain scores were calculated using medians (i.e., central tendency of respondent belief) for items, and also dispersion of responses through Inter-Quartile Range (IQR) for items (i.e., to what degree do respondents agree) which summed respondent scores across the three domains of questions. Finally, the internal consistency of the 21-item scale was calculated using Cronbach's Alpha (α) measure.

#### 3.6 Summary

To summarise the methodology of this work, the thesis employed a structured and sequential approach, which comprised three phases. The first phase encompasses taxonomy construction and validation. Study one used a Delphi method for this process, which was used to measure the shared consensus on the value taxonomy construct. Upon validating the taxonomy, the thesis then proceeded with an empirical scrutiny in the next phase of research. The second phase of research related to the core of the contribution of the thesis

by exploring co-created content (i.e., MGC and UGC) within social media marketing. The research analysed datasets from both the brand and customers sphere of content creation (MGC and UGC respectively). In study two, the aim was to isolate MGC and manually classify this across a 3-month dataset of brand tweets. Next, within study three, the goal is to analyse customers' contribution of content in the form of UGC. Study three employs a computational method to automatically code value propositions in content by way of a corpus. Study three extended empirical observations by combining both brand tweets (stimuli as MGC) and customer tweets (feedback as UGC). In study four, the co-creation of content in top-10 coffee brands is replicated and contrasted between two time periods (2015 and 2018) to determine what practices and relationships change amongst brands within these two time frames. Furthermore, in study five the co-creation of content was extended to top-10 car brands to discover the generalizability of the approach and to examine the differences in the relationship between stimuli and feedback between different market domains. These empirical studies (2 - 5) comprise the core of this thesis and related to the second phase of research. Last in phase three of the research, software development was undertaken and qualitative feedback was collected in study six. The value taxonomy was integrated into a MkIS web application called VAT which operationalizes the processes in phase two of the research with data drawn from a data warehouse over a 3-year duration obtained using the Twitter API. User acceptance testing was conducted by approaching students and marketers to collect their responses using a 21-item scale. In addition, data triangulation was conducted using open-ended interviews with five marketing managers to garner external validity.

### Chapter 4 – The Delphi Study



"If everyone is moving forward together, then success takes care of itself" – Henry Ford

#### 4 The Delphi Study

#### 4.1 Introduction

The purpose of this chapter is to detail the results of the Delphi study which focuses on evaluating the taxonomy constructed to extract value propositions from Twitter data. The objective of this study (study one) is to ascertain whether a panel of experts are able to objectively come to a consensus based on open coding using 15 value propositions from a proposed taxonomy. Before the research instrument could be used to classify longitudinal samples of content marketing in phase two, it must be evaluated in an objective manner to determine the degree to which subjective and independent coders agree on the instrument to be used. Towards this end, in Section §4.2 the results of round one for the Delphi panel is presented. In this round independent panellists were provided with a sample of 20 tweets in order to classify value propositions embedded in content, and were also provided the option to suggest bespoke propositions. This sub-section thus pertains to the first round of the study, which involved single-blind classifications from the panel. Section §4.3 focuses on the results from round two of the Delphi panel, where panellists were given feedback sourced from the first round of results and asked to resolve differences. This sub-section pertains to the second round of the study, where the primary concern was to achieve full consensus (if possible),

through the resolution of coder disagreements. Lastly in Section §4.4, a summary of the first study is provided.

#### 4.2 Round One - Single-blind Classifications

To begin the Delphi study, a guideline document was provided to each participant and the structure of the study and tasks involved were detailed in full to each of the experts on the panel (see Appendix A). Communication was conducted on a mediator-to-participant (1:1) basis as to not disclose the anonymity of the Delphi panellists. From the start of the study, coder classifications of value propositions were instructed to be based on values seeded in *words propositioned*, rather than familiarity, predisposition or stereotype. This allowed for a grounded basis on which to classify content, and also justification to mitigate disagreements. Several coded examples of tweets were provided in the guideline document for each value proposition examined, which assisted in streamlining understanding of the instrument for experts. Each expert was informed that tweets contain *multiple value propositions*, and that experts were tasked with identifying and classifying all examples. The rules of engagement for the study are explained within the guideline document, which acted as a training and consensus building text for the panel.

Apart from the 15 value propositions in the proposed taxonomy, the study also aimed to integrate additional feedback within the first round and so introduced a dimension called 'Other'. This was an optional dimension during coding which allowed experts to formulate and propose a new dimension. The purpose of this was to encourage freedom of input (i.e., through a self-identified dimension) during the coding of tweets. If enough commonality amongst experts produced similar value topics (i.e., propositioned dimensions), then there would exist grounds to include the suggestion into the taxonomy.

Table 13 shows the results from the first round of data collected in the Delphi study. Each dimension in the value taxonomy was simplified for readability purposes; therefore, D1 denotes the Product value proposition, while D5 denotes a Social value proposition. Column 2 shows the unique identifier for each of the experts. Column 3 shows the kappa ( $\kappa$ ) coefficient of panellists to the overall matching of sample scorings. Columns 4 – 18 show the instances of value propositions correctly identified. For example 18/18 indicates that all the products in the dataset were correctly identified (i.e., 18 were present and all 18 were correctly identified by the coder). The last column (DO) shows the number of suggestions for the new dimensions provided by the expert. The formula for the kappa calculation is given as:  $((P_e / (P_o + \text{suggestions}))) + (P_{e2} / (P_{o2} + \text{suggestions})) + ... + (P_{e15} / (P_{o15} + \text{suggestions}))) / Total Observations, where <math>P_e$  is expected agreement for a particular proposition and  $P_o$  is observed agreement for a particular proposition.

As presented in the table, the main areas of disagreement between expert classifications using the value taxonomy were firstly Emotion (see Column 10), followed by the Social dimension (Column 8) and then lastly Sport/Entertainment (Column 9). The levels of disagreement for each of the three dimensions are: Sport/Entertainment (40%), Emotion (29%) and Social (10%). From the 20 tweet total that formed the experimental dataset, 54 embedded propositions were identified through the instrument of the value taxonomy. For each expert in round one, consensus was measured based on the sum of correctly identified value propositions divided by the total value propositions (54) and newly suggested propositions. For example, the first expert had identified 48 out of 54 value propositions correctly. The expert also had an additional suggestion. So, the consensus score is computed as 48 / (54 + 1) = 87%.

Pane 1	Expe rt	κ coeffici	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D1 2	D1 3	D14	D1 5	D O
1	10	ent (%)												2	3		3	O
Roun d 1 (n=2	A	87	18/1 8	2/2	3/3	2/2	2/3	0/1	3/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	1
0)	В	95	18/1 8	2/2	3/3	2/2	3/3	0/1	6/7	4/4	1/1	10/1	1/1	0/0	0/0	2/2	0/0	1
	С	91	18/1 8	2/2	3/3	2/2	3/3	0/1	4/7	4/4	1/1	10/1	1/1	0/0	0/0	2/2	0/0	1
	D	92	18/1 8	2/2	3/3	2/2	3/3	1/1	6/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	4
	Е	88	18/1 8	2/2	3/3	2/2	3/3	1/1	7/7	4/4	1/1	10/1	1/1	0/0	0/0	2/2	0/0	8
	F	86	18/1 8	2/2	3/3	2/2	2/3	1/1	3/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	2
	G	96	18/1 8	2/2	3/3	2/2	3/3	1/1	6/7	4/4	1/1	10/1	1/1	0/0	0/0	2/2	0/0	1
	Н	91	18/1 8	2/2	3/3	2/2	2/3	0/1	6/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	3
	I	89	18/1 8	2/2	3/3	2/2	3/3	1/1	4/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	4
	J	92	18/1 8	2/2	3/3	2/2	3/3	1/1	5/7	4/4	1/1	10/1 0	1/1	0/0	0/0	2/2	0/0	3
Total	Delp hi	91	100 %	100 %	100 %	100 %	90 %	60 %	71 %	100 %	100 %	100 %	100 %	-	-	100 %	-	28

Table 13: Results of Round one from the Delphi Panel

The details about how the consensus scores were computed for each of the panel members is presented in in Table 14.

Expert ID	Correctly identified	Suggested value	Consensus (%) with
	value propositions	proposition	suggestions
A	48	1	48/(54 + 1) = 87
В	52	1	52/(54 + 1) = 95
С	50	1	50/(54 + 1) = 91
D	53	4	53/(54 + 4) = 91
Е	54	8	54/(54 + 8) = 88
F	49	2	49/(54 + 2) = 86
G	53	1	53/(54 + 1) = 96
Н	51	3	51/(54 + 3) = 91
I	51	4	51/(54 + 4) = 89
J	52	3	52/(54 + 3) = 91
Delphi Total	Average of 51	Sum of 28	Average of 91

Table 14: Round one scoring for the Delphi panel

Examples of suggestions introduced by the experts in round one were: Balance, Process, Instrument, Intrinsic, Ingredient, Individualisation, Performance, Technique, Evidence and Arrangement. It can be observed that experts varied in open-ended suggestions proposed, however, none of the propositions were shared between any experts and were exclusively used by individuals. This provided little grounds to supplement the value taxonomy with these dimensions as there existed no common thread in their use between subjective observations. The number of introduced open-ended suggestions between the two discipline-specific groups (i.e., marketing and information science) did not vary a lot, and thus, disciplinary knowledge did not appear to be an important variable in suggesting additional value propositions. The overall consensus among the participants as measured through kappa ( $\kappa$ ) coefficient in round one was 91% which is a strong indicator of consensus.

#### 4.3 Round Two - Group Consensus

Following the completion of the recording of data within the first round of the Delphi study, the second round moved to resolve areas of contention by gaining consensus from participants. This involved contacting the panel members with the aggregate results from the group. The mediator divulged the classifications of the study to all participants (via 1:1 email) and approached each expert with areas of disagreement to solicit their input. Each participant's response to a large degree matched with the response from other participants (e.g., in dimensions such as Product and Price), however there were a few areas of disagreement in tweets that needed to be resolved in order to reach 100% consensus (the end condition) across the Delphi panel. The experts in the second-round feedback maintained control to have the final say on their classification choices for a tweet (i.e., they can disagree with what the majority think). The results of integrating feedback to open coding for the experimental dataset formed the concluding measures of consensus in the study.

An example of how expert disagreements were resolved in the study is presented in the snippet below. Each expert was provided with the tweets which diverged from the groups' views. Embedded within the feedback were the terms which explicitly justified the groups' encoding of value propositions. In some cases, rather than being a semantic error (i.e., issue with understanding the proposition being offered in words), this was simply attributed to human error (i.e., not identifying the presence of a word). Participants were made aware of the group level of agreement (i.e., 70% consensus on a value proposition being present), as opposed to their level of disagreement (i.e., you disagreed with the value being present). They were then provided with the option to produce a simple binary response (i.e., Yes or No), and this response offered the experts final position in reference to the groups' view.

## Tweet 2 – "The upside-down #CaramelMacchiato — pairs well with frozen waffles and fantasy-based tabletop games"

There was 70% consensus that the tweet contains Sports/Entertainment information.

The tweet above contains 'Sport/Entertainment' information based on the underlined words? Yes/No

The tabulated final results following the second round of the Delphi study is shown in Table 15.

Panel	Expert	κ	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15
		coefficient															
		(%)															
		, ,															
Round	A	94	18/18	2/2	3/3	2/2	2/3	1/1	5/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0

2	В	98	18/18	2/2	3/3	2/2	3/3	0/1	7/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
(n=20)																	
	С	94	18/18	2/2	3/3	2/2	3/3	0/1	5/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	D	98	18/18	2/2	3/3	2/2	3/3	1/1	6/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	Е	100	18/18	2/2	3/3	2/2	3/3	1/1	7/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	F	94	18/18	2/2	3/3	2/2	2/3	1/1	5/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	G	98	18/18	2/2	3/3	2/2	3/3	1/1	6/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	Н	96	18/18	2/2	3/3	2/2	3/3	0/1	6/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	I	94	18/18	2/2	3/3	2/2	3/3	1/1	4/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	J	96	18/18	2/2	3/3	2/2	3/3	1/1	5/7	4/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0
	Auto	92	18/18	2/2	3/3	2/2	2/3	1/1	5/7	3/4	1/1	10/10	1/1	0/0	0/0	2/2	0/0

Table 15: Results of Round two from the Delphi Panel

Round 2 results are shown in Column 1 of Table 15 which are as follows: Expert A: 95%, Expert B: 98%, Expert C: 94%, Expert D: 98%, Expert E: 100%, Expert F: 94%, Expert G: 98%, Expert H: 96%, Expert I: 94%, Expert J: 96%. The overall accuracy for the experts from the Department of Marketing was 97%, while experts from the Department of Information Science produced an accuracy of 95%. The total kappa (κ) coefficient rendered in round two using the value taxonomy was 96% as given in Table 16, which significantly improved the accuracy of observations for the task of classifying value propositions in content marketing.

While only two rounds were conducted in this study, an area that potentially could have been improved is through the means of a third round (a brainstorming round), in which the final outlook of the results and dimensions could have been discussed in the fashion of a physical forum. This may have presented new opportunities (e.g. discussing suggestions for value propositions), but would also introduce ethical hurdles (e.g. peer pressure for agreement because the forum will be face to face and also can result in 'groupthink'). This being said, as Landis and Koch (1977) instructs, the strength of the kappa coefficients should be interpreted in the following manner: 0.01 - 0.20 slight; 0.21 - 0.40 fair; 0.41 - 0.60 moderate; 0.61 - 0.80 substantial; 0.81 - 1.00 almost perfect. For the task of identifying value propositions in social media text, study one obtained almost perfect consensus which is in-line with existing literature (Coursaris et al., 2013: Ashley & Tuten, 2015).

Expert ID	Correctly	identified	Consensus (%)

	value propositions	
A	51	51/54 = 94
В	53	53/54 = 98
С	51	51/54 = 94
D	53	53/54 = 98
Е	54	54/54 = 100
F	51	51/54= 94
G	53	53/54= 98
Н	52	52/54 = 96
I	51	51/54 = 94
J	52	52/54 = 96
Delphi Total	Average of 51	Average of 91

Table 16: Round two scoring for the Delphi panel

The last row within Table 15 shows the result for identifying whether or not a value proposition is present in a tweet using automatic coding (explored further in chapter 6). The accuracy of this corpus-based technique was 92%, which is comparable to the consensus obtained in round two of the Delphi panel (96%).

#### 4.3 Summary

In study one of this research, a Delphi panel investigated how a value taxonomy can be constructed and how its validity can be measured through observations. The primary research question aimed to address how accurate the research construct used in the thesis is for classifying embedded value propositions in brand messages. The draft taxonomy was constructed using a combination of literature-surveyed dimensions and bottom-up inferences from empirical data. The taxonomy was then provided to a multi-disciplinary panel along with a guideline document, in order to validate the construct through its collective use. To determine the validity of the taxonomy comprising 15 value dimensions, 10 experts from the Department of Marketing and Information Science were recruited. The task of experts was to use open coding to independently classify value propositions in a sample of 20 tweets which was distributed to all participants

electronically. The guideline document provided, specified the definition of each dimension within the value taxonomy construct and also provided practical examples (i.e., codified tweets) that aided in the identification of propositions in brand messages.

The Delphi panel comprised of two rounds. Round one aimed to gather results using the value taxonomy as a measurement construct and also allowed for experts' input on suggestions for new dimensions to be considered. Levels of agreement on the sample across the panel covered 100% consensus for 12 of 15 value taxonomy dimensions. Levels of disagreement between experts revolved around three dimensions, Emotion (29%), Social (10%) and Sport/Entertainment (40%) propositions. The overall consensus of round one was 91%. Suggestions offered by panelists did not introduce any new shared dimensions and thus, round two aimed at reducing the areas of disagreement through consultation with each expert. In round two, the results of round one were communicated to the entire panel. Individuals were provided with the aggregate consensus for each value dimension highlighting areas where a panel member had a disagreement. They were then offered an option to modify their assessment using a simplified yes or no option. The finalised consensus scores across the panel in round two was 96%. This high reliability score indicates that the value taxonomy provided, is an excellent instrument in identifying value propositions embedded within social media text.

# Chapter 5 – Identifying Value Propositions in Marketer-Generated Content Using Manual Coding



"A brand is a voice and a product is a souvenir." - Lisa Gansky

#### 5 Content Analysis of Brand Value Propositions in Tweets

#### 5.1 Introduction

The objective of this chapter is to present the findings of an explorative analysis on value propositions that originate in a top-down fashion in social media (i.e., MGC that is posted by brands to its followers). This work is a part of phase two of this thesis whose objective is to demonstrate the utility of extracting value propositions unearthed from an empirical cycle of content co-creation. As part of the second research question of the thesis which notes: (RQ2) - "How can the value taxonomy developed be used to offer insights into the value co-creation process?", this chapter explores the MGC sphere of influence within content marketing. In particular, results from this study answers the question RQ2a which is "How can the

taxonomy be used to unearth insights from brand value propositions". Thus, the work reported in this chapter pertains to the first half of value co-creation (i.e., the brand's sphere)<sup>3</sup>.

RQ2a is further refined into the following which relates to the insights that can be obtained using the value taxonomy from the top-down MGC perspective.

- i): Are there differences in the different types of values embedded in tweets?
- ii): Are there differences in values expressed in tweets across brands?
- iii): Can certain values embedded in tweets predict whether user interest is stimulated (e.g. through retweeting or being liked)?

To begin the chapter, Section §5.2 presents the results for the different distributions of value propositions embedded in brand tweets, thus presenting an answer for question (i). Then in Section §5.3, the results for the differences in propositions across coffee brands is examined, thus answering question (ii). Following this, Section §5.4 outlines the results from multiple regression modelling examining the relationship between value propositions embedded in MGC and the influence this has on eWOM outcomes in the form of Likes and Shares (i.e., Retweets), thus answering question (iii). Lastly in Section §5.5, a summary of the findings of study two is provided which explores the brand's sphere of influence in the value co-creation process of content.

#### 5.2 Differences of Value propositions in MGC

Prior to conducting the manual coding procedure for study two on the experiment dataset of 658 brand tweets, the four raters (the mediator and three independent raters) each coded a sample of 50 brand tweets to establish measures of Inter-Rater Reliability (IRR). The kappa coefficients from both sample datasets are shown in Table 17, with Column 3 presenting training IRR scores (i.e., based on 50 samples) and Column 5 presenting actual experimental IRR scores. It can be observed that the scorings between the fourth rater (D, the mediator of the study) and the other three independent raters (i.e., AD, BD and CD) are consistently high in agreement in both sample sizes (greater than 80%). In Column 2, it can be observed that from the 50 training tweets, 77 matches of propositions were found between rater D and A while 7 mismatches were found. Column 4 presents the number of matches and mismatches which emerged between raters for the experiment test dataset (i.e., from 220 tweets, 614 value propositions between D and A were scored the same). On average the IRR scoring for study two was 88% which is considered to be excellent agreement (Fleiss et al., 1981). The average IRR score is similar to the IRR reported in the previous chapter (amongst

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<sup>&</sup>lt;sup>3</sup> This chapter was published in the proceedings of the PACIS 2016 conference.

Delphi experts), despite that the samples in this study being 11 times more than the data items per participant for the previous study.

Rater	Training	Training	Test	Experimental IRR		
	Matches/Mismatches	IRR	Matches/Mismatches			
A	77/7	91.7%	614/43	93.4%		
В	66/16	80.5%	676/119	85.1%		
С	79/9	91.5%	620/114	84.4%		

Table 17: Cohen's kappa (κ) coefficient for independent raters

Presented in Figure 18 is the distribution of value propositions coded in study two. Evidence indicates that the results are non-uniform in distribution, in that certain value propositions exhibited more of a dominating role then others within communicated messages. From the 658 brand tweets which formed the experimental dataset, 1910 embedded propositions were identified after cross-examination. This on average indicates three value propositions per brand tweet in the 3-month sample of top-10 coffee brands, with the top-3 value propositions being Product (397), Time (326) and Emotion (259). Place, Promotion and Informative propositions were expressed in fewer tweets, followed by Questions, Sport/Entertainment, Social and Price related propositions. The rest of the value dimensions were mentioned in fewer than 50 tweets. These results suggest that the magnitude of value propositions as reported through high coder consensus are different in marketing messages.

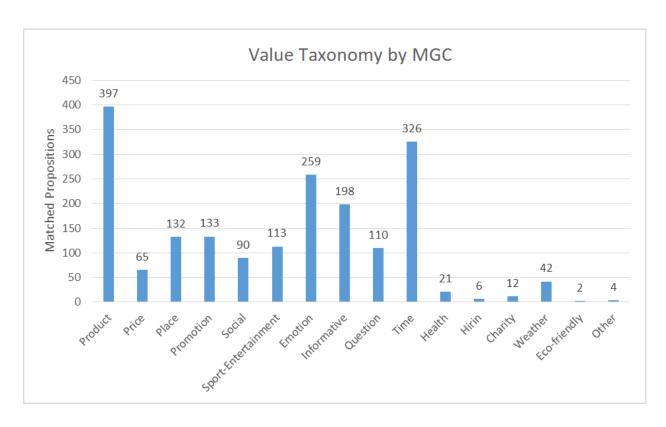


Figure 18: Top-10 Coffee Brand Value Propositions (2015)

The brand-wise results showing the differences in value propositions for each of the top coffee brands, is presented in the brand-level *value signatures* shown in Figure 19. There are 9 radar charts corresponding to each brand with @McCafe being omitted as it only communicated 5 marketing tweets. Each radar chart shows the quantity of the 15 value dimensions present for the particular brand. Similar to the aggregate results shown in Figure 18, the three dimensions of Product, Time and Emotion stand out in the visualisations. First, Product was the highest ranked proposition in 6 of 9 brands. The brand proposition that is ranked second by volume is Time in 6 out of 9 brands. The third most salient value proposition by rank in MGC was Emotion in 6 out of 9 brands. The findings from results show that the combination of these three value propositions (982/1910), account for over half of all value offerings in marketing messages. The marketing mix (4 P's) comprised a significant 38% (727/1910) of the overall value propositions communicated, with Product being the most noteworthy proposition and Price being the most limited. These visualisations can be viewed as time-dependent signatures of value propositions for a brand and can be used as the basis to compare value propositions of different brands. Also, this signature can be compared across different time periods to see the shift in value propositions within the same brand and also across brands.

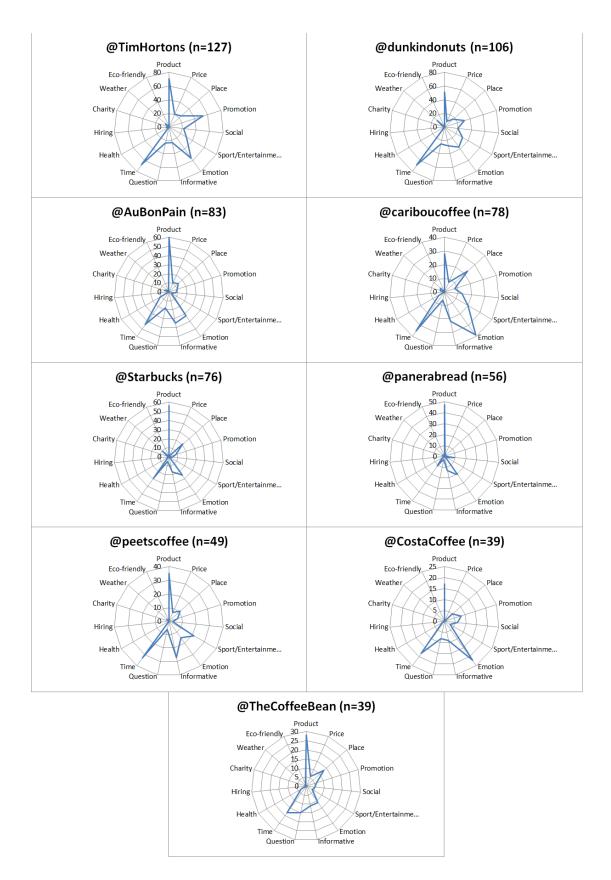


Figure 19: Brand Value Signatures of top-9 coffee brands (2015)

Next, the findings from statistical testing of value propositions extracted from MGC is discussed, which is important to elucidate if the means between the 15 dimensions of the taxonomy are non-uniform for the sample taken. In these tests, two configurations of the value taxonomy were used. First was the discrete-level dimensions for the 15 value propositions of the value taxonomy where each dimension was considered on its own right, second was the general-level dimensions of Sheth et al's consumption value theory (CVT) where certain dimensions were grouped into four aggregate dimensions. The configuration of Sheth et al's dimensions (Sheth, Newman, & Gross, 1991) integrated comparable variables from the 15 discrete-level dimensions of the value taxonomy. Sheth's multi-dimensional CVT comprised of 5 dimensions that closely align with the dimensions in the value taxonomy. Sheth's functional value was categorised using Product, Price and Eco-friendly dimensions. The emotional value dimension in CVT was equivalent to the Emotion dimension in the value taxonomy. The social value dimension in CVT was drawn from the four dimensions (Social, Sport, Hiring and Charity). The epistemic value dimension in CVT was captured using Informative and Question dimensions, which related to knowledge. The fifth dimension in Sheth's work (conditional value) has been omitted since this has been excluded in prior studies (Sweeney & Soutar, 2001). The following outlines the results of conducting statistical testing using both configurations of data.

The first analysis tested for equality of variances in SPSS using Levene's inferential test and this was followed by one-way analysis of variance (ANOVA) for both the 15 and 4 configurations of value dimensions. The tests (see Table 18 and 19) showed statistically significant differences in both framework configurations. The means for the discrete-level 15 dimensions of the value taxonomy, provided evidence of significance (p < 0.05) for 11 of 15 value dimensions and all Sheth et al's dimensions were found to be significant (p < 0.05).

Value Dimension	Levene Statistic	Levene's Homogeneity	ANOVA (Sig,)
		test (Sig.)	
Product	15.154	.000***	.000***
Price	14.539	.000***	.003**
Place	15.016	.000***	.002**
Promotion	36.848	.000***	.000***
Social	7.531	.000***	.123

Sport/Entertainment	65.424	.000***	.000***
Emotion	4.104	.000***	.046*
Informative	12.119	.000***	.000***
Question	19.123	.000***	.000***
Time	16.118	.000***	.000***
Health	22.901	.000***	.000***
Hiring	7.249	.000***	.094
Charity	6.058	.000***	.163
Weather	9.591	.000***	.020*
Eco-friendly	5.340	.000***	.244
Other	3.691	.000***	.519
	p < 0.05 *, p <	( 0.01 **, p < 0.001 ***	

Table 18: Value Taxonomy Levene's Homogeneity test and ANOVA results

Levene's test of homogeneity on Sheth's categorization presents statistical significance for all four value dimensions (p < 0.001) with a further one-way ANOVA providing support for statistical significance in the means (p < 0.05) for all dimensions.

Consumption Value	Levene's Homogeneity test (Sig.)	ANOVA (Sig.)
Functional	.000***	.000***
Emotion	.000***	.020*
Social	.000***	.000***
To the state of th	a a a a statut	0.07 dest
Epistemic	.000***	.007**
	p < 0.05 *, p < 0.01 **, p < 0.001 ***	
	p < 0.03 , p < 0.01 · , p < 0.001 · · ·	

Table 19: CVT Levene's Homogeneity test and ANOVA results

Next, a paired samples t-test analysis was performed for all possible combinations of consumption value-pairs. The results (see Table 20) indicate independence for all value-pairs (with p < 0.05) except for a single case (emotional-epistemic pair). Correlation values designate the frequency of observed mutual association between the value pairs, and the results indicate positive and negative association to functional value.

The findings of the results in Tables 18 - 20 indicate that based on a 3-month sample of MGC, consistent evidence exists which suggests that the dimensional elements embedded within content are different (i.e., statistically significant difference exists between these variables) when examined through frameworks based on value. This implies that the categorisation of dimensions can be used to unearth the differences between brands.

CVT Value-pair (paired sample	Correlation	Sig (2-tailed)
t-test)		
Functional & Emotional	.011	.000***
Functional & Social	236	.000***
Functional & Epistemic	147	.000***
Emotion & Social	088	.000***
Emotion & Epistemic	183	.835
Social & Epistemic	.101	.000***
p < 0.05 *, p < 0.01 **, p < 0.001 ***		

Table 20: Paired sample t-test on Consumption value-pairs

#### 5.3 Differences in Value Propositions across brands

This sub-section scrutinizes whether the values embedded in tweets of specific brands are different (question ii of RQ2a). Figure 20 shows the value propositions expressed in the top-10 coffee brands on the 4 value dimensions proposed by Sheth's CVT. It can be observed that functional value dominates in 7 out of 10 brands, while epistemic value dominates in two others and emotional value dominates in one of the brands. There appears to be variability in the focus of brands on consumption values with some brands focusing on all four value dimensions (e.g. Dunkin Donuts) while others focus more on a specific value dimension (e.g. Panera Bread or Starbucks focusing on functional value). The conducted paired samples

t-test for all possible combinations of pairs of consumption values, were found to be independent for all value-pairs (with p < 0.05) except in the instance of the emotional-epistemic value pair.

The findings shown in Figure 20 of brand-wise differences in value propositions suggests that the digital marketing efforts of brands as inferred through bottom-up empirical data, can be organised into multiple strategies, each unique in their own respect. For example, as historic theory has advanced that the product is meaningful in exchange, this is conveyed in the brand-specific analysis shown in the majority of marketing content. What's more interesting is that in contrary to the traditional dominance of the products (as shown in the result for the functional category); differentiated offerings exist for brands through social and emotional values. This implies that researchers and practitioners can observe the value dimensions communicated in brand-specific e-channels to garner a larger strategic perspective on how brands differentiate themselves from their competitors through their implicit positioning of branded content. For example, a Tim Horton's manager can observe the patterns that are different from another brand (e.g. Starbucks).

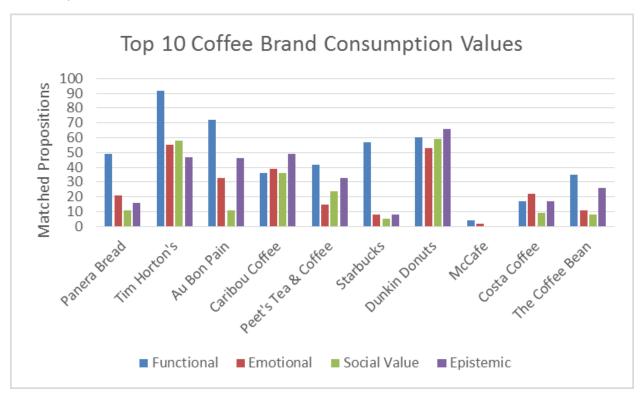


Figure 20: Brand-wise Value propositions by Consumption Value Theory (2015)

#### 5.4 Predicting Value Propositions which stimulate user interests in tweets

The last investigation of study two, was to identify if certain values might trigger user interests in tweets more than others (i.e. embedding certain types of value propositions will facilitate retweeting or 'liking' tweets), thus corresponding to answering iii of RQ2a. To investigate this, multiple regression was used with

the dependent variables being the number of Likes and Shares that a brand tweet received, and the independent variables were the presence (1) or absence (0) of 4 general-level variables from CVT embedded in brand messages. The regression results (see Table 21) show that both eWOM outcomes can be predicted by the functional value dimension (with p < 0.01 for Like and p < 0.05 for Share respectively). The other three CVT dimensions (emotional, social and epistemic values) did not contribute to the prediction of whether a tweet is liked or retweeted.

The findings shown in Table 21 indicate that although brands may differentiate based on marketing content, the dimension discovered in regression analysis pointed the aggregate variable that predicted whether a brand tweet is liked or retweeted is the functional category. This implies a course of action for practitioners who need statistical rigor behind marketing efforts which is tested across a number of independent samples of marketing content from a specific brand (i.e., this generalises across all brands).

<b>Consumption Value</b>	Like (p-values)	Retweet (p-values)
Functional	.001***	.039*
Emotion	.262	.083
Social	.076	.193
Epistemic	.348	.943
p < 0.0	5 *, p < 0.01 **, p < 0.001 ***	

Table 21: Multiple Regression results from CVT on Like's and Retweet's

#### 5.5 Summary

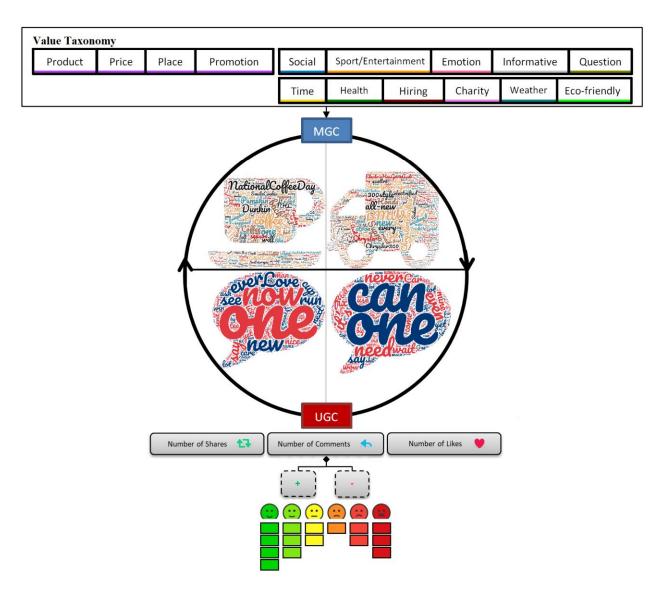
The type of messaging that brands wish to communicate (i.e., MGC), is part of their branding identity. What follows summarises the findings of the three specific sub-research questions of RQ2a this chapter answers. The first question aimed to measure the different values expressed in tweets (independent of the brand that posted the tweet). The results showed that certain values are reported in higher frequencies than others (e.g. Product, Time and Emotion). The implication of this result is that brands do not attach the *same importance* to the propositioning of different types of values.

The second question aimed at investigating whether the values reported in brand tweets vary across brands. The results in Figure 20 show that *brands do not have the same set of value propositions* (i.e. distribution of values is different across value dimensions). This is because the competitive nature of the markets that motivate brands to strategically differentiate themselves in terms of value propositions (i.e., to organise and communicate varied values). It is well-known in the literature that brands follow differentiation and

positioning strategies to make them unique in what they are offering in comparison to competitors (Aaker, 2009).

The third question aimed at scrutinizing whether the presence of certain value dimensions in a tweet could predict the users' interest in the message. The user interest in the tweet content is measured using eWOM outcomes in the form of the number of Likes and Shares of a tweet. The investigations showed that the presence of the functional value predicts both eWOM outcomes in the tweets. This finding has implications for practitioners who can leverage the modelling of marketing messages to better engage with their customers.

# Chapter 6 – Identifying Value Propositions in Propositions in Brand and Customer Tweets Using Lexical Coding



"Marketing is no longer about the stuff you make, but about the stories you tell" – Seth Godin

#### 6 Automatic Analysis of Brand and Customer Tweets

#### 6.1 Introduction

The objective of this chapter is to investigate the phenomena of content co-creation from the perspective of consumers. This entails integrating both brand (MGC) and customer (UGC) tweets and investigating eWOM outcomes as modalities of Customer Engagement (CE) in the form of Likes, Shares and Comments. As a natural extension to chapter 5, this chapter moves to close the loop of co-creation by analysing the responses (i.e., marketing feedback) to value propositions (i.e., marketing stimuli) from the bottom-up context of customers. Therefore the studies presented in this chapter (studies 3, 4 and 5) pertain to the consumer's sphere of co-creation, which comprises of the feedback generated after the fact of marketing stimuli and respectively this chapter examines how feedback is embodied within engagement metrics which are representative of brand eWOM.

CE is signified in two ways within this chapter. Shallow CE is based on reach-based metrics in dialogues such as the number of Likes, Shares and Comments generated based on a brand message. Conversely deep CE is based on sentiment-based metrics which involves embedded expressions of consumer sentiment. The unique contribution from the consumer's sphere is specifically this consumer sentiment, which is hidden within test responses. This research targets this deep CE of consumer sentiments by extracting and aggregating positive and negative community valence as performance metrics for brands, having been noted in the literature as critical to moderating marketing practice (Schivinski & Dabrowski, 2015; 2016; Kim & Johnson, 2016). Thus, in this chapter MGC (brand tweets) and UGC (customer tweets) are coupled in two-way empirical datasets and presented as a model<sup>4</sup> for value co-creation within social media.

Chapter 6 contributes towards answering research question RQ2 "How can the value taxonomy developed be used to offer insights into the value co-creation process?" by specifically answering the sub-question RQ2b that notes: "How can the taxonomy be used to unearth insights in customer value propositions and consumer sentiments in response to brands". Thus, the work reported in this chapter pertains to the second half of co-creation (i.e., the customer's sphere).

The sub-question RQ2b is further refined into the following which relates to the insights that can be obtained from feedback to value propositions.

<sup>&</sup>lt;sup>4</sup> The general model was published in the proceedings of the ECIS 2019 conference.

- i): What values propositioned by brands attract more interest (volume of responses) from the community?
- ii): What is the nature of sentiments expressed in response tweets?
- iii): What brand value propositions influence shallow customer engagement (i.e., number of Likes, Shares, Comments)?
- iv): What brand value propositions influence deep customer engagement (i.e., positive and negative valence)?
- v): What insights on value propositions can be obtained by analysing marketing quarters?
- vi): What insights on value propositions can be obtained by analysing marketing domains?

This chapter begins with the results from study three (see Section  $\S6.2$  -  $\S6.5$ ), which comprises of a co-creation dataset of brand ( $n_b$ =658) and customer ( $n_c$ =12077) tweets, examined to explain the influence of value propositions on customer feedback (thus answering question (i)), sentiments expressed (thus answering question (ii)) and shallow (thus answering question (iii)) and deep CE thus answering question (iv). Next in Section  $\S6.6$ , the chapter presents the results from study four which replicates the technique and scope of co-created content in study four, for an independent marketing quarter ( $n_b$ =290,  $n_c$ =8811) of the same brands in 2018 to examine the phenomena of time (thus answering question (v)) on value propositions, specifically by scrutinising awareness and engagement. Then in Section  $\S6.7$ , the top-10 coffee and car brands in 2018 are contrast in study five to examine how brands convey different marketing messages based on the industry that they are in, and also how prediction models can be contrast by market domain, thus answering question (vi). Lastly, in Section  $\S6.8$  the chapter is summarised using the findings of results from studies 3 - 5.

#### 6.2 What Value Propositions attract more Interest in the Community?

The first question in this chapter, seeks to scrutinize the scale of feedback from consumers corresponding to value propositions. This was analysed through volume of classifications from value propositions in both contexts of brand and customer tweets. As was the case that value propositions were non-uniform for brand tweets, this was reflected in the case of tweets from the community as shown in the empirical comparison of volumes of tweets that belong to different value propositions within Figures 21. The pattern of non-uniform value propositions that is similar in both contexts can be observed in propositions relating Product, Time and Emotion. In a few cases (e.g., Social and Hiring), the scale of feedback to a certain proposition is much larger in the community than originally communicated by the brand. The ratio between the number of customer tweets reporting a particular proposition (e.g., Product) and the number of brand tweets containing the same proposition (shown to the right in Figure 21) are ranked as follows: Hiring (22.1),

Social (17.8), Emotion (15.5), Product (13.1), Time (12.1), Price (11.4), Promotion (10.9), Place (10), Informative (9.9), Health (9.2), Question (7.4), Weather (7.2), Sport/Entertainment (6.1), Charity (4.7), Eco-friendly (4.6). The findings of the descriptive analytics from both contexts of value propositions, suggests the certain value propositions attract more discussion than others. This does not reveal however, if these responses are favourable engagements as it simply indicates that the scale ratios of value propositions stimulated and reciprocated are different between brand and customer tweets. This has implications for practitioners who are strategically geared toward building discussion on a particular topic, regardless of the valence (i.e., positive or negative) being conveyed. Although the analysis is at a descriptive level, the results supplement prior results by expanding on the dimensions which could help in strategic differentiation of a brand (i.e., using Social and Hiring appeals in a brand tweet to garner voluminous feedback from customers).

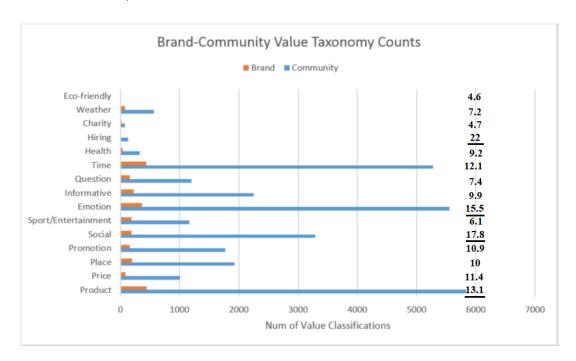


Figure 21: Value Taxonomy distribution for Brand and Community tweets (2015)

The datasets were also investigated statistically based on the frequencies of classifications reported in 1) brand tweets and 2) customer tweets to determine statistical significance across brands. The two separate Mann-Whitney U tests conducted in SPSS showed that there were significant differences (p < 0.05) between the value propositions reported in brand tweets (amongst all brands) and the propositions reported in the response tweets (amongst brand communities). This shows that brands differentiate themselves on value propositions (i.e., different brands focus on different values that are propositioned) and this indeed holds for facilitated response tweets. While this sub-section focused on the responses to value propositions

generated in discussions (i.e., volume of segmented dialogues), the sentiment of the discussion is a key aspect since a discussion can have a positive or a negative slant. Next, consumer sentiments are explored.

### 6.3 What is the nature of sentiment to Value Propositions expressed by the Community?

The sentiment analysis of results for the response tweets show that a majority of feedback was positive (79% of tweets) while a minority of feedback was negative (21% of tweets). The top-3 words corresponding to the positive category (i.e., compliments) were love, © (smiley face) and delicious while the top-3 words corresponding to the negative category (i.e., complaints) were bad, shit and  $\odot$  (sad face). The overall community sentiment corresponding to 3-months of feedback to coffee brands in 2015 is tabulated using the value taxonomy and shown in Figure 22.

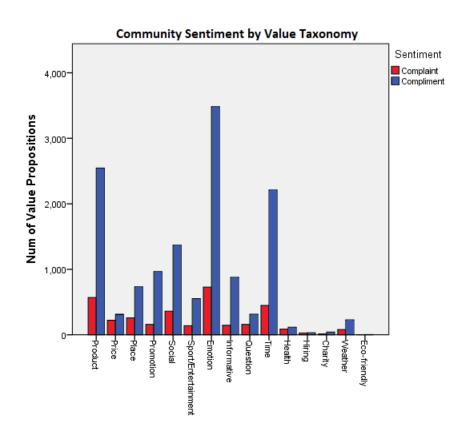


Figure 22: Community Sentiments by Value Taxonomy Histogram (2015)

Within Figure 22, it can be observed that the orientation of compliments and complaints in customer tweets tend to point towards specific value propositions which generate more polarity in sentiments than others. The top-5 value propositions associated with compliments were Emotion, Product, Time, Social and Promotion propositions. This implies, for example, whenever Product is included in the brand's responses, the tweet was mostly associated with a compliment within the studied dataset. Thus, Product in the

examined study of coffee brands is less frequently associated with complaints (as can be observed from the first group of bars for Product in Figure 22). Price and Health attracted relatively more negative sentiments, based on the scale of positive and negative sentiments in tweets for the various value propositions. Notably these results indicate that feedback relating to the marketing mix is positive, with the exception of Price which is a source of contention for the community and a sensitive area of differentiation for brands. In the next sub-section, the empirical results of using regression modelling to predict the influence of marketing stimuli (i.e., value propositions embedded in MGC) on marketing feedback (i.e., CE in eWOM outcomes) within the co-creation cycle is examined.

#### 6.4 What Value Propositions predict Shallow Engagement?

In this sub-section, the predictive modelling results from the multiple regression based models that present the impact of value propositions on shallow CE is described. In this procedure, the independent variables were 15 brand value propositions of the brand coded in binary, while the predicted variables were the numeric totals of Likes, Shares and Comments for the brand tweet. Tables 22 - 24 presents the outcomes in study three for the three shallow CE metrics targeted, with Column 2 showing the statistically significant value propositions and Column 3 indicating the characteristics of the regression models. From the top-10 coffee brands analysed in regressions, 4 brands produced significant (p < 0.05) models in each respective case.

For the Like metric, the outcomes of the multiple regression models are given in Table 22. The results signify that different value propositions influence *shallow* CE. For example while the marketing mix variables were involved in two cases, it was also found that Emotion, Question, Time and Weather propositions were unique to brands within predictions. Six out of 15 value propositions were statistically significant predictors, while the R<sup>2</sup> (adj) values of regression models could explain 10% to 45% of variance in the data. This result indicates that different aspects of brand messages (i.e., value dimensions) statistically predict stimulation in the form of Likes, as it can be observed that for three out of four brands; only one value dimension was statistically significant. However, for Caribou Coffee, three different value dimensions (e.g., Product, Time and Weather) influenced shallow engagement.

Brand	Significant value dimensions (and regression co-efficients)	Regression parameters
Caribou Coffee	Product*** (.367), Time* (.319), Weather* (.372)	$p < 0.01$ , $df = 13$ , $R^2 = 0.657$ , $R^2$ (adj) = 0.445, $F = 3.094$
Peet's Coffee	Price** (.579)	$p < 0.05$ , $df = 11$ , $R^2 = 0.571$ , $R^2$ (adj) = 0.309, $F = 2.177$
Dunkin Donuts	Question** (.263)	$p < 0.05$ , $df = 12$ , $R^2 = 0.224$ , $R^2$ (adj) = 0.103, $F = 1.707$

Starbucks	Emotion* (.314)	$p < 0.05$ , $df = 12$ , $R^2 = 0.246$ , $R^2$
		(adj) = 0.101, F = 1.625
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$		

Table 22: Significant regression models with Likes as the dependent variable

For the Share metric, the outcomes of the multiple regression models are given in Table 23. Five out of 15 value propositions were statistically significant predictors, while the  $R^2$  (adj) values of regression models indicate that the models could explain 13% to 51% of variance in the data. One example involved a single predicting value proposition, while the majority of examples were found to be combinatorial with at least one element from the marketing mix.

Brand	Significant value dimensions (and regression co-efficients)	Regression parameters
Peet's Coffee	Price*** (.693), Social* (.299)	$p < 0.001$ , $df = 11$ , $R^2 = 0.697$ , $R^2$ (adj) = 0.511, $F = 3.760$
Costa Coffee	Product* (.360), Social*** (.845)	$p < 0.05$ , $df = 12$ , $R^2 = 0.685$ , $R^2$ (adj) = 0.432, $F = 2.714$
Caribou Coffee	Weather** (.582)	$p < 0.05$ , $df = 13$ , $R^2 = 0.487$ , $R^2$ (adj) = 0.170, $F = 1.535$
Dunkin Donuts	Price* (.221), Question* (.582)	$p < 0.05$ , $df = 12$ , $R^2 = 0.221$ , $R^2$ (adj) = 0.125, $F = 1.355$
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$		

Table 23: Significant regression models with Shares as the dependent variable

For the Comment metric, the outcomes of the multiple regression models are given in Table 24. The results show that the significant predictor variables that are commonly observed across brands are drawn from the marketing mix. Seven out of 15 value propositions were statistically significant predictors, while the R<sup>2</sup> (adj) values of regression models indicate that the models could explain 17% to 51% of variance in the data. Notably in the examples predicting Comments, is the consistent inclusion of Product and Question propositions in generating responses from brand communities. In the next sub-section, the results from the models that predict deep CE are scrutinised.

Brand	Significant value dimensions (and regression co-efficients)	Regression parameters
Tim Hortons	Price** (.313), Social***(.289), Emotion* (.150), Question*** (.338), Time* (.183)	$p < 0.001$ , $df = 13$ , $R^2 = 0.587$ , $R^2$ (adj) = 0.506, $F = 7.290$
Peet's Coffee	Product* (.282), Price* (.361), Question** (.476)	$p < 0.05$ , $df = 11$ , $R^2 = 0.578$ , $R^2$ (adj) = 0.320, $F = 2.443$
Caribou Coffee	Product* (.272), Price* (.471)	$p < 0.05$ , $df = 13$ , $R^2 = 0.553$ , $R^2$ (adj) = 0.276, $F = 1.997$
Dunkin Donuts	Product** (.311), Promotion* (.295), Question* (.217)	$p < 0.01$ , $df = 12$ , $R^2 = 0.279$ , $R^2$ (adj) = 0.167,

	F = 2.290
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$	

Table 24: Significant regression models with Comments as the dependent variable

#### 6.5 What Value Propositions predict Deep Engagement?

In this sub-section, the predictive modelling from multiple regression results on deep CE is detailed. In this procedure, the independent variables were 15 brand value propositions coded in binary, while the predicted variables were the net positive and negative valence extracted (see page 71) from customer tweets. The multiple regression models produced for *valence* are given in Tables 25 and 26.

In the modelling of positive valence, significant models emerged for 6 brands (p < 0.05). Seven out of 15 value propositions were observed to be predictors, while the  $R^2$  (adj) values of regression models indicate that the models could explain 12% to 31% of the variance in the data. As compared to the results from shallow CE modelling, deep CE included three instances in which predictor coefficients maintained a negative relationship to positive valence.

Brand	Significant value dimensions (and regression co-efficients)	Regression parameters
Peet's Coffee	Promotion* (362)	$p < 0.01$ , $df = 13$ , $R^2 = 0.346$ , $R^2$ (adj) = 0.312, $F = 3.488$
Costa Coffee	Product*** (.388), Time* (228)	$p < 0.05$ , $df = 14$ , $R^2 = 0.318$ , $R^2$ (adj) = 0.235, $F = 2.696$
Caribou Coffee	Emotion** (.328), Question* (.205)	$p < 0.05$ , $df = 14$ , $R^2 = 0.281$ , $R^2$ (adj) = 0.126, $F = 1.583$
Starbucks	Question** (.269)	$p < 0.05$ , $df = 15$ , $R^2 = 0.248$ , $R^2$ (adj) = 0.141, $F = 1.583$
Dunkin Donuts	Product* (.208), Emotion* (.175), Health* (215)	$p < 0.01$ , $df = 14$ , $R^2 = 0.228$ , $R^2$ (adj) = 0.120, $F = 2.094$
Tim Hortons	Product*** (.308)	$p < 0.01$ , $df = 13$ , $R^2 = 0.190$ , $R^2$ (adj) = 0.117, $F = 1.788$
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$		

Table 25: Significant regression models with Positive valence as the dependent variable

In the modelling of negative valence, significant models emerged for 5 brands (p < 0.05). Nine out of 15 value propositions were observed to be predictors, while the  $R^2$  (adj) values of regression models indicate that the models could explain 12% to 29% of the variance in the data. Additionally, three instances were identified in which predictor coefficients maintained a negative relationship to negative valence. In the next sub-section, this chapter examines two empirical datasets from 2015 and 2018 of the top-10 coffee brands, in order to gain insights on the phenomena of time in study four.

Brand	Significant value dimensions (and regression co-efficients)	Regression parameters
The Coffee Bean	Product** (424), Question* (.342), Health* (.395)	$p < 0.05$ , $df = 14$ , $R^2 = 0.451$ , $R^2$

		(adj) = 0.289, F = 2.591
Panera Bread	Price** (.452), Promotion*** (555)	$p < 0.05$ , $df = 15$ , $R^2 = 0.379$ , $R^2$ (adj) = 0.231, $F = 2.252$
Caribou Coffee	Promotion* (.278), Emotion* (.245), Time* (.207)	$p < 0.01$ , $df = 14$ , $R^2 = 0.341$ , $R^2$ (adj) = 0.189, $F = 2.085$
Starbucks	Sport/Entertainment* (.246)	$p < 0.05$ , $df = 15$ , $R^2 = 0.308$ , $R^2$ (adj) = 0.152, $F = 1.984$
Tim Hortons	Place*** (.311), Question* (180)	$p < 0.01$ , $df = 13$ , $R^2 = 0.181$ , $R^2$ (adj) = 0.125, $F = 2.029$
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$		

Table 26: Significant regression models with Negative valence as the dependent variable

#### 6.6 What Influence does Time have on Value Propositions?

In this sub-section, the influence of time on brand awareness and engagement is explored. Study four specifically analyses how a shift in time, changes the marketing strategy of coffee brands over two snapshots of time and also how it can identify persistently used marketing practices. As time is a contextual factor, two independent models of empirical co-creation ( $n_b$ =658,  $n_c$ =12077) from 2015 and from 2018 ( $n_b$ =289,  $n_c$ =8111) are examined using the same procedure. As @McCafe and @AuBonPain produced less than 5 tweets in 2018, these brands were omitted from further analysis.

Value signatures (depicting value propositions) in the form of MGC for two time periods of social media marketing for the top-10 coffee brands are presented in Figure 23. It can be observed that although the volume of brand tweets is reduced between marketing periods, the orientation of marketing messages remains generally consistent across the brands particularly with regard to Product, Time and Emotion propositions. Notably however, brands do deviate from past strategies on specific propositions, for example Costa Coffee shifts from communicating no Price propositions to over 10 messages between marketing quarters. These results (i.e., value signatures) indicate that the "value awareness" of brands as inferred from bottom-up data exposed on e-channels (i.e., unearthed and presented about brands in the form of a dashboard), can be used to expose shifting marketing patterns. Evidence exists that brands strategically reintegrate consistent appeals (e.g., Tim Hortons and Dunkin Donuts) and also that at times brands (e.g., Peet's Coffee, Panera Bread) can alter their perceptions to the market across marketing quarters as a form of differentiation.

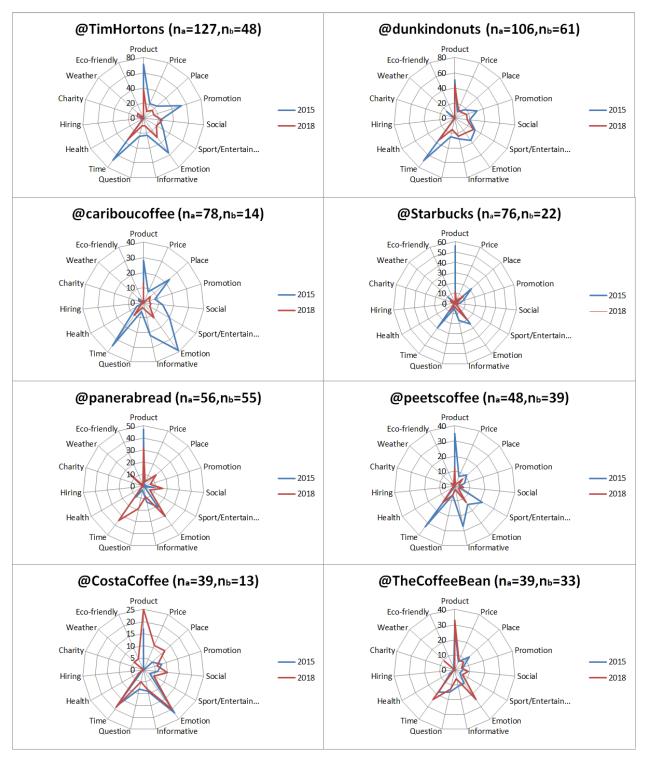


Figure 23: Value Signatures of top-8 coffee brands in 2015 and 2018

Brand engagement (depicted through like, share and comment metrics) comparison result for the two time periods of social media marketing for the top-10 coffee brands is presented in Figure 24. It can be observed that the eWOM outcomes produced between marketing periods is sporadic. Notable is the stratified

orientation of eWOM outcomes, with a constant layering to metrics based on the level of consumer effort required (i.e., Liking as compared to Sharing or Commenting). The ordering of the metrics based on volume of occurrences is a pattern consistent across every brand examined. In a number of examples (e.g., Starbucks, Costa Coffee, Peet's Coffee) the bursts of engagement over time peaks with Likes, is followed by Shares and lastly trailed with Comments. A rationale for this would be that the ladder of involvement increases for users going from Likes to Comments, meaning that brands which yield larger volumes of Comments can be seen as having higher involvement with their community. Next, the prediction models between marketing periods is investigated.

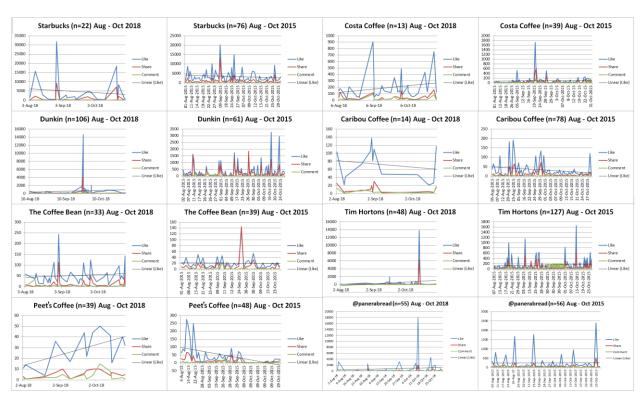


Figure 24: Time Series of eWOM outcomes for top-8 coffee brands in 2015 and 2018

The statistically significant (p < 0.05) prediction models produced for brands which appeared exclusively in both marketing periods are presented in Tables 27 - 31. In the case of the Like metric, two significant examples are presented with both presenting a change in the predictor variables in the models (see Table 27). Each brand-specific prediction involved a single value dimension, with four out of 15 value propositions being involved in modelling across both years (two within each year).

Brand	Model	Sig. Variables	Regression parameters
	Period		
Dunkin Donuts	2015	Question** (.263)	$p < 0.05$ , $df = 12$ , $R^2 = 0.224$ , $R^2$ (adj) = 0.103, $F = 1.707$

	2018	Time* (.306)	$p < 0.05$ , $df = 11$ , $R^2 = 0.185$ , $R^2$ (adj) = 0.128, $F = 1.014$
			$R^{2}$ (adj) = 0.128, $F = 1.014$
Peet's Coffee	2015	Price** (.579)	$p < 0.05$ , $df = 11$ , $R^2 = 0.571$ , $R^2$ (adj) = 0.309, $F = 2.177$
	2018	Charity* (.723)	$p < 0.05$ , $df = 11$ , $R^2 = 0.922$ , $R^2$ (adj) = 0.496, $F = 2.161$
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$			

Table 27: Brand-wise Multiple Regression results for Like across Marketing periods

The Share metric presented an additional significant brand in both marketing quarters, with each of the brands adopting a marketing mix variable in predictions (see Table 28). The results for predicting Shares indicated a number of variables which stimulate community sharing of content within brands. Ten out of 15 value propositions were involved across the two years, with four out of 15 propositions in 2015 and six out of 15 propositions in 2018. The marketing mix is importantly used in a number of significant cases, all involving positive coefficients when predicting Shares.

Brand	Model	Sig. Variables	Regression parameters
	Period		
Dunkin Donuts	2015	Price* (.221), Question** (.263)	$p < 0.05$ , $df = 12$ , $R^2 = 0.221$ , $R^2$ (adj) = 0.125, $F = 1.355$
	2018	Place* (.238)	$p < 0.05$ , $df = 11$ , $R^2 = 0.187$ , $R^2$ (adj) = 0.135, $F = 1.026$
Costa Coffee	2015	Product* (.360), Social*** (.845)	$p < 0.05$ , $df = 12$ , $R^2 = 0.685$ , $R^2$ (adj) = 0.432, $F = 2.714$
	2018	Promotion*** (.436), Emotion* (.447), Informative* (.440)	$p < 0.05$ , $df = 13$ , $R^2 = 0.434$ , $R^2$ (adj) = 0.204, $F = 1.430$
Peet's Coffee	2015	Price*** (.693), Social* (.299)	$p < 0.05$ , $df = 11$ , $R^2 = 0.697$ , $R^2$ (adj) = 0.511, $F = 3.760$
	2018	Charity* (.709), Time* (.845)	$p < 0.001$ , $df = 11$ , $R^2 = 0.939$ , $R^2$ (adj) = 0.606, $F = 2.815$
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$			

Table 28: Brand-wise Multiple Regression results for Share across Marketing periods

The Comment metric presented further evidence that predictor variables are subject to change following the period of a marketing quarter. For example in one out of three cases, marketing mix variables were present as predictors in 2015 and also then re-emerged in 2018 models. Nine out of 15 value propositions were involved in significant regression models, increasing the spectrum of predictor variables for Comments when compared to models for Likes.

Brand	Model	Sig. Variables	Regression parameters
	Period		
Dunkin Donuts	2015	Product** (.311), Promotion* (.295), Question* (.217)	$p < 0.01$ , $df = 12$ , $R^2 = 0.279$ , $R^2$ (adj) = 0.167, $F = 2.290$

	2018	Place* (.281)	$p < 0.05$ , $df = 11$ , $R^2 = .166$ , $R^2$ (adj) = .096, $F = 0.947$		
Tim Hortons	2015	Price** (.313), Social*** (.289), Emotion* (.150), Question*** (.338), Time* (.183)	$p < 0.001$ , $df = 13$ , $R^2 = 0.587$ , $R^2$ (adj) = 0.506, $F = 7.290$		
	2018	Emotion** (.498)	$p < 0.05$ , $df = 12$ , $R^2 = 0.261$ , $R^2$ (adj) = 0.125, $F = 1.192$		
Peet's Coffee	2015	Product* (.282), Price* (.361), Question** (.476)	$p < 0.05$ , $df = 11$ , $R^2 = 0.578$ , $R^2$ (adj) = 0.320, $F = 2.443$		
	2018	Sport/Entertainment* (1.249), Time* (.907)	$p < 0.05$ , $df = 11$ , $R^2 = 0.957$ , $R^2$ (adj) = 0.718, $F = 4.016$		
$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$					

Table 29: Brand-wise Multiple Regression results for Comment across Marketing periods

The Positive valence metric produced an increasing number of brand-specific models, with ten out of 15 value propositions being involved. Notable in the results is the increased instances in which coefficients presented are negative in nature, illustrating different influences of the same variable (positive and negative) used in predicting shallow vs. deep sentiments in conversations.

Brand	Model	Sig. Variables	Regression parameters
	Period		
Dunkin Donuts	2015	Product* (.208), Emotion* (.175), Health* (215)	$p < 0.01$ , df = 14, $R^2 = 0.228$ , $R^2$ (adj) = 0.120, $F = 2.094$
	2018	Price*** (495), Place** (.341), Promotion* (.411)	$p < 0.05$ , $df = 11$ , $R^2 = 0.315$ , $R^2$ (adj) = 0.161, $F = 2.049$
Tim Hortons	2015	Product*** (.308)	$p < 0.01$ , $df = 13$ , $R^2 = 0.228$ , $R^2$ (adj) = 0.120, $F = 2.094$
	2018	Emotion** (.498)	$p < 0.05$ , $df = 12$ , $R^2 = 0.261$ , $R^2$ (adj) = 0.125, $F = 1.192$
Starbucks	2015	Sport/Entertainment* (.246)	$p < 0.05$ , $df = 15$ , $R^2 = 0.308$ , $R^2$ (adj) = 0.152, $F = 1.984$
	2018	Informative* (.642)	$p < 0.05$ , $df = 11$ , $R^2 = 0.752$ , $R^2$ (adj) = 0.350, $F = 1.871$
Costa Coffee	2015	Product*** (.388), Time* (228)	$p < 0.05$ , $df = 14$ , $R^2 = 0.318$ , $R^2$ (adj) = 0.235, $F = 2.696$
	2018	Price* (.603), Place* (580), Emotion* (.355), Informative* (.485)	$p < 0.05$ , $df = 13$ , $R^2 = 0.532$ , $R^2$ (adj) = 0.355, $F = 2.863$
Peet's Coffee	2015	Promotion* (362)	$p < 0.01$ , $df = 13$ , $R^2 = 0.346$ , $R^2$ (adj) = 0.312, $F = 3.488$
	2018	Charity** (1.053)	$p < 0.05$ , $df = 11$ , $R^2 = 0.976$ , $R^2$ (adj) = 0.847, $F = 7.540$
		$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$	)

Table 30: Brand-wise Multiple Regression results for Positive valence across Marketing periods

The Negative valence metric produced two significant examples, of which each contained two variables from the marketing mix with at least one in both cases remaining across the marketing quarter thus showing

evidence of the same variable over time. Two cases of negative coefficients were present in predictions with five out of 15 value propositions being involved.

The findings show that value propositions vary across time for some brands and in some brands the same value propositions are influential in predicting outcomes across time. The results for both these inferences can be observed in descriptive insights in Figure 23 and predictive insights in Tables 27 - 30. This offers actionable knowledge to marketing managers that awareness and engagement are dynamic constructs on e-channels and also that the influence of time can be empirically modelled in order to determine which variables to persistently include as effective communication strategy. For example, if certain value propositions have been consistently beneficial for a significant number of brands, then it may be worthwhile to include those propositions in the branded material of a brand that hasn't been using that dimension. This concludes the observations in study four on the influence of marketing periods on value propositions.

Brand	Model	Sig. Variables	Regression parameters
	Period		
Panera Bread	2015	Price*** (.611), Health*** (.351)	$p < 0.001$ , $df = 14$ , $R^2 = 0.527$ , $R^2$ (adj) = 0.361, $F = 3.180$
	2018	Price** (.452), Promotion*** (555)	$p < 0.05$ , $df = 15$ , $R^2 = 0.379$ , $R^2$ (adj) = 0.231, $F = 2.252$
Tim Hortons	2015	Place*** (.311), Question* (180)	$p < 0.01$ , $df = 13$ , $R^2 = 0.181$ , $R^2$ (adj) = 0.125, $F = 2.029$
	2018	Place* (.277), Promotion* (.296)	$p < 0.05$ , $df = 12$ , $R^2 = 0.302$ , $R^2$ (adj) = 0.143, $F = 1.362$
	•	$(* \to p < 0.05, ** \to p < 0.01, *** \to p < 0.001)$	

Table 31: Brand-wise Multiple Regression results for Negative valence across Marketing periods

In the next sub-section, study five explores and contrasts the top-10 coffee brands in 2018, with the top-10 car brands to identify how market domains influence value propositions.

#### 6.7 How do Value Propositions compare across Market Domains?

In this sub-section, the top-10 coffee and car brands are examined (in study five) which seeks to identify insights obtained from examining value propositions from different market domains. Study five specifically analyses how the nature of value propositions and eWOM metrics from communities can be influenced by the industry which frames the exchange. Two models of empirical co-creation from the top-10 coffee brands ( $n_b$ =289,  $n_c$ =8111) and top-10 car brands ( $n_b$ =635,  $n_c$ =7035), both from 2018 are examined using the same procedure as prior studies. To begin, the descriptive value signatures of brands are examined at a brand, domain and market level. Then diagnostic results using sentiments expressed for each brand

community is presented, and lastly the prediction results for each brand on five eWOM outcomes are examined.

Examining at a *brand-level*, the brand value signature of each brand in the study is presented in Figures 25 and 26. These figures show the brand-level differentiation of organisations, structuring the conveyed strategy which is communicated to audiences. For example, in brands such as The Coffee Bean and Chrysler, the Product value proposition is the central appeal within the brand's social media marketing strategy, for brands such as Tim Hortons and Dunkin Donuts, apart from the Product value proposition, other value dimensions such as Social and Emotion appeals are also important. It was discovered that within both marketing domains, the frequency of propositions embedded within brand tweets on average was four value propositions.

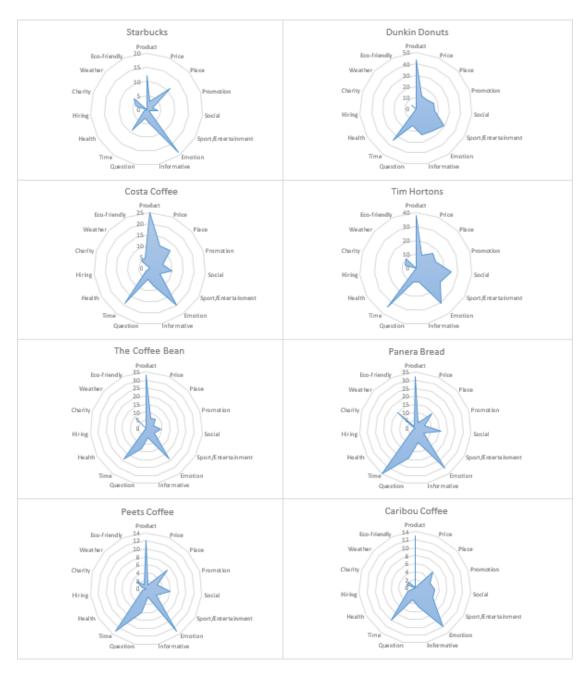


Figure 25: Top-8 Coffee Brand Value Signatures (2018)

At a *domain-level*, competitors within the same domain can be contrasted to identify trends in business strategy. In the coffee market domain, a dominant view of Product, Social and Emotion propositions are present, while for the car market domain, the focus amongst domain brands is on Product, Sport/Entertainment and Emotion propositions. These differences in domain-level propositions, identifies part of the context in which brands differentiate themselves both for their communities and against their competitors.

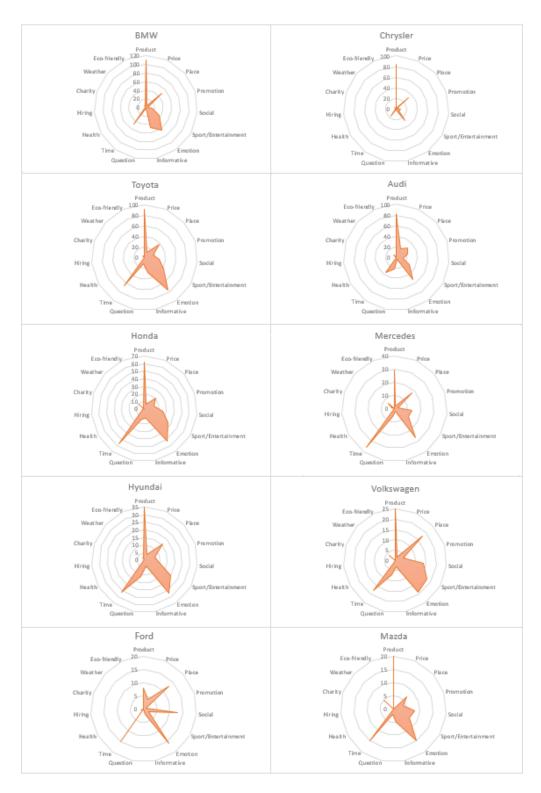


Figure 26: Top-10 Car Brand Value Signatures (2018)

At a *market-level*, statistical comparisons of value propositions accumulated from every brand using means and standard deviations of brand messages that contain certain value propositions are reported in Table 32.

The findings indicate both evidence for difference and similarity across both market domains. It can be observed that the variables which exhibit the most difference were Product, Place, Sport, Emotion and Informative value propositions. Variables which were communicated similarly between domains were Social, Question, Time, Health, Hiring, Charity, Weather and Eco-friendly value propositions. These results suggest that based on empirical sampling of two market domains, the main factor of difference in content marketing is largely due to a smaller number of variables which is the focus of ongoing conversations, such as the Product alongside a number of auxiliary propositons (i.e., Time, Question) which are less frequent but consistently integrated within content marketing. Next, consumer sentiments embedded within brand communities are examined.

Domai	in	Prod	Pri	Pla	Promot	Soci	Spo	Emoti	Informa	Questi	Ti	Heal	Hiri	Char	Weat	Eco-frie
		uct	ce	ce	ion	al	rt	on	tive	on	me	th	ng	ity	her	ndly
Coff ee	x	26	6	11	7	11	9	22	9	9	22	1	1	2	7	1
	σ	12	5	3	5	7	9	7	6	6	11	1	1	3	4	2
Car	x	55	5	24	8	15	21	37	11	8	33	1	1	1	5	1
	σ	34	5	12	7	6	13	20	15	7	18	1	1	1	3	1

Table 32: Value proposition means and standard deviation measures by market domain

Regarding brand engagement, the consumer sentiments for both coffee and car brands were found to exhibit significant differences. The descriptive radar graphs for each brand-community (i.e., community value signatures) is presented in Figures 27 and 28. Overlaid on this result is the counts of positive and negative sentiments associated to value propositions in response discussions. The counts of negativity and positivity for a given dimension is represented using red and green respectively. At the bottom-left of each radar graph is a zoomed version of each figure to clearly show the nature of sentiments. Feedback was analysed for insights at three levels, the brand-level, domain-level and market-level.

At the *brand-level*, taking Starbucks for instance in Figure 27, it can be observed that the brand attracts sentiments from the community which are positive in one appeal and negative within another based on the value propositions communicated (e.g., Price, Social). From the community of Starbucks, Price propositions are more closely associated to negative sentiments (130 -ve compared to 112 +ve) while Social propositions are more closely associated to positive sentiments (317 +ve compared to 195 -ve).

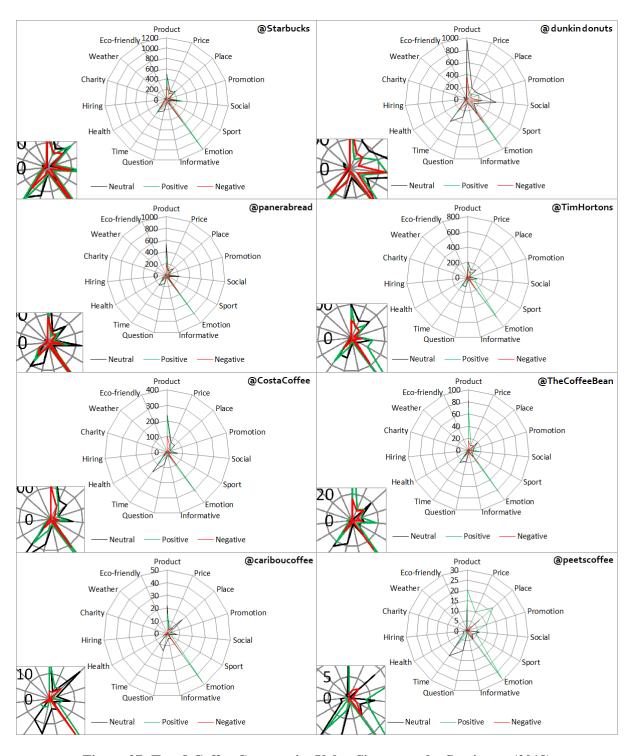


Figure 27: Top-8 Coffee Community Value Signatures by Sentiment (2018)

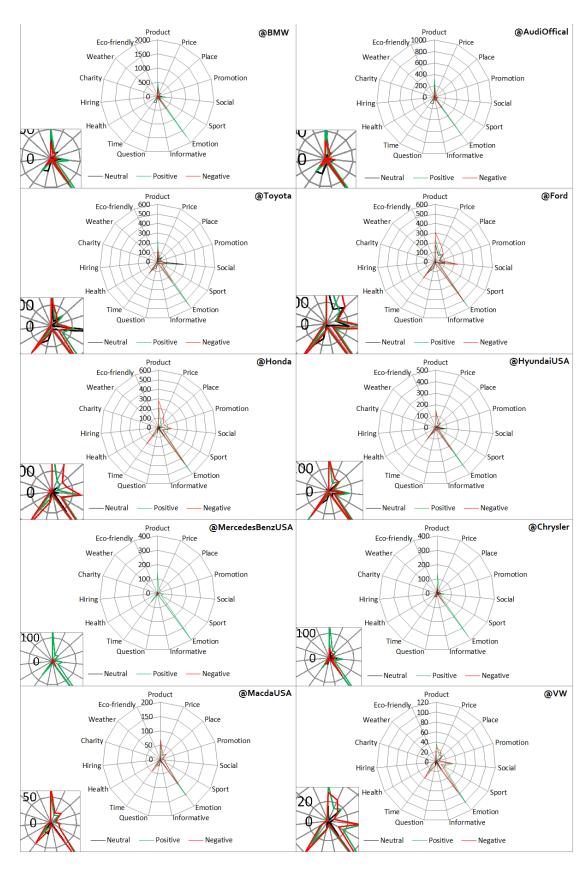


Figure 28: Top-10 Car Community Value Signatures by Sentiment (2018)

At the *domain-level*, comparing Starbucks to Dunkin Donuts presents further strategic disparities. The marketing mix is responded by the community in different ways. For example while receptions to Product is relatively the same (Starbucks 470 +ve, 258 -ve, Dunkin Donuts 472 +ve, 360 -ve) between competitors, Price (Starbucks 112 +ve, 130 -ve, Dunkin Donuts 68 +ve, 112 -ve), Place (Starbucks 259 +ve, 167 -ve, Dunkin Donuts 110 +ve, 114 -ve) and Promotion (Starbucks 65 +ve, 50 -ve, Dunkin Donuts 195 +ve, 62 -ve) are all propositions which vary in the sentiments generated. Therefore, it is discernible from the domain-level, that brands attract different comments based on same value propositions they offer to their customers in their tweets. In the case of Dunkin Donuts, Promotion appeals generate better valence from the community than their Social appeals. This is an area of marketing in which Starbucks is producing more favourable sentiments, and therefore could provide actionable knowledge as to how Dunkin Donuts can use its competition's strategy to turn negativity into positivity. This diagnostic view of value propositions can assist strategic decision-making by identifying the source of marketing communications (i.e., the value proposition) which seeds positive and negative discourse and allow brands to structure and compare themselves on heterogeneous strategies within the market domain.

At the *market-level*, sentiment analysis comparisons can be done across the two market domains considered (i.e., coffee, car). It was observed that the proportion of sentiments in the coffee domain was more favourable (73.25% positive, 26.5% negative) than the automobile domain (65.7% positive, 34.3% negative) and therefore based on the two market domains examined, industry domain exhibited an influence on the feedback generated from value propositions. Next, the multiple regression results for shallow and deep CE in the context of market domains is examined.

The multiple regression results for shallow CE metrics is provided in Tables 33 and 34. The first row of result for each Column in Table 33 identifies the brand-specific statistically significant variables obtained in regressions, with the standardised coefficients of these variables given in brackets. In the second row of each column is the statistics identified for each significant regression equation. For example, Costa Coffee illustrates that marketing which embeds Promotion, Emotion and Informative propositions, can account for 58.1% of variability in the dependent variable. Across the three models for Costa Coffee, the explanatory power given by R<sup>2</sup> (adj) values range from 20% to 30%. In some cases, because of limited data, no significant models were found for a brand (as indicated by a dash symbol).

Brand	Like	Share	Comment
Costa Coffee	Promotion*** (.570),	Promotion*** (.436),	Emotion* (.320),
	Emotion** (.361),	Emotion** (.447),	Informative*** (.509)
	Informative** (.323)	Informative* (.440)	
	$R^2 = .581, R^2 \text{ (adj) } .299,$	$R^2 = .434, R^2 \text{ (adj) } .204,$	$R^2 = .535, R^2 \text{ (adj) } .238,$
	F=2.030, df=13, p < 0.05	F=1.430, df=13, p < 0.05	F=1.684, df=11, p < 0.05

Peet's Coffee	Charity* (.723)	Charity* (.709), Time*	Sport/Entertainment*
	-	(.845)	(1.249), Time* (.907)
	$R^2 = .922, R^2 \text{ (adj) } .496,$	$R^2 = .939, R^2 \text{ (adj) } .606,$	$R^2 = 0.957, R^2 \text{ (adj)} =$
	F=2.161, df=11, p < 0.05	F=2.815, df=11, p <	0.718, F = 4.016, df = 11,
		0.001	p < 0.05
	Time* (.306)	Place* (.238)	Place* (.281)
Dunkin Donuts	$R^2 = .185, R^2 \text{ (adj) } .128,$	$R^2 = .187, R^2 \text{ (adj) } .135,$	$R^2 = .166, R^2 \text{ (adj) } .096,$
	F=1.014, df=11, p < 0.05	F=1.026, $df=11$ , $p < 0.05$	F=0.947, df=11, p < 0.05
	Sport/Entertainment*	Sport/Entertainment*	Price*** (.269),
	(.362), Time* (303)	(.269)	Charity*** (.710)
Panera Bread	$R^2 = .281, R^2 \text{ (adj) } .133,$	$R^2 = .259$ , $R^2$ (adj) .098,	$R^2 = .841, R^2 \text{ (adj) } .785,$
	F=1.115, df=14, p < 0.05	F=1.000, df=14, p < 0.05	F=15.100, df=14, p <
			0.001
	Price*** (.618),	Price* (.653),	Question** (.483)
The Coffee Rean	Promotion* (647)	Promotion* (583)	
The Coffee Bean	Promotion* (647) $R^2 = .422, R^2 \text{ (adj) } .195,$	Promotion* (583) $R^2 = .338$ , $R^2$ (adj) .173,	$R^2 = .259, R^2 \text{ (adj) } .142,$
The Coffee Bean	Promotion* (647) R <sup>2</sup> =.422, R <sup>2</sup> (adj) .195, F=1.583, df=12, p < 0.05	$\begin{aligned} & Promotion* \ (583) \\ & R^2 = .338, \ R^2 \ (\text{adj}) \ .173, \\ & F = 1.108, \ df = 12, \ p < 0.05 \end{aligned}$	$R^2$ = .259, $R^2$ (adj) .142, F=0.947, df=12, p < 0.05
The Coffee Bean	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment*	Promotion* (583)  R <sup>2</sup> = .338, R <sup>2</sup> (adj) .173, F=1.108, df=12, p < 0.05  Sport/Entertainment*	$R^2 = .259, R^2 \text{ (adj) } .142,$
	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)	Promotion* (583)  R <sup>2</sup> = .338, R <sup>2</sup> (adj) .173, F=1.108, df=12, p < 0.05  Sport/Entertainment* (.375), Emotion* (.300)	R <sup>2</sup> = .259, R <sup>2</sup> (adj) .142, F=0.947, df=12, p < 0.05 Emotion** (.498)
The Coffee Bean Tim Hortons	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)  R <sup>2</sup> = .232, R <sup>2</sup> (adj) .104,	Promotion* (583)  R <sup>2</sup> = .338, R <sup>2</sup> (adj) .173, F=1.108, df=12, p < 0.05  Sport/Entertainment*	$R^2$ = .259, $R^2$ (adj) .142, F=0.947, df=12, p < 0.05
	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)	Promotion* (583)  R <sup>2</sup> = .338, R <sup>2</sup> (adj) .173, F=1.108, df=12, p < 0.05  Sport/Entertainment* (.375), Emotion* (.300)	$R^2 = .259, R^2 \text{ (adj) } .142, \\ F = 0.947, df = 12, p < 0.05 \\ Emotion** (.498)$ $R^2 = .261, R^2 \text{ (adj) } .125, \\ F = 1.192, df = 12, p < 0.05$
	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)  R <sup>2</sup> = .232, R <sup>2</sup> (adj) .104,	$\begin{aligned} & \text{Promotion*} \text{ (583)} \\ & R^2 = .338, \ R^2 \text{ (adj) .173,} \\ & F = 1.108, \ df = 12, \ p < 0.05 \\ & \text{Sport/Entertainment*} \\ & \text{ (.375), Emotion*} \text{ (.300)} \\ & R^2 = .226, \ R^2 \text{ (adj) .101,} \end{aligned}$	$R^2 = .259, R^2 \text{ (adj) } .142, \\ F = 0.947, df = 12, p < 0.05 \\ Emotion** (.498)$ $R^2 = .261, R^2 \text{ (adj) } .125, \\ F = 1.192, df = 12, p < 0.05 \\ Promotion* (.641)$
	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)  R <sup>2</sup> = .232, R <sup>2</sup> (adj) .104,	$\begin{aligned} & \text{Promotion*} \text{ (583)} \\ & R^2 = .338, \ R^2 \text{ (adj) .173,} \\ & F = 1.108, \ df = 12, \ p < 0.05 \\ & \text{Sport/Entertainment*} \\ & \text{ (.375), Emotion*} \text{ (.300)} \\ & R^2 = .226, \ R^2 \text{ (adj) .101,} \end{aligned}$	$R^2 = .259, R^2 \text{ (adj) } .142, \\ F = 0.947, df = 12, p < 0.05 \\ Emotion** (.498)$ $R^2 = .261, R^2 \text{ (adj) } .125, \\ F = 1.192, df = 12, p < 0.05 \\ Promotion* (.641)$ $R^2 = .622, R^2 \text{ (adj) } .327,$
Tim Hortons Starbucks	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)  R <sup>2</sup> = .232, R <sup>2</sup> (adj) .104,	$\begin{aligned} & \text{Promotion*} \text{ (583)} \\ & R^2 = .338, \ R^2 \text{ (adj) .173,} \\ & F = 1.108, \ df = 12, \ p < 0.05 \\ & \text{Sport/Entertainment*} \\ & \text{ (.375), Emotion*} \text{ (.300)} \\ & R^2 = .226, \ R^2 \text{ (adj) .101,} \end{aligned}$	$R^2 = .259, R^2 \text{ (adj) } .142, \\ F = 0.947, df = 12, p < 0.05 \\ Emotion** (.498)$ $R^2 = .261, R^2 \text{ (adj) } .125, \\ F = 1.192, df = 12, p < 0.05 \\ Promotion* (.641)$
Tim Hortons	Promotion* (647)  R <sup>2</sup> = .422, R <sup>2</sup> (adj) .195,  F=1.583, df=12, p < 0.05  Sport/Entertainment* (.370), Emotion* (.340)  R <sup>2</sup> = .232, R <sup>2</sup> (adj) .104,  F=1.023, df=12, p < 0.05	$\begin{aligned} & \text{Promotion*} \text{ (583)} \\ & R^2 = .338, \ R^2 \text{ (adj) .173,} \\ & F = 1.108, \ df = 12, \ p < 0.05 \\ & \text{Sport/Entertainment*} \\ & \text{ (.375), Emotion*} \text{ (.300)} \\ & R^2 = .226, \ R^2 \text{ (adj) .101,} \end{aligned}$	$R^2 = .259, R^2 \text{ (adj) } .142, \\ F = 0.947, df = 12, p < 0.05 \\ Emotion** (.498)$ $R^2 = .261, R^2 \text{ (adj) } .125, \\ F = 1.192, df = 12, p < 0.05 \\ Promotion* (.641)$ $R^2 = .622, R^2 \text{ (adj) } .327,$

Table 33: Shallow regression models for top-8 coffee brands

At the domain and market-level, the marketing mix is embedded in a number of regression results within both the coffee domain (see Table 33) and within the car domain (see Table 34). For the coffee brands, the elements from the 4 P's is present in 5 of 8 coffee brands, with Product being in no models, Price in 3 instances, Place in 2 instances and Promotion being present in 5 instances. For the car domain, the 4 P's are involved in 7 of 10 brands. Product is a predictive variable in modelling for 7 instances, Price in 1 instance, Place in 2 instances and Promotion in 7 instances. These results indicate that the marketing mix is involved in a majority of eWOM modelling in both coffee and car domains and thus, the 4 P's are important predictors of eWOM outcomes for domain competitors.

Brand	Like	Share	Comment
BMW	Promotion** (231),	Social* (173),	-
	Social* (200)	Sport/Entertainment*	
		(.131)	
	$R^2 = .218, R^2 \text{ (adj) } .142,$	$R^2 = .128, R^2 \text{ (adj) } .084,$	-
	F=2.258, df=12, p <	F=1.187, df=12, p <	
	0.01	0.05	
Chrysler	Place*** (505)	Place*** (404),	Price* (.185)
		Emotion* (.203),	
		Weather* (.184)	
	$R^2 = .431, R^2 \text{ (adj) } .336,$	$R^2 = .316, R^2 \text{ (adj) } .207,$	$R^2 = .123, R^2 \text{ (adj) } .078,$
	F=4.537, df=12, p <	F=2.775, df=12, p <	F=0.962, df=12, p <

	0.001	0.001	0.05
Honda	Product* (.201),	Product* (.253).	Product** (.359),
	Promotion** (.283),	Promotion** (.299),	Promotion** (.282),
	Social* (262),	Social* (243)	Question*** (.303)
	Sport/Entertainment**	, ,	, ,
	(.258), Weather* (.207)		
	$R^2 = .377, R^2 \text{ (adj) } .234,$	$R^2 = .345, R^2 \text{ (adj) } .205,$	$R^2 = .232, R^2 \text{ (adj) } .185,$
	F=2.633, df=14, p <	F=2.296, df=14, p <	F=1.759, df=14, p <
	0.001	0.01	0.05
MazdaUSA	Promotion** (.680)	Promotion*** (.753)	Promotion*** (.821)
	$R^2 = .616, R^2 \text{ (adj) } .232,$	$R^2 = .680, R^2 \text{ (adj) } .360,$	$R^2 = .899, R^2 \text{ (adj) } .798,$
	F=1.605, df=10, p <	F=2.123, df=10, p <	F=8.923, df=10, p <
	0.05	0.05	0.001
Toyota	Product*** (387),	-	Product* (197),
	Social* (202),		
	$R^2 = .231, R^2 \text{ (adj) } .175,$	-	$R^2 = .153, R^2 \text{ (adj) } .102,$
	F=2.196, df=15, p <		F=1.211, df=15, p <
	0.001		0.05
Volkswagen	Emotion* (391),	-	Question* (.331)
	Informative* (541),		
	Question* (.280)		
	$R^2 = .394, R^2 \text{ (adj) } .137,$	-	$R^2 = .442, R^2 \text{ (adj) } .175,$
	F=1.441, df=11, p <		F=1.495, df=11, p <
	0.05		0.05
AudiOffical	-	-	Sport/Entertainment*
			(.212), Question***
			(.381)
	-	-	$R^2 = .196, R^2 \text{ (adj) } .149,$
			F=1.525, df=12, p <
			0.05
	Time* (.486), Hiring*	Product* (.765)	-
	(.466)	2	
Ford	$R^2 = .684, R^2 \text{ (adj) } .268,$	$R^2 = .623, R^2 \text{ (adj) } .359,$	-
	F=1.308, df=10, p <	F=1.103, df=10, p <	
	0.05	0.05	
HyundaiUSA	-	Product* (.355),	Question** (.473)
		Time* (.306)	2 2
	-	$R^2 = .300, R^2 \text{ (adj) } .185,$	$R^2 = .348$ , $R^2$ (adj) .166,
		F=1.061, df=13, p <	F=1.285, df=13, p <
		0.05	0.05
MercedesBenzUSA	-		-
	$(* \rightarrow p < 0.05, ** \rightarrow$	$0.01, *** \rightarrow p < 0.001$	

Table 34: Shallow regression models for top-10 car brands

The multiple regression results for deep CE metrics is provided in Tables 35 and 36. At the *brand-level*, these findings indicate that different variables influence positive and negative sentiments for the same brand (e.g., for Panera Bread, Price and Health influence positive valence and also Health and Charity influence negative valence). Notably, these variables are different to the ones identified for models constructed using the shallow eWOM metrics. For Panera Bread, the shallow models for Like and Share

were mainly influenced by Sport/Entertainment appeals. However, the variables influencing positive and negative valence did not feature these. In the example of Costa Coffee on the other hand, two of the predictors influencing shallow metrics (Emotion and Informative) also appear to influence positive valence, however two additional variables (Price and Place) also emerge as influential variables.

Brand	Positive valence	Negative valence
Costa Coffee	Price* (.603), Place*	-
	(580), Emotion*	
	(.355), Informative*	
	(.485)	
	$R^2 = .532, R^2 \text{ (adj) } .355,$	-
	F=2.863, df=13, p <	
	0.05	
Dunkin Donuts	Price*** (495),	-
	Place** (.341),	
	Promotion* (.411)	
	$R^2 = .315, R^2 \text{ (adj) } .161,$	-
	F=2.049, df=11, p <	
	0.05	
Tim Hortons	-	Place* (.277),
		Promotion* (.296),
		Emotion*** (.530)
	-	$R^2 = .302,$
		$R^2$ (adj) .143, $F=1.362$ ,
		df=12, p < 0.05
Panera Bread	Price*** (.611),	Health** (.334),
	Health*** (.351)	Charity* (339)
	$R^2 = .527,$	$R^2 = .366,$
	$R^2$ (adj) .361, F=3.180,	$R^2$ (adj) .144, $F=1.646$ ,
	df=14, p < 0.001	df=14, p < 0.05
Peet's Coffee	Charity** (1.053)	Promotion* (.569),
		Sport/Entertainment*
		(.644), Time* (.442),
	2	Charity* (.602)
	$R^2 = .976,$	$R^2 = .990,$
	$R^2$ (adj) .847, F=7.540,	$R^2$ (adj) .932,
	df=11, p < 0.05	F=17.190, df=11, p <
		0.05
Starbucks	Informative* (.642)	-
	$R^2 = .752,$	
	$R^2$ (adj) .350, F=1.871,	
	df=11, p < 0.05	
Caribou Coffee	-	-
The Coffee Bean	-	-
(* → )	$p < 0.05, ** \rightarrow p < 0.01, *** \rightarrow p < 0.01$	0.001)

Table 35: Deep regression models for top-8 coffee brands

At the *domain-level*, comparing the coffee domain (Table 35) and car domain (Table 36) identifies shared predictive trends, as well as patterns of difference within market domains. For coffee brands, the marketing mix emerged in 5 of 8 brands with Price, Place and Promotion predicting sentiment outcomes in 3 instances each, and the value proposition Product not predicting valence in any coffee brand. For car brands, the marketing mix variables re-emerge similar to the shallow eWOM outcomes, within 5 of 10 brands, however it is the Product and Price which predicts deep eWOM outcomes in 3 instances each, Promotion in 2 instances and Place in 1 instance. A noteworthy trend in the car brands is how commonly the Question dimension predicts valence in the community (i.e., how the call-to-action explains sentiments used on its own (e.g., Volkswagen) or in conjunction with other propositions (e.g., Honda)).

At the *market-level*, the marketing mix is involved in a majority of brands across both domains. In two instances, the same predicting variables in deep eWOM metrics were explaining both positive and negative valence within the community (e.g., Ford, Peet's Coffee). Both the coffee domain and car domain improved in explanatory power, when moving from modelling shallow to deep eWOM metrics. The coffee domain shifted from an adjusted R<sup>2</sup> (adj) range from 10% to 79% in shallow eWOM predictions, to an R<sup>2</sup> (adj) range of 16% to 93% in deep eWOM predictions. Moreover, in the car domain, shallow predictions were measured in R<sup>2</sup> (adj) ranges from 8% to 80% with an improvement in explanatory power for deep eWOM predictions going from 14% to 93% of variability in modelling explained.

When comparing the influence of the same variable in influencing shallow vs. deep CE, it is identified that the same variables can be used to predict different behaviours. In the example of Ford, the presence of the Product in a marketing message influences the amount of Shares it receives (see Table 36). Within the brand-specific deep eWOM metrics shown in Table 36, the same variable Product is shown to influence both positive and negative valence which is generated from the community. Positive discussions are influenced by the mention of Product appeals and other value propositions, however, negative discussions also arise mainly because of the Product. Thus, the empirical regression results suggests that there are differences in variables that can be used to predict shallow vs. deep eWOM metrics.

Brand	Positive valence	Negative valence
BMW	Price* (.198)	Social* (244)
	$R^2 = .235,$	$R^2 = .195,$
	$R^2$ (adj) .161, $F=1.522$ ,	R <sup>2</sup> (adj) .104, F=1.006,
	df=12, p < 0.05	df=12, p < 0.05
Chrysler	Social* (223)	-
	$R^2 = .157,$	-
	$R^2$ (adj) .109, F=0.917,	
	df=12, p < 0.05	
Honda	Product*** (.392),	-
	Question* (.236)	

	1 2	
	$R^2 = .271,$	-
	$R^2$ (adj) .159, $F=1.842$ ,	
	df=14, p < 0.05	
MazdaUSA	-	Place ** (.727),
		Promotion *** (.491)
	-	$R^2 = .855, R^2 \text{ (adj) } .711,$
		F=5.920, df=10, p <
		0.001
Toyota	Price** (267)	-
Toyota	$R^2 = .241, R^2 \text{ (adj) } .189,$	_
	F=1.749, df=15, p <	_
	0.05	
V - 11		
Volkswagen	Question* (.397)	<u>-</u>
	$R^2 = .458, R^2 \text{ (adj) } .303,$	-
	F=1.917, df=11, p <	
	0.05	
AudiOffical	Question* (.211)	Emotion* (.284)
	$R^2 = .165, R^2 \text{ (adj) } .108,$	$R^2 = .157, R^2 \text{ (adj) } .132,$
	F=1.294, df=12, p <	F=1.131, df=12, p <
	0.05	0.05
Ford	Product* (1.086),	Product* (1.124)
	Price* (657),	
	Promotion* (.718),	
	Emotion* (.649),	
	Time* (.813)	
	$R^2 = .593, R^2 \text{ (adj) } .417,$	$R^2 = .644$ , $R^2$ (adj) .453,
	F=1.367, df=10, p <	F=1.520, df=10, p <
	0.05	0.05
HyundaiUSA	Question*** (.538),	Informative* (.363),
nyullualUSA	. ,,	
	Time* (385)	Question*** (.566)
	$R^2 = .429, R^2 \text{ (adj) } .205,$	$R^2 = .402, R^2 \text{ (adj) } .188,$
	F=1.774, df=13, p <	F=1.597, df=13, p <
1 2 772	0.05	0.05
MercedesBenzUSA	- 005 44 .001 444	- 0.001)
(* → 1	$p < 0.05, *** \rightarrow p < 0.01, **** \rightarrow p < 0.01$	0.001)

Table 36: Deep regression models for top-10 car brands

#### 6.8 Summary

This chapter outlines the findings based on a 3-month analysis of tweets co-created from both brands (MGC) and customers (UGC). Presented within this chapter are six specific sub-research questions of RQ2b which this chapter answers.

The first question aimed to determine descriptively which value proposition produced the largest volume of responses from the community. The results showed that the scale of value propositions are varied, including propositions such as Hiring and Social which are not typically large in volume within brand tweets, but produced the largest volume of interest when taking into account responses from customer tweets.

The second question aimed to examine diagnostically the orientation of responses within customer tweets. The results uncovered that a majority of responses were positive (79%), while a minority was negative (21%).

The third question aimed to use regression analysis to identify the predictive relationship between value propositions embedded in MGC and shallow CE metrics (i.e., number of Likes, Shares, Comments). The findings generated statistically significant brand-specific results showcasing which variables in brand tweets predicted each respective eWOM outcome. For example in the case of Costa Coffee, Promotion, Emotion and Informative propositions were found to predict Likes and Shares.

The fourth question aimed to conduct further regression analysis to identify the predictive relationship between value propositions embedded in MGC and deep CE metrics (i.e., positive and negative valence). The findings generated statistically significant brand-specific results showcasing which variables in brand tweets predicted each respective eWOM outcome. For example in the case of Ford, Product, Price, Promotion, Emotion and Time were identified as predicting positive valence in the community, while Product was identified as predicting negative valence, suggesting that some value propositions can generate both responses from communities.

The fifth question aimed to examine how value propositions differ across marketing quarters. The findings discovered evidence that across time, the same value propositions consistently predicted outcome variables in some brands and in some other brands differing variables (value propositions) predict the same outcomes.

The sixth question aimed to examine how value propositions differ across marketing domains. The findings show that sentiments were a significant differentiator between domains, and in addition the marketing mix variables are important predictor variables in these two marketing domains.

This corresponded to the second phase of the research work, which seeks to unearth empirical insights from the co-creation of content in Twitter and structures this knowledge into actionable insights.

## **Chapter 7 – Evaluating a Marketing Information System on Value Analytics**



"In the modern age of Social media, the community tells us who we are" –

Marketer C

#### 7 Evaluating VAT with Students and Marketers

#### 7.1 Introduction

The objective of this chapter is to present the findings based on the feedback collected from both students and managers on the utility of a tool (i.e., VAT) which provides analytics on value propositions. In this final phase of the research, software development of VAT and software evaluation (open/close ended questions) were undertaken as a part of the last study in this thesis (i.e., study six).

The last study in this thesis is qualitative in nature and is positioned to collect the expertise and opinions of students and marketing managers and contextualise this within a software system based on value propositions. In Section §7.2, the descriptive results (e.g., demographics, central tendency) from participants (n=40) is presented, and the summary of scores for the 21-item scale is provided for each of the three domains surveyed. These three domains are analytics, usability and usefulness. In Section §7.3, the qualitative feedback which was collected from the five marketing managers is discussed. Lastly, in Section §7.4 a summary of findings is provided for study six and the areas of perceived importance of VAT is discussed which were drawn from both the students' and managers' feedback after they used the VAT system.

#### 7.2 Respondent Results

The Cronbach's alpha ( $\alpha$ ) measure of the 21-item questionnaire was calculated and shown in Table 37. This test to conduct internal consistency reliability analysis of the scale used in the study had determined that the  $\alpha$  measure of the 21-item scale was higher than 0.7, which is commonly accepted within the literature (Ritter, 2010) and so validated the consistency of the survey instrument.

Cronbach's Alpha	Cronbach's Alpha Based on	N of Items
	Standardized Items	
.852	.853	21

Table 37: Cronbach's Alpha VAT Reliability Statistics Result

The respondents comprised 24 Males (59%) and 16 Females (41%). Age was skewed towards the lowest age group considered in this study with larger proportions falling in this group (see Figure 29) with age ranges being: 18-24 (44%), 25-34 (23%), 35-44 (23%), 45-54 (5%), 55-65 (5%). From the student cohort who participated in the provision of feedback, 17 of 35 participants (50%) provided open-ended responses in the form of comments.

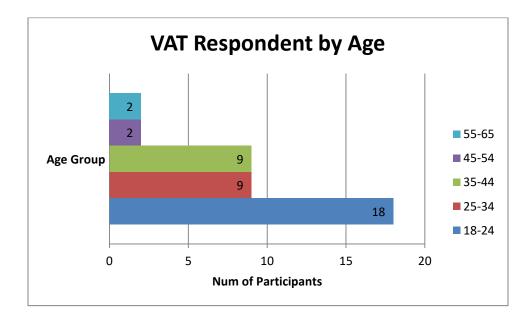


Figure 29: Summary Histogram of VAT Respondent by Age

The summary distributions for each survey item from respondent scores is presented in Table 38. Ordinal data was collected and the research scale used a ranking system and so the results shown did not use the notion of an arithmetic mean, but instead uses median for average response calculations. The median (see Column 2) represents the average respondent belief in the sample for a given Likert-item (see Column 1),

IQR on the other hand (see Column 3) represents the polarisation of opinions; small IQR (e.g., 0) indicates complete consensus while larger numbers indicate increased polarisation between participant beliefs on a measure. From the respondents, the overall median across every item was 4 (> Neither and < Strongly Agree), and in 6 of 21 items the calculated IQR was 1 while the rest of the items presented complete consensus (i.e., score of 0). The summary statistics for each of the three domains evaluated (see Figures 30 - 32) indicates how close the scores between participants were (e.g., for usability, how many times do respondents strongly agree with the domain questions posed). Each figure presented is domain-specific (one of analytics, usability and usefulness), meaning that the results correspond to the scores given based on the domain questions posed. For example in Figure 30, five questions in the domain of analytics were asked (see Table 38) with the respondents central tendency of scoring being between strongly agree and agree on how VAT was perceived for that domain. Furthermore, the domain of usability (containing ten questions) was agreed by respondents to be supported. The median score for the six TAM questions was also four (similar to the other two domains). In general the findings suggest a majority of the users were in support of the three domains that was evaluated (median tendency of 4). These findings are further elaborated below using qualitative feedback form the respondents for the domains of analytics, usability and usefulness.

Likert-item	Median (central tendency)	IQR (dispersion)
ALT1	4	0
ALT2	4	1
ALT3	4	1
ALT4	4	1
ALT5	4	1
SUS1	4	0
SUS2	4	1
SUS3	4	0
SUS4	4	0
SUS5	4	0
SUS6	4	0
SUS7	4	0

SUS8	4	0
SUS9	4	0
SUS10	4	0
TAM1	4	0
TAM2	4	1
TAM3	4	0
TAM4	4	0
TAM5	4	0
TAM6	4	0

Table 38: VAT Survey breakdown of central tendency and dispersion

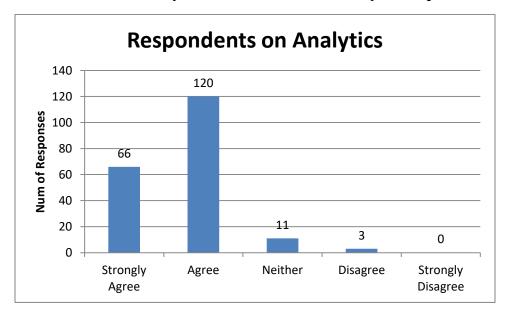


Figure 30: Distribution of Respondents on Questions of VAT's Analytics

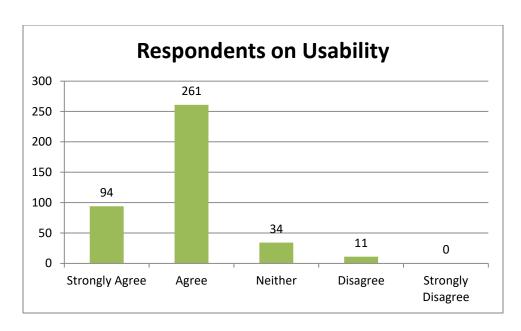


Figure 31: Distribution of Respondents on Questions of VAT's Usability

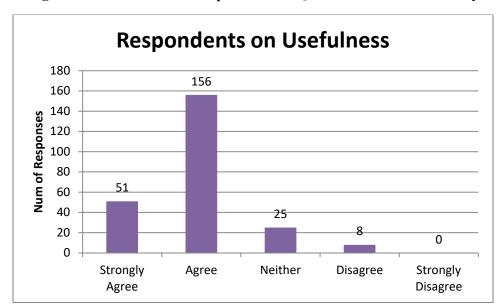


Figure 32: Distribution of Respondents on Questions of VAT's Usefulness

The open-ended feedback (i.e., comments) from the student cohort respectively corresponded to the areas that the study was collecting feedback on (i.e., analytics, usability and usefulness) and this data is shown in Tables 39 - 41. The major focus of the feedback was on usability and features believed to be missing or that needed improvement at the application level of the system. One of the significant inferences from interpreting the student feedback (see respondent comments 3, 9, 17, 18, 28. 37 in Tables 39 - 41) is the suggestion that usability (i.e., the superficial visualisation of system features) influenced the beliefs of the analytical features of the system (i.e., the analytical insights perceived of system features). Accordingly, student feedback for the analytics domain asked for clarity in statistical visualisations, functional

perspectives (i.e., user-generated notes, conversation-level analysis) to generate further insights and a larger sample pool of brands. Student feedback for the usefulness domain highlighted the perceived practicality of the tool and feedback on usability discussed the presentation issues that can be improved such as splitting graphs. The feedback also requested a user manual to inform usability.

A number of improvements were made based on the student cohort feedback (e.g., VAT user tutorial). A number of features were removed which impacted usability (e.g., corpus dictionary output for B2C and C2B messages). These designs developed based on feedback, were keep separate from the VAT version used on the server for the purposes of study six in order to maintain a consistent observation of the subject being tested. In the following sub-section, the feedback from the manager cohort in study six is investigated.

Respondent #	Analytics Comments
3	Some <i>simple explanation about the graphs should be added</i> for an easier and better understanding
9	Would be interesting to have the option to <i>drill down further into exactly what customers</i> are tweeting about eg. if there are a lot of negative posts about product, is there a specific feature that is being mentioned?
21	Good Job on the tool, I found a lot of insight on the brands
28	Graphs need to be reconsidered - perhaps changing scales (e.g., log scale) to show some of the plots.
37	Could be nice with an explanation of what for instance the number "726" in brand value propositions means. I'm trying to understand what is being captured from the tweets? Same goes for frequency of brand impressions
39	It would be great to choose from a <i>wider scale of brands</i> , but great system so far!  And one idea is just to briefly <i>add comments on the bottom of each page/chart</i> about the possible analytical meaning.

Table 39: Student feedback on VAT Analytics domain

Respondent #	Usability Comments

3	For the comparing part, two groups of result should be displayed in one box in order to compare them directly
10	I think the diagram for comparisons would be better suited to a graph rather than the spider like diagram
13	Really <i>easy to use</i> . Once I understood what the axis actually meant, it made more sense.
17	Perhaps add additional prompts on some menu options to explain function options
18	In community sentiments, please add legend differentiating between +ve and -ve
20	Usability is <i>good in some parts and bad in others</i> . Functionality was <i>slow on some</i> selections and I needed to reload a couple of times. It makes the experience a bit delayed. Terminologies used are not intuitive and needs clarity. Having multiple lines on one chart does not allow me to see the difference between performance of 2 brands - suggest that the graphs split up retweets and likes
22	Brand impression graph should be more clear
24	The re-tweet, like graph is <i>hard to read when there is large differences</i> in values e.g. Starbucks vs Costa coffee
25	Clear categories and well explained definitions. Key would have been useful under the classify module under the community sentiment portion.
26	UI needs cleaning etc as a product itself
30	Kindly <i>provide a user manual</i> and a tutorial of the basic functionalities of the system to the end-users before they engage practically. Thanks. Excellent Tool!!!
34	I think the tool is a really cool idea, it just needs to be a bit more user friendly:)

Table 40: Student feedback on VAT Usability domain

Respondent #	Usefulness Comments
9	I think the tool will be really useful.

24	I could see how this would be very useful to the right person
25	Intuitive application that provided very clear visuals. Well done, would be <i>useful tool to use</i> .
26	The tool I can see as <i>being very useful for the provision</i> of what is now essential data for business

Table 41: Student feedback on VAT Usefulness domain

## 7.3 Insights from Marketing Managers

In addition to data collected from the student cohort, study six collected data about what marketing executives had to say about the VAT (i.e., gathered empirical evidence beyond academia). Five marketing managers were recruited with high organisational positions with subject-matter knowledge of social media marketing within their business for the purposes of the study.

For the subsequent portions of the chapter, the results are anonymised and will refer to these individuals as Marketer A - E. The experts from industry held the following organisational roles with years indicated in brackets: Chief Operating Officer & Head of Marketing Sales (1), Marketing Coordinator (8), Operations and Engagement Coordinator (1), Head Social Media Advisor (2) and Marketing Operations Manager (17). Each manager identified their familiarity with web-based systems from: Not Familiar, Somewhat Familiar, Familiar and Very Familiar. All respondents identified themselves as Very Familiar with analytics tools. Shown below in Table 42 are the results of the pre-interview survey on SNS usage across the brands, and the importance of SNS platforms to Marketers. Under each marketer identifier in Table 42, is three sub-columns which identify for each e-channel, 1) adoption of the platform, 2) weekly posting of content and 3) importance to the brand. It can be observed from the table that Facebook was used by all marketers followed by Twitter and then YouTube.

Platform	A	В	С	D	Е
	Usage, Weekly	Usage,	Usage, Weekly	Usage,	Usage,
	Posting,	Weekly	Posting,	Weekly	Weekly
	Importance	Posting,	Importance	Posting,	Posting,
	(1-5)	Importance	(1-5)	Importance	Importance
		(1-5)		(1-5)	(1-5)

Twitter	~	1x	3	~	1x	3.5	~	3-5x	2	/	20x	2	X	-	-
Facebook	~	2x	5	~	1x	4	~	3-5x	5	<b>✓</b>	5-7x	4	<b>/</b>	1-3x	4
YouTube	~	1x	4	~	1x	2.5	~	1x	0.5	<b>/</b>	1-3x	3	<b>'</b>	1x	2
Direct/Text Messaging	~	1x	4	×	-	-	X	-	-	<b>&gt;</b>	1x	5	X	-	-
Instagram	~	1x	1	×	-	-	X	-	-	<b>'</b>	5-10x	3	X	-	-

Table 42: Marketer pre-interview feedback on internal SNS usage

Marketer A works for a multi-national automotive manufacturer which is one of the top-10 car brands in Japan with over 30,000 employees. Their business not only produces commercial grade passenger cars (e.g., Ute, 4WD), but also consumer electronics (e.g., heat pumps, refrigeration units) and industrial motor vehicles (e.g., trucks and buses). Their consumers span a global market (e.g., Europe, Asia, South America), and their products are defined by high levels of 'quality, reliability and durability'; as evidence of this they employ extensive warranties on their products as a point of brand differentiation.

Marketer B's brand is a tech-focused (ICT) entrepreneurship education provider which is based in New Zealand. Their business aims to bridge the gap between academic accreditation and industry experience. They do this through partnerships with local tech companies and established academic providers, their purpose is to develop and foster current, and prospective ICT professionals using their commercial programmes. Their consumers are by nature inexperienced individuals who interact with the brand at a personal-level to bootstrap their ability in gaining employment within New Zealand's ICT industry.

Marketer C's brand is the local governmental authority (i.e., city council) for one of New Zealand's biggest provinces. Their business provides a very wide range of services. They operate functions at the regulatory-level such as animal and business registration, parking, water and waste management. Also at a commercial-level, they operate in a B2B capability to be the face of what the city chooses to promote. In many cases this is done by providing a platform for events-based services such as museums, university events, and cultural activities (e.g., festivals). Their consumers are residents of the city, who are enabled by the service provision of the government-funded body.

Marketer D's brand is one of the top-10 Universities in New Zealand. Their business provides a set of educational structures and processes (e.g., teachers, laboratories, tutorials) for students to reach their course-specific (BCom, MSc, PhD) objectives. The university as an organisational structure operates

top-down with several divisions, schools and departments. Their consumers are both domestic and international students, with ranging educational backgrounds with a demand for scholarship provided by the education service provider.

Marketer E's brand is one of the top-10 Polytechnic institutions in New Zealand. Their business focuses on vocational training, with a priority on a practically-based education. The polytechnic as a business aims to prepare students using a career path oriented towards professional practice, which is not the area satisfied by their competitors. Their consumers are students with more industrial exposure than the university counterpart. In many cases, these clients aim to secure employment directly following engagement with the service provider within the fields of technology, science, commerce and the arts.

For the manager cohort, feedback was collected using the same method as the student cohort, however the thesis author also interviewed each manager for about an hour and transcribed their responses for qualitative analysis. The findings from transcribing interview responses is presented in Table 43. SAS's Text Miner module was employed for this purpose which unearthed 12 common topics in conversations with brand managers. These 12 topical groups were generated empirically based on words (e.g., +look, +competitor, +want) and were analysed within the SAS text miner component, which took as input sentences from marketing managers (n=127) within interviews. These 12 groupings were then examined manually to validate them. The manual analysis revealed that a majority of feedback from practitioners aligned to the topics identified.

It can be observed that the themes discovered using text mining relate to products, services, organisational performance, consumer sentiments, analytics tools, value propositions and others (see Table 43). Although the themes are constructive of the type of conversations being conveyed by marketers, the content of their conversation reveals the dispositions of insights from marketing strategy and the evaluations of VAT from industry professionals and this is discussed next.

Marketing Topic	Tokens in SAS analysis from Conversations
	(n=127)
Market Analysis	+look, +competitor, +want, engagement, +brand
Social Media Marketing	social, media, social media, marketing, a lot
Product Attributes	+product, +brand, +personality, high, trust
Service Attributes	+event, +promote, +value, +student, museum

Organisational	+team, +work, +market, different, organisation
Management	
Industry Knowledge	+thing, know, able, important, industry
Brand Sentiments	+sentiment, +system, compare, +brand, +student
Social Media Analytics	facebook, community, marketing, +brand, analytics
Brand Differentiation	point, +different, marketing, people, +tool
Service Consumers	+service, +student, education, people, end
Performance Analytics	google, analytics, alot, +tool, +show
Value Propositions	+value, +tool, +proposition, able, +customer

Table 43: Marketer Topics analysed using Text Mining in SAS

In what follows, the open-ended questions are discussed which detail the positions of marketing professionals. Based on the analysis of interviews with marketing managers, it was observed that brands design their value propositions and hence their content strategy as based on their target audience. Moreover, it was identified that all brands surveyed used two-way communications supplemented by paid one-way advertising on such platforms. Also, the brands were highly invested in consumer sentiments to moderate and even shape content marketing. Lastly, data-driven aggregate analytics (i.e., sales reports, focus groups, online feedback) was used to support managerial decision-making.

The most common tactic used by marketing managers to inform content creation on social media was *buyer personas*, which is a fundamental customer-oriented technique within inbound marketing. A buyer persona is defined as a "semi-fictional representations of your ideal customer based on real data and some select educated speculation about customer demographics, behavior patterns, motivations, and goals" (HubSpot Academy, 2015). Marketers would model their prospective market through their customers, cater their actions to this representation and use empirical sales statistics to support decisions relating to content that would appeal to such targets. For example, in the instance of the car brand "old ladies that are buying...through to young farmers that are buying utes...as a brand we have an overall picture of what people want but within those subsets you want to cater your value offerings to those personalities of vehicle buyers" (Marketer A). In the example of the city municipality, "our brand is geared around the events we offer and the values that we promote to the wider community, because that's a customer-facing experience and what people expect of those organisations, we work hard to engage with our internal customers running

those facilities and then put together communications that is reflective of the organisation and its customers" (Marketer B). Moreover, customers were the focus of the ICT work-focused training school (Marketer C), stating that "it's important for us to know who our limited audience of customers are, as it is very easy for organisations to be too close to their product and totally promote it wrong...in the modern age of social media, the community tells us who we are...the emotions of our customers is centrally important and so we need high engagement leading to people making an enquiry, then we can have a one-on-one with them". For the university brand, it was indicated that "we try to communicate an emotion for the university, giving the university a bit more personality and character to build a relationship with our audience, rather than an institution that they read about" (Marketer D). In addition, the polytechnic case conveyed that "we don't use our business page for selling, we use it for telling stories. It's a reputation building site for us and we allow our students to speak to our audience about their experiences...obviously we have products, but we are a customer-oriented service" (Marketer E).

Content marketing strategies were prioritised differently based on the two-way communication platform being used, "each with their respective merits" (Marketer B). Content was always designed by multiple parties within the organisation, where "at one end of the room you have communications people dealing reactively to media inquiries...a web team which synergises with other teams...and the team I'm in which is marketing and design which proactively works in concert with those other two teams...the marketing team is really driving it all but we are working with a brand strategy which says for this year we are going to focus on these aspects that we want to promote for and therefore our marketing is geared around that and hence when we run a campaign we are going to assess that we have hit those goals" (Marketer B). Social media platforms were found to be consistently monitored by dedicated staff of the brand. These platforms were engaged by brands using two approaches, traditional one-way broadcasting of targeted messages supported by paid advertising (i.e., to further segment who views the message), "just like you would on tv" (Marketer A) and also open-ended two-way dialogues using content-based stories to build awareness and engagement within business pages, for instance "we support two-way communications, being a high involvement product we want our customers to be engaged by running competitions and sharing videos of our products relating to our audiences such as with their families" (Marketer A). In the example of the ICT training school, "we want our customers to value the information of our content, in order to build trust with our brand. So we use content marketing for awareness and emotional stories such as testimonies from our clients and we also promote our posts using paid advertisements for our information evening events...we listen and respond to our community posts" (Marketer C). For the university example, a collaborative strategy was reiterated in that "I work with multiple teams to develop a plan or strategy for the month of [sic], with content from media releases, notices and news from communication and marketing teams which

are relevant to staff and students, I would then [use] appropriate it [sic] for social media and create images and ideas that the students would be interested in and want to know...additionally we also employ paid advertisements to improve the awareness of our campaign and monitor the post-by-post feedback on our page, responding to comments and private messages" (Marketer D). For the case of the polytechnic, content was less focused on building dialogues and more focused on supporting the brands image, as stated "we don't post content to drive conversation, we drive content to get people to view it, click it, share it and enrol if possible...Facebook is our main social media platform and we have a team of writers, marketers, videographers, producers and social media experts collaborating to form content" (Marketer E).

Designing value propositions revolved around products, services and emotions. For the automotive brand "it starts with the product, so the product in the different categories will determine to a large extent the buyer persona to appeal, and around that are key organisational values so for us that means differentiating ourselves on quality, we understand that quality is a driver of trust in our brand and in our expensive high involvement products" (Marketer A). For the municipality case, "it begins with the experiences we are trying to convey and the visual communications we are trying to design and the way that we convey sentiment and brand values, for example we primarily host event-based exhibitions that comes up at a gallery, library or museum that has its own specific set of values, like emotional and social benefits or shared experience that we wish to promote...so the gambit that we convey is really quite wide and the messaging that we're putting out and the way that we promote and market that is quite varied because of the different parts of the organisation that we deal with, we're not like an organisation which has got a very defined consistent offering that happens every day" (Marketer B). In the example of the ICT school, "we try to promote career change, our selling proposition is that after our course which takes one year, you can with a high chance get into an area that you would have previously not have been otherwise...it's a convenience product, because it's not just about sitting in lectures all day long, it's part of that but also getting involved with industry-focused projects and internships so that a student is employment ready" (Marketer C). Moreover, the university example designed propositions for audience relevancy, as "we try to come up with content that our audience would be interested in or need to know, promoting upcoming events and communicating a voice and emotion for the university" (Marketer D). In the polytechnic case, propositions were designed based on offered experiences, in that "our Facebook page tells stories more than talks about a program, we might post a video about a summer event...it's about quality content which captures an experience for us and that builds our brand" (Marketer E).

Analytics tool adoption by brands tended to be varied, in the car example "we're not using any tools, we use a manual approach but it's something we are escalating quite quickly" (Marketer A). Additionally, the city council indicated that "we're using a lot of the integrated tools which ship with the big players, so Facebook

and Twitter analytics when I run a campaign to see the reach and engagement...from a web-based point of view a lot of our campaigns will be driving people digitally to a place, so we use Google Analytics and also reports coming from Google AdWords...these tools tend to reinforce and validate our direction" (Marketer B). In the case of the ICT school, it was indicated that "Facebook and Twitter insights are helpful in campaigns, as well as Facebook Ads Manager, we also just started using Google AdWords and Google Analytics which helps in reducing bounce rate to our business" (Marketer C). For the university example "Hootsuite is the primary tool we use to manage our content, we also use Isentia and the integrated analytics from Facebook, Instagram and Twitter" (Marketer D). For the polytechnic example "we have two purposes for using our Facebook page, first is for reputation building which we monitor using the integrated analytics, and second we have paid advertising which is all analysed and we have contractors that provide reports which track it's performance" (Marketer E).

The key feedback on VAT's utility identified by marketers was that "the direct comparison was really beneficial, being able to see on one hand what the customers are thinking of your brand versus another brand...the sentiment is the most important feature followed by the level of conversation...if I compare this to what we are doing manually, speed, accuracy, efficiency, data provision and the ability to manipulate the data" (Marketer A). The city council example stated that "the interesting part of the tool is that it provides an awareness to somebody coming in and looking at a tool like this, that there are various value propositions that can be common across competitors, that perhaps you may have not realised that some of those propositions may have existed within their marketing...on the first instance, it reveals with a degree of clarity, what those various propositions are, you know, what's in the mix?...it's a no brainer in the sense that, if you've got access to data that's going to inform decisions that you use it...perhaps you could consider users to be able to export or import propositions or add their own bespoke ones which to a degree will have enough commonality across competitors to make them worthwhile and also be able to provide a degree of weighting to them" (Marketer B). For the ICT training school "it was insightful that the tool compared brands and the emotions attached to each, as it allowed to understand the perceptions of each audience...using tools like this are a way for continuous improvement of your advertising" (Marketer C). In the case of the university, sentiments were the primary utility as given by the feedback that "I particularly enjoyed how the tool picked up on engagement over time and sentiments, then compare these over a broad range of brands...it was similar to the way we analyse sentiment amongst the media that we've got" (Marketer D). For the polytechnic example, sentiments were again the favoured utility as stated by the response that "this tool discovers the value propositions and nicely aligns these beside the emotional sentiments of the users, it's a benefit that the tool identifies how competitors are doing well and how they

are not, which would allow our team to optimise those areas, pulling through what feedback is causing these differences" (Marketer E).

With the qualitative responses from interviews with marketers examined, it is deduced that social media marketing is a highly structured, data-driven, and cross-functional process across business teams, with content catered to the audience which the business serves. The brands also indicated that the most significant feature of VAT was its ability to explain the performance of competitors with particular attention to consumer sentiments, which was indicated to have more perceived utility for marketers in informing their decision-making.

## 7.4 Summary

In the last study relating to value propositions, a value proposition-based web application was developed that provides analytical features based on publicly available social media data from brands. The outcomes of study six in this chapter, outlined the utility the designed VAT system provided to two cohorts – students and practitioners. While both cohorts found the three aspects of the developed system valuable, the student cohort identified common usability faults and features that needed more development. The manager cohort noted that the system can be particularly useful for identifying brand differentiation based on value propositions. The results of this chapter found twelve marketing themes emerging from interviews with business professionals on VAT's utility.

# Chapter 8 – Discussion



"The Pen is Mighter than the Sword" - Edward Bulwer-Lytton

## 8 Discussion

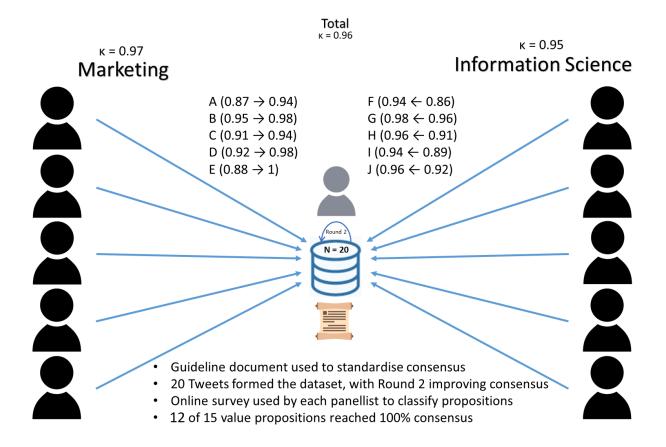
There is a philosophic adage which speaks a poignant truth in our society. It is that the 'pen is mightier than the sword', in other words it describes how effective communication (particularly the written word) will always trump direct provocation. Of course, this makes sense in the time of William Shakespeare and Winston Churchill where the scale of the pen matched the presence of the sword and typically disagreement leads to one of the parties losing their head. Today this aphorism is even truer, with the introduction of the internet by Tim Berners-Lee, our society has shaped itself irrevocably around this system which carries our communications (i.e., the written word) through an environment of cognizant networkers. In the age of social media, the ability for customers to impact one another has become something marketers could have never previously seen, nor *understood*.

The lesson from the internet is that, the scale of the pen (i.e., the ability to convince) is always more justifiable then the sword (i.e., the ability to coerce). The customer has been transformed, from one who has no choice but to accept the sword, to one who becomes the communication source itself (i.e., the pen). In marketing, communication theory began as propaganda ('market to'), but has slowly and surely evolved into a principle of 'market with' (i.e., a conversation with those who become a platform for the message). The line which divides the writer from the message has been obscured behind the *scale of volume* generated

by the internet. For information scientists and marketing managers, this volume of communication is the starting point to investigate effective communication strategies. This thesis, although a grain within the vast quantitative literature, uses data as a tool, to unearth and identify those effective communications for brands within strategic content.

#### 8.1 Research Aims, Conclusions and Implications

The core of this thesis asks three RQs comprising of six studies, and these works collectively expand understanding of the research phenomena of value propositions. In study one, RQ1 asked: How can different value propositions embedded in Social Media data be drafted to form a validated taxonomy? The research answers this based on a literature survey to identify value propositions and also a bottom up approach based on the investigation of Twitter content. The taxonomy was validated using a Delphi study where a consensus-building guideline document to support open coding was given to 10 multi-disciplinary experts, who within two Delphi rounds coded an experimental dataset of 20 brand tweets. Excellent consensus was achieved (96%) on the task of classifying value propositions in tweets and therefore provided a validated measure of consensus for RQ1. The summary of the Delphi panel consensus is shown in Figure 33.



#### Figure 33: Findings from the 2-round Delphi Study

This was a significant outcome, which provided internal validity to the research construct. The construct comprising 15 value propositions could now be used in identifying value propositions embedded in brand tweets. It should be highlighted that the kappa coefficients for this study aligned with current works in social media (Ashley & Tuten, 2015; Poba-Nzaou et al., 2016) and also provided a strong level of confidence that the construct tested amongst experts was a reliable instrument in extracting structure from unstructured marketing content. However, the unexpected result was that although open-ended suggestions for dimensions averaged to three suggestions per expert, no suggestion was uniformly provided across experts and additionally no differences between domain disciplines were found to influence the size of open-ended feedback (i.e., the number of suggestions). These results explain that study one would not have benefited from a larger Delphi panel to generate new dimensions (as a multi-disciplinary panel of 10 experts produced no new consistently shared dimensions), but suggests that additional rounds or larger sample sizes could have potentially altered consensus outcomes due to the level of disagreement present between rounds one and two. Moreover, the lack of commonality among the 10 PhDs on the suggestions for value propositions other than the 15 proposed by the construct, suggests that no additional requirement for value propositions is needed at least for the coffee domain. The study acknowledges that this may differ between product and service oriented domains. Lastly, it was reassuring that both techniques of manual and automatic coding using the same sample produced similar measures of accuracy in identifying value propositions. An outcome of this study is that other researchers can use the procedure employed in this work to extract value propositions (or other constructs) and also evaluate the instrument's validity.

The next thesis question was RQ2 which posed: "How can the value taxonomy developed be used to offer insights into the value co-creation process?". This question initiated the empirical phase of research investigating the co-creating cycle present in MGC and UGC content. To delve deeper into the marketer's sphere of creation, MGC was examined. The following sub-question was asked pertaining to the marketer, RQ2a: How can the taxonomy be used to unearth insights from brand value propositions? The content analysis (study two) answered three marketer-sided research questions as a subset of RQ2a:

- i): Are there differences in the different types of values embedded in tweets?
- ii): Are there differences in values expressed in tweets across brands?
- iii): Can certain values embedded in tweets predict whether user interest is stimulated (e.g. through retweeting or being liked)?

The results of study two found that a) there are statistical differences in brand value propositions (i.e., across messages sampled), b) there are statistical differences in the distribution of values across brands (i.e.,

between brands sampled) and lastly, c) that functional values from Sheth's CVT framework is a statistically significant predictor of both Likes and Retweets.

The insights from structuring brand value propositions in study two produced unique *value signatures* presented in Figure 19. These signatures can be used as a basis to examine brand differentiation from content marketing. It can be observed that once such a technique of segmenting value propositions from brand communication data is employed, differentiation is then a matter of visual examination of results, which provides insights for researchers and practitioners. While it is well-known in the literature that brands employ differentiation strategies to position (DiMingo, 1988; Aaker, 2009) themselves vis-à-vis competitors, in study two this evidence is empirically confirmed from the unique perspective of brand value propositions in this thesis. A primary implication of the results in study two is a proof of evidence that e-channels such as that on Twitter, play an important role in the shaping of brand identities, whether this is done knowingly or unknowingly (i.e., whether or not a brand knows they were embedding these propositions). This is impactful because it is a source of learning for marketers, customers and researchers, who can act upon the unearthed knowledge (e.g. compare value propositions offered by different brands). This indeed was communicated in the practitioners' evaluation of the tool that featured the 'compare' functionality. These observations then call for investigation on how customers engage with a brand's value propositions.

In the third, fourth and fifth study, the co-creation loop involving customer tweets was examined. The customer's sphere of creation was investigated by exploring the relationship between the stimuli of MGC, and the feedback of UGC. These investigations were a part of RQ2 which posed a specific sub-question (RQ2b), which asks: *How can the taxonomy be used to unearth insights in customer value propositions and consumer sentiments in response to brands?* 

All modalities, in which consumers can provide feedback, are referred to as Customer Engagement (CE). In the context of Twitter, five eWOM metrics were present to measure CE. These target metrics are Likes, Shares and Comments, which correspond to shallow CE, while positive and negative valence in UGC represented deep CE. RQ2b was answered through six consumer-sided research questions and these were:

- i): What values propositioned by brands attract more interest (volume of responses) from the community?
- ii): What is the nature of sentiments expressed in response tweets?
- iii): What brand value propositions influence shallow customer engagement (i.e., number of Likes, Shares, Comments)?

- iv): What brand value propositions influence deep customer engagement (i.e., positive and negative valence)?
- v): What insights on value propositions can be obtained by analysing marketing quarters?
- vi): What insights on value propositions can be obtained by analysing marketing domains?

The outcome of the first research question was that the scale of responses generated corresponding to value propositions, were disproportionate. For example, the ratio of frequencies of value propositions embedded in brand and customer value propositions were computed and the top-5 were: Hiring, Social, Emotion, Product and Time. This shows that in reality customers are specific about the value proposition which they choose to respond to, meaning that for marketers designing propositions using a fixed rulebook model (i.e., the 4 P's), may not yield the best outcomes if they were to aim to generate responses. Instead, they must focus on the top performing value propositions. The literature has in fact pointed to designing offerings (Tuten, 2008) which match customer's wants and demands (i.e., customer-generated marketing) and the approach presented has found these value propositions that should be offered to the customers.

With regard to the sentiments of responses based on a value proposition, results found that positive and negative sentiments tended to point towards specific value propositions which generated these appeals, while others tended to generate contention within the community of the top-10 coffee brands. The top-5 propositions associated with positive sentiments from the community were Emotion, Product, Time, Social and Promotion, however this part of the sentiment analysis also uncovered that these were some of the most commonly exchanged dimensions within the brand. Two value propositions stood out, with significantly higher measures of negative sentiments and these were Price and Health. The literature has shown support for the idea that Price maintains a sensitive relationship with customers (Varki & Colgate, 2001), due to Price being a monetary sacrifice from the beneficiary. Through empirical inference of the examined dataset, it was observed that price (see snippet below) was disputed, argued and opposed by customers.

Replying to @Starbucks I'm not in the mood to <u>pay</u> for a <u>expensive</u> beverage. You need to change your <u>price</u> policy

Replying to @DunkinDonuts I thought iced coffee was only \$0.99 this month if you used your <u>card</u>. Having to <u>pay</u> full <u>price</u> and disappointed

Health on the other hand is typically considered a benefit or quality attribute of a product, which is sourced from the provider's perspective; however, the results coming from coffee consumers show that they typically generate large amounts of negative discussions criticising the Health promises communicated by brands.

Replying to @TimHortons I never eat donuts, so sickly unhealthy for people

Replying to @DunkinDonuts made me a cup of <u>SPOILED MILK</u> iced coffee the other day, every store i go to in gwinnett is disgusting. U all need to fix this.

Next, the results from statistical regressions between value propositions embedded in MGC and different forms of CE are scrutinised. Numerous statistical results were shown, with brand-specific predictor variables identified for 8 out of 9 coffee brands for both shallow and deep CE. The generated prediction models from the two-way datasets of top-10 coffee brands are shown in Tables 44 - 46, where the columns are the value propositions that predict certain eWOM outcomes of a particular brand and the rows indicates each of the dependent CE metrics. It can be observed across the five CE metrics that the most common predictor variables in brand-customer relationships were Product/Question (9x), Price (7x), Social (3x), Emotion (5x), Promotion/Time (4x), Weather (2x) and Sport/Entertainment (1x). These R<sup>2</sup> (adjusted for error) values for these models ranged from 10% to 51%. What was unexpected in results, is that the significant correlation coefficients of these models were mostly positive (i.e., greater than zero), apart from the deep CE metric, in which case, 6 out of 21 variables were sternly negative. The implication of this to researchers is that based on the observed sample, a majority of predictor variables exhibited positive relationships to eWOM outcomes, and the inclusion of these predictors increased the eWOM metrics. Furthermore, the range of positive coefficients were from .031 to .693, suggesting that the prioritisation of these predictor variables can fluctuate significantly. So, one should choose independent variables that have higher coefficients because they are more influential in predicting outcomes and employ those value propositions to obtain favourable outcomes (e.g. increase likes). Lastly and most importantly within studies three and four, different propositions were shown to be contributing to shallow and deep CE (i.e., Social appeals predicting Shares and Comments in the sample), and inversely that same variables also behaved differently on different target metrics (i.e., Product appeals predicting every eWOM outcome in the sample). This suggests that models at the brand-level are quite unique (based on underlying value dimensions) with some minor commonalities across brands (e.g. Product value proposition being more common). This has implications for both researchers and practitioners who can then isolate those value propositions which are impactful for obtaining specific eWOM outcomes.

Dependent Variable	STATE OF THE STATE	DUNKIN' DONUTS	Fin Hartons
	Starbucks	Dunkin Donuts	Tim Hortons

$\bigcirc$	Emotion*	Question**	-
Like			
$\Box$	-	Price*, Question*	-
Share			
	-	Product**, Promotion*,	Price**, Social***,
		Question*	Emotion*,
Comment			Question***, Time*
L/J	Question**	Product*, Emotion*,	Product***
		Health*	
Positive valence			
₽J1	Sport/Entertainment*	-	Place***, Question*
Negative valence			

Table 44: Regression results for Starbucks, Dunkin Donuts and Tim Hortons

Dependent Variable	Panera:	Peets Coffee	Costree Res
	Panera Bread	Peet's Coffee	The Coffee Bean
$\bigcirc$	-	Price**	-
Like			
$\Box$	-	Price***, Social*	-
Share			
$\bigcirc$	-	Product*, Price*,  Question**	-
Comment		Question	

£	-	Promotion*	-
Positive valence			
₹JI	Price**, Promotion***	-	Product**, Question*, Health*
Negative valence			Healur

Table 45: Regression results for Panera Bread, Peet's Coffee and The Coffee Bean

Dependent Variable	COSTA SILE DO SET	Caribou COFFEE.	an bon pain.
	Costa Coffee	Caribou Coffee	Au Bon Pain
Like	-	Product***, Time*, Weather*	-
Share	Product*, Social***	Weather**	-
Comment	-	Product*, Price*	-
Comment	Product***, Time*	Emotion**, Question*	-
Positive valence			
Negative valence	_	Promotion*, Emotion*, Time*	<u>-</u>

Table 46: Regression results for Costa Coffee, Caribou Coffee and Au Bon Pain

The implications of these findings in Tables 44 - 46 for marketing practitioners are two-fold. First, it confirms the significance of the traditional marketing mix (4 P's) within social media, as these variables

were abundant (see bolded variables in Tables 44 - 46) in the significant models that emerged. Therefore, it can be argued that the marketing mix is an *effective communication strategy* within social media. Second, this research also points to evidence of the *diversification of the variables which trigger* shallow vs. deep CE (i.e., different set of dimensions tend to influence these two types of metrics), and thus marketers should be selective about the variables based on the outcomes they wish to maximize (e.g. deep vs. shallow outcomes) and then offer specific value propositions that can help realize those outcomes.

Next, the findings of the fourth study in this research are discussed that relate to contrasting the value propositions between two operating periods (2015 and 2018) for the top-10 coffee brands. The results show that for specific brands, similar value propositions re-emerged in discovered models, which suggests empirical evidence that certain brands continue to use specific effective value propositions in practice. Also, conversely evidence for the opposite that time differentiates the stimulating propositions offered by brands also emerged. Most notable among the result for conformance of value propositions across time was the result for Dunkin Donuts (see Table 47). The difference in significant value propositions can be seen for other brands such as Starbucks and Peet's Coffee. Within the study results, 5 out of 9 brands generated predictive models between the two observed durations as shown in Table 47 with the columns representing the brand and the row indicating the significant value propositions which influence eWOM outcomes.

Period	Starbucks	Dunkin	Tim Hortons	Peet's Coffee	Costa Coffee
		Donuts			
2015	Sport/Entertai	Price*,	Product***,	Product*,	Product***,
	nment*	Promotion*,	Price**,	Price***,	Social***,
		Question**,	Social***,	Promotion*,	Time*
		Health*	Emotion*,	Social*,	
			Question***,	Question**	
			Time*		
2018	Informative*	Price***,	Emotion**	Sport/Entertai	Price*, Place*,
		Place**,		nment*,	Promotion***
		Promotion*		Time*,	, Emotion*,
		Time*		Charity*	Informative*

Table 47: Regression modelling for 5 brands from 2015 and 2018

The idea that compelling value propositions are reintegrated within practice (i.e., market orientations are maintained) is a sensible practice and has been noted within the literature (Kohli & Jaworski, 1990). What

is absent within the discussion on business strategy is how offerings are consistently offered within digital platforms. These findings are an important examination, as value dimensions which are found to be appealable over time, will be perceived positively by consumers, for if strategy is wrongly targeted then consumers are likely to become disengaged. The findings from time comparisons show that the tendency of brands is towards differentiation of propositions (i.e., using different offerings across periods), however one focal trend which can be observed in the sampled datasets is the reoccurring and influential role of the marketing mix (i.e., see bolded variables in Table 47).

Lastly, within the empirical phase of research, two independent datasets were contrasted from the domains of coffee and car brands to demonstrate the scalability of the proposed approach. The summary statistics (see Table 32) from study five provides evidence both for difference and similarity across both market domains. The value propositions which exhibited the most difference were Product, Place, Sport/Entertainment, Emotion and Informative dimensions. The propositions which exhibited the most similarity were Social, Question, Time, Health, Hiring, Charity, Weather and Eco-friendly dimensions. Therefore the main factor of difference from the top-down between market domains, is largely due to a small number of variables such as the Product which is accompanied by less frequented propositions (i.e., Time, Question).

Difference from the bottom-up (i.e., customer tweets) were more revealing for market domains. Consumer sentiments were the significant area of difference between the brands analysed in the study. Sentiment analysis found that the proportion of sentiments in the coffee domain was more favourable (73.25% positive, 26.5% negative) than the automobile domain (65.7% positive, 34.3% negative) and therefore based on the two market domains examined, automobile industry exhibited a noticeable skew on negativity based on the feedback generated in response to value propositions offered by the brands.

In the last study of this thesis, RQ3 asked: How can software based on a value taxonomy be developed and tested for utility? In study six, qualitative surveys were collected through students and professionals, which provided a measure of external validity for the approach developed. The results found that end-users (see Figures 30 - 32) identified strong support for VAT's analytics, usability and usefulness domains.

Furthermore, the marketers who were involved as a research cohort participated in open-ended interviews, which generated a number of common themes discovered following analysis of discussions. The themes uncovered in interviews, related to products, services, organisational performance, consumer sentiments, analytics tools and value propositions. Each professional maintained a highly organised strategy with multiple teams in order to generate timely content. Content marketing strategies were heavily dependent on the product or service being offered, the target audience persona and the sentiments that was being

conveyed. Four marketers indicated that they used content to drive engagement, while one indicated that the platform was primarily a branding platform. Four of these marketers used well-known analytics tools such as Google Analytics, Twitter and Facebook Integrated Insights, while one indicated a manual analysis process with indication that software will be introduced into their business process. All marketers believed that the VAT system was valuable and in particularly liked two features: the one that compared competitors' value propositions and the one that presented consumer sentiments for each brand.

### 8.2 Stakeholders Benefited by this Research

Two primary stakeholders benefit from the original contributions made by the thesis, namely academic researchers through knowledge contributions and business practitioners through practical contributions.

The text mining technique employed in this thesis is novel as it drives research on co-creation and produces 'theory-in-use' which can support further conceptual developments by empirically grounding business strategy on quantitative units of empirical data exchanged in two-way digital environments. For researchers, this work presents a mid-range construct (i.e., value taxonomy) which can build business intelligence on a brand based on unstructured sources such as social media content. As researchers are learning to generate and contribute knowledge to new repeatable measures for digital marketing, this work has proposed an approach for researchers to operationalise and extract insights on value propositions within social media.

The models and software tool created as a part of this thesis can be used to obtain actionable insights for business practitioners. From the descriptive, diagnostic and predictive analytics modules of the tool, strategic support is provided to marketing managers who can then use the insights to design effective social-media strategies to offer value propositions that target specific eWOM metrics. Also, the software tool can be used to gain competitive advantage in brands that use it.

#### 8.3 Limitations and Future Work

The design of this research has been inherently bottom-up, and although this approach benefits from scalability, there are some associated constraints. A limitation of this research exists is that a bag of words was needed for labelling value propositions. For example, in a new domain, the set of all Product names used must be captured using various techniques including NLP techniques. Another limitation is that the work ignored grammatical structure, which is a linguistic context significant of a structure in its own right. The "how" of consumer communication, is justifiably as important as the "what", a notable limitation of this research is that a grammatical ontology was not used. For example, if a combinatorial approach (i.e., syntax and semantics) is used then the higher level meaning constructed where a phrase can have more than

one meaning (i.e., is situational based on the meanings being inferred) across the context of the sentence rather than simply based on the exact meanings of lexical semantics within the sentence. A third research limitation present is that the primary unit of analysis for unstructured content (e.g., collected, analysed, visualised) was text-based tweets. The drawback of this limitation is that non-textual content formats such as images, audio or video tweets which were not considered could potentially provide further insights on value propositions. This work therefore is limited to discourse analysis which is text-based. Having said that, the approach developed in this thesis serves as a groundwork towards multi-format content analysis for future works. As a further matter, a single e-channel (i.e., Twitter) is investigated and there is a need to investigate multiple platforms that are popular in content marketing, as e-channels capture separate user audiences.

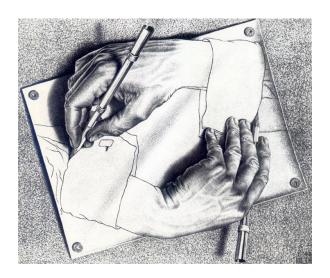
Future work should seek to implement a combination of both semantic (i.e., meaning) and structural (i.e., syntax) analysis in order to augment the strengths of both methodologies and produce unique empirical and conceptual solutions for researchers and practitioners. For instance, while semantics is important for extracting meaning, syntax can bolster such meaning with additional context which can diversify the discourse being analysed. Furthermore, as the case for quantifying low-level value propositions in social media marketing has been alluded in this thesis, a gap still remains on how empirical value propositions in practice correspond to conceptual definitions of value propositions (i.e., the promises made in mission statements). For instance take the example of McDonald's 2013 mission statement, "McDonald's brand mission is to be our customers' favorite place and way to eat and drink...which center on an exceptional customer experience - People, Products, Place, Price and Promotion. We are committed to continuously improving our operations and enhancing our customers' experience" (Strategic Management Insight, 2020). Insights on the alignment of the conceptual and empirical use of value propositions can aid business strategists to communicate uniformly and 'on brand', and therefore have better success in targeting the right audience. Further works need to uncover the relationship between the value propositions being communicated and if these accurately reflect the values of the organisation. In addition to empirical insights, deeper contexts in data hold a significant key to identifying deeper layers of engagement within audiences of customers, as this was touched on in shallow and deep CE. Future research should explore customer-to-customer communications, as this is an important reference point for the customers learning process in marketing. As such this thesis only considered B2C and C2B interactions. For example, the literature indicates that C2C messaging in social media has a direct impact on consumer purchase intention (Adjei et al., 2010). By conjoining contextual datasets of social media interactions, the journey consumers have in marketing interactions along a purchase funnel (Strong, 1925) can be segmented to different contexts. Respectively, a larger context can be developed through both content and context using researcher

tools, techniques and models, which can be seeded in value propositions sourced from online content which ends with sales revenue for the business.

## 8.4 Summary

In this chapter, this thesis has outlined the key findings and the implications of the six study results to both theory and practice (as relevant). The noteworthy findings in this thesis work was deliberated regarding the impact the outcome has to conceptual understandings of value propositions and the empirical capabilities of quantifying their presence in content marketing. In this chapter, the quantitative and qualitative areas of research to which this work contributes has been discussed. Also, the stakeholders who benefit from it have been outlined and the future path of investigation which requires scrutiny has been delineated. The findings from this chapter shows evidence that insights remain dormant in unstructured content and that structuring such data into intelligence provides data-driven support to practitioners.

# **Chapter 9 – Conclusion**



"For last year's words belong to last year's language and next year's words await another voice" – T.S Eliot

## 9 Conclusion

In this research thesis, the role of value propositions within social media has been explored. In part this research builds an argument that social media content (i.e., 280 character messages exchanged on business pages) can be analysed from a co-creation viewpoint, and in particular through the marketing lens of value propositions. This work has contributed a value taxonomy construct to structure this perspective and validates its use through three phases of research development. In phase one, this work investigated the internal validity of the construct by orchestrating a Delphi method (study one) with a multi-disciplinary panel of academic experts. Next this research shifted to empirical analysis by utilising the construct to unearth insights from data samples in social media marketing. This provided practical evidence of the constructs utility, which highlights the importance of the approach developed. In the last phase of research, qualitative research was conducted to evaluate the construct from the perspective of business professionals and therefore gained external validity. The findings in this research are significant in many areas, contribute real-word implications and establish opportunities for future avenues for researchers and marketing managers to uncover meaning, where it previously may be dormant.

## 9.1 Conclusion to Research Objectives

This thesis has offered insights through six different studies investigating the phenomena of value propositions in social media. The first study determined in what way, researchers could measure the accuracy of classifying value propositions in marketing content. For this purpose, a systematic approach (i.e., Delphi) was employed to test the research construct through observational use. The study discovered satisfactory measures of consensus on the constructs ability to encode value propositions embedded within brand messages and therefore granted internal validity for the value taxonomy.

The second study aimed to use the taxonomy validated by identifying the 15 value propositions within a longitudinal sample of brand tweets ( $n_b$ =658) of the top-10 coffee brands using content analysis. The study discovered evidence of a) statistical differences in value propositions across the sample, b) statistical differences of value propositions across brands and c) regression results which indicate that certain value propositions predict user interest (i.e., Likes and Shares).

The third study combined messages originating from marketing stimuli ( $n_b$ =658) and marketing feedback ( $n_c$ =12077) and developed an automated technique of classifying value propositions based on a corpus. The study discovered descriptive insights (volume of value propositions in responses), diagnostic insights (sentiments associated to value propositions) and predictive insights (predictions on how value propositions influence shallow and deep CE).

The fourth study replicated the methodology proposed across two marketing quarters in 2015 ( $n_b$ =658,  $n_c$ =12077) and 2018 ( $n_b$ =290,  $n_c$ =8811). The study discovered evidence that across marketing quarters, social media marketing exhibits trends of consistent use of specific value propositions and also that brands differentiate their value offerings over time.

The fifth study explored the generalizability of the methodology by examining how value propositions differ across two marketing domains of top-10 coffee brands ( $n_b$ =290,  $n_c$ =8811) and top-10 car brands ( $n_b$ =635,  $n_c$ =7035). The study discovered that consumer sentiments between market domains significantly differed and also that brands across domains commonly adopted variables from the marketing mix.

The last study aimed to bridge academic knowledge with industry domain knowledge by testing a MkIS based on value propositions with marketing managers. The value taxonomy was embedded in the software system VAT and made available through a web application allowing for end-users to perform activities such as classifying and comparing tweets. The study discovered a favourable support by participants, where a significant majority agreed that the VAT system was useful and that it provided supportive and actionable insights across the three surveyed domains of analytics, usability and usefulness.

## 9.2 Summary

To conclude, this research puts forth the case that social media contains rich insights when viewed from the lens of value propositions. Presented is an approach, based on a multi-dimensional value taxonomy which can be leveraged to encode value propositions embedded within social media content. The construct is first validated using a Delphi panel of academic experts, tested using manual and automatic coding techniques and then evaluated from the perspective of business professionals. The outcomes of the six studies conducted in this research provides statistical evidence and business insights which assert that brands knowingly or unknowingly differentiate themselves on the basis of value propositions. This has real-world implications for researchers as well as marketing managers who are attempting to gain a better grasp of brand awareness and engagement. What brands communicate in MGC is only the beginning of a story of co-creation, which continues in UGC. The empirical models outlined in this research connect stimuli and feedback (i.e., customer engagement), that exist in the forms of MGC and UGC and exemplifies content as a co-creation cycle. Most significantly, this work has grounded the concept of value propositions to marketing content, which can be scrutinised in other e-channels to understand the nature of value propositions offered to the market through different platforms.

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## **Appendices**

## Appendix A: Study 1 – Value Taxonomy Delphi Guideline Document

The goal of the study is to ascertain consensus on the subject of value classification in brand tweets using a Delphi approach. The Delphi Method originated in 1963 at the RAND Corporation think-tank as a technique to garner expert knowledge (Baker, Lovell, & Harris, 2006) and lead to consensus in the absence of reliable truth. In the previous work of the researchers involved in this study, they have identified 15 value dimensions based on the Marketing literature and content analysis. To establish validity, this study is using a panel of experts to evaluate a sample of tweets using the Delphi approach.

Each panellist will independently identify the values present in a series of 20 tweets of top coffee brands (in the first phase using an online survey - https://www.surveymonkey.com/r/PNBCF7P). This document provides information about the 15 value dimensions developed using examples. The results from the first round will be summarised with the findings discussed in personal meetings between the participant and the primary researcher of this study. Following a discussion of potential disagreements and suggestions in response results, the panellists will then participate in feedback for the second round.

The Table given below shows the 15 value dimensions (Column 1) and a brief description of each value dimension (Column 2). Sample tweets for each of these values denoting the presence of a value is given for each value dimension. Note that classifications should be seeded from words propositioned within the brand tweet rather than an individual's familiarity, predisposition or stereotype. Also, a tweet can contain multiple value propositions, experts are expected to classify each value embedded in the tweet.

Value	Value description & examples
Proposition	
Product	Tweet relates to product satisfying consumer demand, either tangible commodity or intangible service
	Example 1: Beauty is looking bright. The Mediterranean Chicken & Quinoa Salad. #PaneraGoodness
	Example 2: A little sweet. A little salted. Because life is all about balanceand Sweet and Salted Cold Brew

<sup>&</sup>lt;sup>5</sup> real and not imaginary; able to be shown, touched, or experienced

<sup>&</sup>lt;sup>6</sup> a substance or product that can be traded, bought, or sold

 $<sup>^{7}</sup>$  a system or organization that is responsible for a particular type of activity, or for providing a particular thing that people need

	Example 3: The cosiest of cups on the coldest of nights. #RedCups
Price	Tweet relates to pricing (reference/actual) or method of purchase (\$, Free, Sale)
	Example 1: Coffee Connoisseurs and Latte Lovers rejoice! You can make your favorite Starbucks drinks at home with #Verismo, just <u>\$</u> 59.
	Example 2: Time to st Ock up! Save 30% on Verismo pods at participating US stores, now through 8/15.
	Example 3: Bring in your same day receipt after 2PM to get a grande cold beverage for just \$2.50 at participating US stores.
Place	Tweet relates to location, distribution or place of access to the product/service
	Example 1: Order at the top. Pick up at the bottom.   ##MobileOrder  ##MobileOrder
	Example 2: Skip the <u>line</u> and cozy up with your <u></u>
	Example 3: Can't wait to hear your voice, @common. 1:30pm EST—today at Rufus King Park, Jamaica, Queens. #NYC #TurnUpTheVote
Promotion	Tweet relates to advertising, PR, brand organisation/Image/loyalty and sales promotion (free, save, % off)
	Example 1: Turn Starbucks for now into #StarbucksForLife. Join <u>Starbucks Rewards</u> to play
	Example 2: Happy #NationalSmoresDay • We're celebrating with 30% off all s'mores packs thru 8/14! (US only)
	Example 3: Happy *3rst* of July: \$3 grande Frappuccino 3 days (July 2-4) 3 hours (noon-3pm) (at participating stores)
Social	Tweet relates to notion of interactive collective co-existence (family, friends, mum/dad, @twitter handle)
	Example 1: Congrats to our fellow <u>Canadian</u> ! Excited for <u>@VanessaGrimaldi</u> to show <u>@viallnicholas28</u> what true love really means: a Tim Hortons donut
	Example 2: "We the # <u>veterans</u> of Starbucks would like to set the record straight." —A letter from <u>Starbucks Armed Forces</u> <u>Network</u>
	Example 3: Fresh fall flavors, inspired every day. Ask your <u>barista</u> for their customized favorite.   ##BaristaOriginals
Sport/Enterta	Tweet relates to organised entertainment participation
inment	Example 1: Friends in high places. Thanks for sharing the #TimbitsHockey moment, @tsakaki9
	Example 2: Cross-coffee ski
	Example 3: Bean <u>poetry</u> : Groovy bean your line is so fine gonna make you mine - #CascaraLatte

Emotion	Tweet relates to feelings of sensation or <i>affective</i> <sup>8</sup> state <sup>9</sup> in regards to product/service/brand
	Example 1: Monday is yours to conquer #MondayMotivation
	Example 2: We believe in acceptance, inclusivity, and humanity—for everyone.
	Example 3: #NitroColdBrew: a <u>velvety</u> cascade of <u>delicious</u> .
Informative	Tweet relates to proposition 10 of brand/product/service information (For more info, Introducing, visit http://)
	Example 1: Le croissant, nonchalant.  Have a buttery, flaky, deliciously scrumptious #National Croissant Day
	Example 2: We're relieved to <u>report</u> that all partners & customers from our store in Kokomo, IN are safe. Our thoughts are with all those affected. ♥
	Example 3: When coffee and craft beer collide. <u>Introducing</u> the Espresso Cloud IPA: <u>http</u> ://sbux.co/2dVO5m8 #StarbucksEvenings
Question	Tweet relates to direct question (?)
	Example 1: Weekend treat, anyone? Try an #affogato: ice cream + espresso! #yum
	Example 2: Are you RRReady?
	Example 3: © or ©? Depends on what looks better in a Snapchat filter. #FirstPSL
Time	Tweet relates to time, date, day, month, year or schedule
	Example 1: The sweetest pot of gold. Happy #StPatricksDay!
	Example 2: Just a little more holiday before the new year. #HolidaySpiceFlatWhite
	Example 3: <u>Holiday</u> flavors with all the trimmings. #RedCups
Health	Tweet relates to state of complete physical, mental, and social well-being
	Example 1: It's a good day for the <u>clean food</u> movement. Welcome to the team @Caribou_Coffee: http://bit.ly/2mXbWG1
	Example 2: #NEW Freshly prepared Greek Salad now available at 2002 Queen St E. #Greek #Salad #Healthy #TimHortons
	Example 3: <u>Healthy sauces</u> offer great taste without the <u>calories</u> . Check out these <u>healthy sauce recipes</u> from @Shape:

 $<sup>^{8}</sup>$  connected to emotion

 $<sup>^{9}\,</sup>$  a condition or way of being that exists at a particular time

 $<sup>^{10}</sup>$  an offer or suggestion

	https://t.co/tUz1XQHi79
	- Angelin No. 10 Early 1
Hiring	Tweet relates to career opportunities with the brand
_	
	Example 1: Last year, 6,535 Starbucks employees received full college tuition coverage #ThanksToYou ₩
	Example 2: We're committed to <u>hiring</u> 10,000 veterans & military spouses by 2018. Two years in & we're halfway there.
	# <u>HireVets</u>
	Example 3: 1,700 young people. 25 companies. 500 <u>immediate job offers</u> . We're just getting started. #HireOpportunityYouth
	Example 3. 1,700 young people. 25 companies. 500 miniculate job oriers. We're just getting started. #Interopportunity roun
Charity	Tweet relates to philanthropy <sup>11</sup> or morale action (donate)
3	
	Example 1: 185k hours of volunteer hours in one month. To everyone who donated their time to
	#GlobalMonthofService—thank you!
	Example 2: Help the Red Cross provide food, water & cots for refugees across Europe. http://sbux.co/AidRefugees
	# <u>AidRefugees</u>
	Example 3: Activate a Veterans Card now thru 11/11 & we'll donate \$5 to @the_USO to support service members & their
	families.
	Tallinies.
Weather	Tweet relates to presentation of elemental or atmospheric weather conditions
	Example 1: #SpringCups have sprung! *
	Example 2: A campfire of caramelly, buttery espresso—smothered in an <u>avalanche</u> of <u>icy</u> goodness.
	#IcedSmokedButterscotchLatte
	Example 3: Summer uniform. #IcedVanillaLatte
	Example 3. Summer uniform: #iced vanifiaLatte
<b>Eco-friendly</b>	Tweet relates to ethical understanding and practice of environmental-friendliness (EarthDay)
·	
	Example 1: A college student creates an app that can reduce food waste and end hunger. #Upstanders http://sbux.co/2cknV7k
	Example 2: Single Origin coffee. 100% ethically sources beans all picked from the same committed, small grower. Pic:
	@designcue
	Example 3: Our goal: Protect the health of coffee trees and ensure <u>sustainable growth</u> . #EarthDay
L	

the giving away of money to organizations that help people

## Appendix B: Study 1 – Delphi Panellist e-Classification Procedure

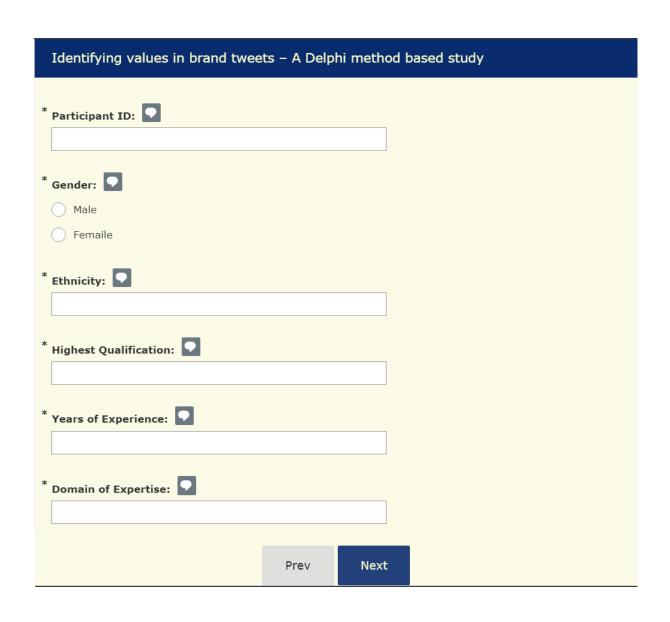
## Identifying values in brand tweets - A Delphi method based study

Thank you for agreeing to take part in this survey as a part of the Delphi study on identifying values present in brand tweets. This survey aims to scrutinize the perceived judgements of several panelists' in order to validate the value taxonomy comprising 15 value categories. Please refer to the provided guideline document for the description of the value categories and example tweets that contain these values. Note that a tweet can have one or more values and your goal is to identify all the values that are present.

You will be presented a total of 20 tweets and you need to identify the values present in these tweets. Please make note of any other value you identify in the tweet.

The estimated overall time of completion is 30 minutes, but take as long as you believe is needed. Be assured that all answers you provide will be confidential.

Next



Identifying values in brand tweets – A Delphi method based study
One was cold and one was hot. Pick just one? They thought not. #CoconutmilkMochaMacchiato
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study	
The upside-down #CaramelMacchiato — pairs well with frozen waffles and fantasy-based tabletop games.	
Product	
Price	
Place	
Promotion	
Social	
Sport/Entertainment	
Emotion	
Informative	
Question	
Time	
Health	
Hiring	
Charity	
Weather	
Eco-friendly	
Other (please specify)	
Prev Next	

Identifying values in brand tweets – A Delphi method based study
Buy any size #Macchiato hot or iced, get a 2nd free. March 2-6 from 2-5pm.
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Sugar and spice. Our new Churro Donut with Caramel Filling is everything nice.
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

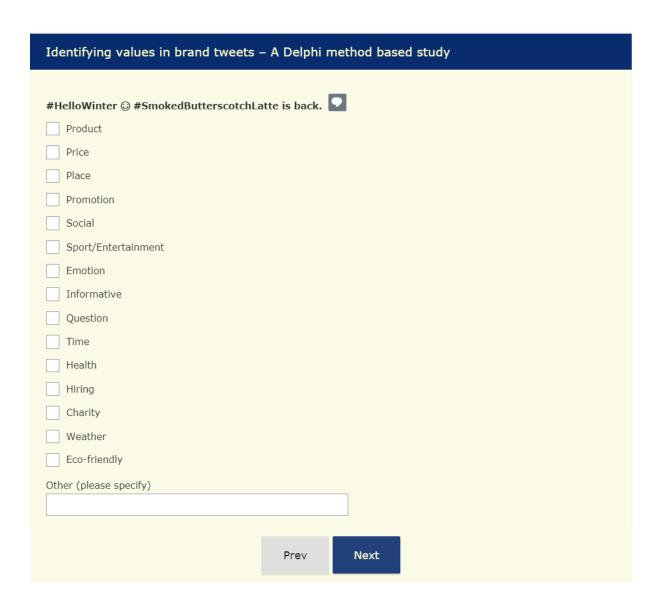
Identifying values in brand tweets – A Delphi method based study
New year, new muffins
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
So much to love, So much to share. So much #MoltenChocolate Sending ♥ everywhere.
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Lovely to meet you, #CascaraLatte. May this year be full of subtle sweetness.
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev

Identifying values in brand tweets – A Delphi method based study
We pride ourselves on being an open book when it comes to nutrition. Visit http://aubonpain.com/menuall to view our menus.
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Au Bon Pain is giving everyone a #free small coffee this Tues, Nov 15, 2-5PM! RT to share this treat with a friend! #FreeCoffeeDay
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next



Identifying values in brand tweets – A Delphi method based study
#CaffeMisto = coffee + steamed milk #Latte = espresso + steamed milk + foam
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

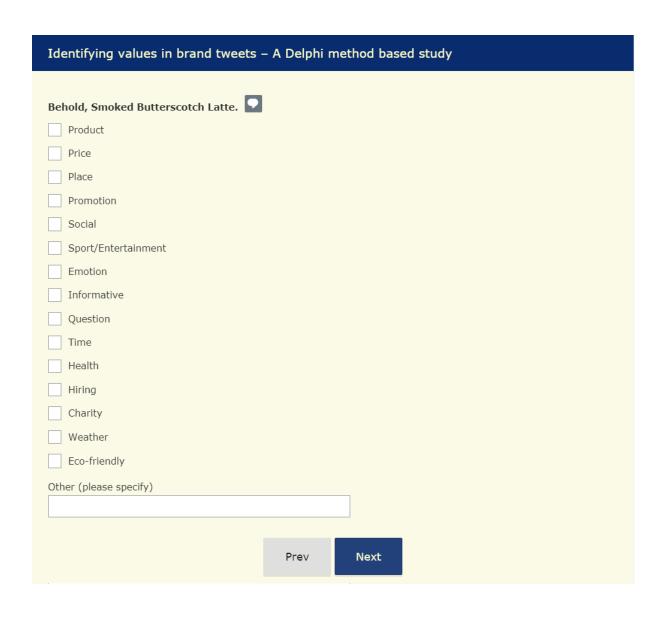
Identifying values in brand tweets – A Delphi method based study
All locations close at 1pm today so our employees can spend time with their friends & family. Happy  Thanksgiving to all! #CaribouCoffee
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Strawberry pastry Filled with love and happiness Also known as jam #Megpies #Haiku
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

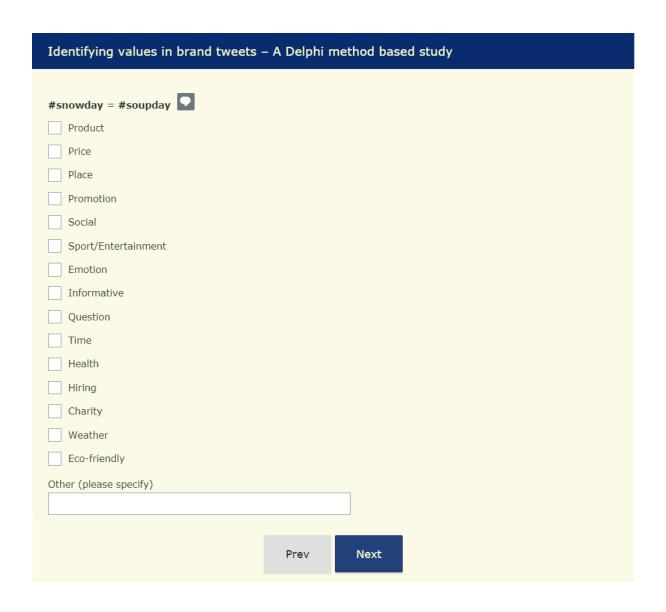
Identifying values in brand tweets – A Delphi method based study
Sweet, spicy & chocolatey. #MexicanCoffee
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Fun fact: the #FlatWhite originated in Australia in the mid '80s. 💝 🖢
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

Identifying values in brand tweets – A Delphi method based study
Because coffee tastes better with friends #CaribouCoffee #NationalFriendshipDay
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next



Identifying values in brand tweets – A Delphi method based study
A Starbucks store nestled between two continents. #WhereInTheWorld
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

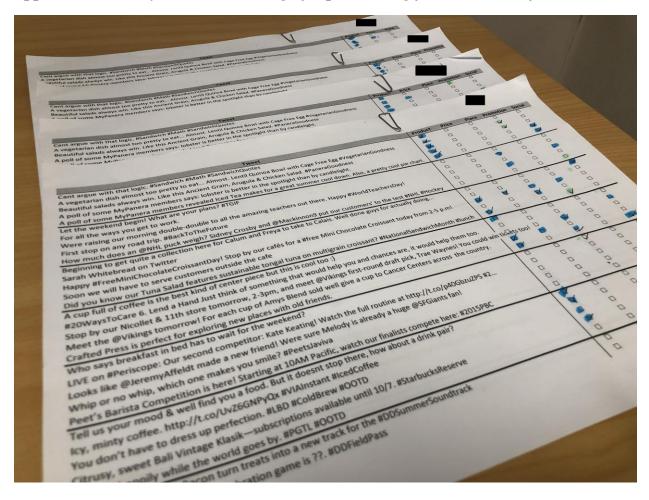


Identifying values in brand tweets – A Delphi method based study
The sign of a good morning. #CoffeeFirst
Product
Price
Place
Promotion
Social
Sport/Entertainment
Emotion
Informative
Question
Time
Health
Hiring
Charity
Weather
Eco-friendly
Other (please specify)
Prev Next

# Appendix C: Study 2 – Coder Sheet for Content analysis of 50 MGC Sample

Tweet	Product	Price	Place	Promotio	n Social	Sport/Entertainment	Emotion	Informative	Question	Time	Health	Hiring	Charity	Weather	Eco-friendly	y Othe
Cant argue with that logic. WSandwich #Math #SandwichQuotes	[0]	0	0	0		O .	0	0	n .	0	0	0	0	0	0	0
vegetarian dish almost too pretty to eat Almost. Lentil Quinoa Bowl with Cage Free Egg #VegetarianGoodness	(*)	0	- 0	0	- 0	0	•	0	П	- 0		0	0	0	0	- 0
Beautiful salads always win. Like this Ancient Grain, Arugula & Chicken Salad. #PaneraGoodness	•	0	0	0	0	0	•	0	П	0	0	0	0	0	0	0
A poll of some MyPanera members says: lobster is better in the spotlight than by candlelight.	(4)	0	0	0		0	0		п	0	0	0	0	0	0	0
A poll of some MyPanera members revealed iced Tea makes for a great summer cool down. Also, a pretty cool pie chart.	(*)	0	0	0		0	•		П	•	0	0	0	(4)		0
Let the weekend begin! What are your plans? #TGIF	П	п		n .		п		П	P	P	п	п	П	п	П	п
For all the ways you get to work.		0	(4)	0	0			0	п			0		0	0	- 0
Were raising our morning double-double to all the amazing teachers out there. Happy #WorldTeachersDay!		0	- 0	0	(2)		(4)	(4)	п	(*)				0	0	- 0
First stop on any road trip. WBackToTheFuture			(4)	0	0		- 0	- 0	п	(*)			- 0	0		- 0
How much does an @NHL puck weigh? Sidney Crosby and @Mackinnon9 put our customers' to the test #NHL #Hockey				0	(4)	(2)			P	п				0		- 0
ning to get quite a collection here for Calum and Freya to take to Calais. Well done guys for actually doing		n	- n	-	7	Ď.	-	-		n	n	n	-	n	-	n
Sarah Whitebread on Twitter	0	- 0	- 0	- 0	0		- 0	(4)	п			-	0	0		- 0
Happy #FreeMiniChocolateCroissantDay! Stop by our cafés for a #free Mini Chocolate Croissant today from 2-5 p.m!	(2)	(2)	(4)	(4)	0		(2)		п	(4)		0	0	0		- 0
Soon we will have to serve customers outside the cafe	0	0	(2)	0	0		0	0	П			0	0	0	0	- 0
Did you know our Tuna Salad features sustainable tongal tuna on multigrain croissant? #NationalSandwichMonth #lunch	(2)	0	0	- 6	- ii	0	0		P	(4)	0	0	0	0		0
A cup full of coffee is the best kind of center piece but this is cool too:)	P	-	- n	-	-		2	-	-	-	-	-	-	-	-	0
#20WaysToCare 6. Lend a Hand Just think of something that would help you and chances are, it would help them too.	0	0	- 0	0	(2)		[4]		-			0	0			- 0
	Ö	0	(2)	0					n		0		0	0	0	0
Stop by our Nicollet & 11th store tomorrow, 2-3pm, and meet @Vikings first-round draft pick, Trae Waynes! You could win tickets too!	(2)	0	(0)	- 0	0		0	0	-	(4)	0	0		0	0	- 0
Meet the @Vikings tomorrow! For each cup of Amys Blend sold well give a cup to Cancer Centers across the country.	(0)	0	(2)	- 6			(F)	0			- 0	0		0	-	- 0
Crafted Press is perfect for exploring new places with old friends.						U		U		0	U		U			
Who says breakfast in bed has to wait for the weekend?	D	11	11	11	11	11	- 11	11	121	1-1	11	11	11	11	- 11	- 11
LIVE on #Periscope: Our second competitor: Kate Keating! Watch the full routine at http://t.co/p40GbzuZPS #2		0	0	0	U	•		•	111	•	U	0	0	U	U	
Looks like @JeremyAffeldt made a new friend! Were sure Melody is already a huge @SFGiants fan!	0	0	0	0	•	(e)	0	0		0	0	0	0	0		0
Whip or no whip, which one makes you smile? #PeetsJaviva	0	0	0	0	- 0	0	•	0		0		0	0	0		0
Peet's Barista Competition is here! Starting at 10AM Pacific, watch our finalists compete here: #2015PBC	0	0	0	0	0	(e)	0	•	п	(*)		0	0	0		- 0
Tell us your mood & well find you a food. But it doesnt stop there, how about a drink pair?	3	п	п	п	п	П	3	п	9	п	п	п	п	п	п	
Icy, minty coffee. http://t.co/UvZ6GNPyQx #VIAInstant #IcedCoffee	(*)	0	0	0	0	0	0	0	П	0	0	0	0	0		0
You don't have to dress up perfection. #LBD #ColdBrew #OOTD	(*)	0	0	0	0	0	•	0	П	0	0	0	0	0	0	0
Citrusy, sweet Bali Vintage Klasik—subscriptions available until 10/7. #StarbucksReserve	(*)	0			0	0	0	•	П	•	0	0	- 0	0		0
Sipping happily while the world goes by. MPGTL MOOTD	0	0	0	0	0	0	•	0	П	-0	0	0	0	0	0	0
Watch @ChristylezBacon turn treats into a new track for the #DDSummerSoundtrack	П	П	п	P		P		-	п	П	П	п	П	П	п п	П
Its good! @BdotAdotSs celebration game is ??. #DDFieldPass	0	0	0	0	0		•	0	П	0	0	0	0	0	0	- 0
Whos looking forward to a little #LaborDay ???		0	0	0	0	0	•	0	P	•	0	0	0	0	0	- 0
Share on Twitter or Instagram why you enjoy breakfast any time of day w/ #BreakfastWhenevs & #Sweepstakes and you could win!	- 0	0	0		0	0	0	0	П	•	0	0	0	0	0	0
You could win a \$50 mGift or the grand prize of a year's worth of DD Breakfast Sandwiches! NoPurchNec21+	(*)	•	0		0	0	- 0		П	•	0	0	0	0	0	- 0
McCafé coffee at home, to help you hit the ground(s) running. ??	-	П	P	П		Π	P	П	П	П	П	П	П	П	П	П
Warm up with McCafé before you head out this morning.		0		0	-0	0		0	п	•	0	0	0	0	0	- 0
Autumn is a season of changes, and with McCafés seven flavors, youre ready to change it up as often as you like.	(*)	0	- 0	0	-0	0	0	0	П	•	0	0	-0	(4)	0	- 0
If theres any day to sayor coffee from the bean to the brew, todays the day, #NationalCoffeeDay	•	0	0	0	0	0	0	•	П	•	0	0	0	0	0	0
You can now have premium McCafe coffee at home. Things are falling into place.	(*)	0		0	0	0	0	•	П	0	0	0	0	0	0	0
Download our Coffee Club App for exclusive news, rewards and offers, Install here:	P	п	п	P	P	п	п	P	п	П	П	п	П	п	п	
Sea Salted Caramel MuffinWell Thursday is the new Friday #CostaCoffee	(*)	0	0	0	-0	0	0	0	п	(4)	0	0	0	0	0	- 0
#BeautifullyPredictable #OldParadiseStreet	0	0		0	0	0	•	0	П	-0	0	0	-0	0	0	- 0
Here we go! Good luck #ENG #IRE #WAL #SCO #RWC2015	0	0		0	0	•	•	0	п	•	0	0	0	0	0	0
Make your routine wonderful with our new dark chocolatey #OldParadiseStreet No.9 Limited Roast	(*)	0	(4)	0	0	0	•	0	п		0	0	-0	0	0	- 0
What are you having for breakfast today? #cbtl #thecoffeebean #tea Instagram photo from: karo_gram	P	h 1	10	- n	10	n .	-	h 1	D	P	n .	n .	n .	I n	-	-
Life is never too busy for a cup of #coffee and a treat! #thecoffeebean Photo Credit:	(*)	- 10	- 0	- 0	10		- 0		п			- 0	- 0			- 0
What do you do after you have your first cup of coffee? Wobtl Withecoffeebean Mmorning	(4)	0	0	0	10	0	0	0	P	(*)	0	0	0	0	0	0
Special thanks to @USCTMB @mannystreetz for helping us celebrate #NationalCoffeeDay! #thecoffeebean #coffeeplease	(2)		0	0	(2)		(2)		п	(*)				0		- 0
Special trianks to @ OSC IMB @mannystreetz for neiping us celebrate wivational contectary intreconceptease  Nothing goes better than a pomegranate blueberry flicedtea and cheering on the boys in blue. @dodgers	(2)	0	0	0	(2)	(a)			-			0	0	0		0

Appendix D: Study 2 – IRR Scoring of Open coding for 3-months of MGC



Appendix E: Study 3 – LIWC 2007 Corpus of 464 Dimensions

	1		2	3	4	5	6	7	8	9	10		11
	Funct		Pronoun	Ppron	- 1	We	You	SheHe	They	Ipron	Article		Verbs
а	he's	since	anybod*	hed	i	lets	thee	he	their*	anybod*	а	accepted	hasnt
about	highly	singl*	anyone*	he'd	ld	let's	thine	hed	them	anyone*	alot	admit	hasn't
above	him	six*	anything	her	ľd	our	thou	he'd	themselves	anything	an	admits	hate
absolutely	himself	so	everybod*	hers	ľII	ours	thoust	her	they	everybod*	the	admitted	hated
across	his	some	everyone*	herself	lm	ourselves	thy	hers	theyd	everyone*		affected	hates
actually	hopefully	somebod*	everything*	hes	ľm	us	ya	herself	they'd	everything	*	aint	have
after	how	somehow	hed	he's	ive	we	yall	hes	theyll	it		ain't	havent
again	however	someone*	he'd	him	l've	we'd	y'all	he's	they'll	itd		am	haven't
against	hundred*	something*	her	himself	me	we'll	ye	him	theyve	it'd		appear	having
ahead	i	somewhat	hers	his	mine	we're	you	himself	they've	itll		appeared	hear
aint	ld	somewhere	herself	i	my	weve	youd	his		it'll		appears	heard
ain't	l'd	soon	hes	ld	myself	we've	you'd	oneself		its		are	hears
all	if	s000*	he's	l'd			youll	she		it's		arent	hed
allot	l'II	still	him	l'II			you'll	she'd		itself		aren't	he'd
along	lm	stuff	himself	lm			your	she'll		nobod*		arrive	held
alot	l'm	such	his	l'm			youre	shes		other		arrived	he'll
also	immediately	ten	i	ive			you're	she's		others		arrives	helped
although	in	tenth	ld	I've			yours			somebod*		ask	helps
am	infinit*	than	l'd	lets			youve			someone*		asked	heres
among*	inside	that	ľli	let's			you've			something	*	asks	here's
an	insides	thatd	lm	me						somewher	e	ate	hes
and	instead	that'd	l'm	mine						stuff		be	he's
another	into	thatll	it	my						that		became	hit
any	is	that'll	itd	myself						thatd		become	hope
anybod*	isnt	thats	it'd	oneself						that'd		becomes	hoped
anymore	isn't	that's	itll	our						thatll		becoming	hopes
anyone*	it	the	it'll	ours						that'll		been	hows
anything	itd	thee	its	ourselves						thats		began	how's
anyway*	it'd	their*	it's	she						that's		begin	ld
anywhere	item*	them	itself	she'd						these		begins	l'd
apparently	itll	themselves	ive	she'll						thing*		being	l'II
are	it'll	then	l've	shes						this		believe	lm
arent	its	there	lets	she's						those		believed	i'm
aren't	it's	theres	let's	thee						what		believes	is
around	itself	there's	me	their*						whatever		bought	isnt
as	ive	these	mine	them						whats		bring	isn't
at	l've	they	my	themselv	es					what's		brings	itd

Appendix F: Study 3 – Early Research Corpus of 98 Dimensions

Positive Term (406)	Negative Term (499)	Cognitive/Psychological Term (730)	Emotion	Sense/Sensation	Action/Behavior	Perceptual/Material Term (273?)	Informative	Acquisition	Health (236)	Spirituality (159)	Body (180)	Animal
absolutely	abuse	always	acceptance	answer	accept	absorb	in-store	Question	abortion	afterlife	abdomen	aardvark
accepted	abysmal	amazing	admiration	being	act	appearance	Instore	Answer	ache	agnostic	abs	abalone
acclaimed	adverse	appetite	adoration	citrusy	appear	aqua	Proof	Poll	aching	alla	Adam's apple	frican gray parro
accomplish	afraid	balance	affection	cozy	ask	back	plans	Vote	acid	allah	adenoids	African penguin
accomplishment	alarming	because	afraid	delicious	autograph	bake	have you tried	how	acne	altar		African elephan
achievement	Angry	belief	aggravation	floral	back	balsamic	have a	ask	addict	amen	anal	rican rock pytho
action	Annoy	block	aggressive	frosty	bake	beautiful	open	fav	advil	amish	anatomy	African wild cat
active admire	annoyed	building	agitation	happiness	beat	beauty	law .	favorite	aids alcohol	angel	ankle	albatross
admire adorable	anxious anathy	care	agony	life listen	became hent	bend	report	tell us Tell us	alconoi	angelic	anus appendix	algae
adventure	apathy	charity	agreeable alarm	live	bent	bigger black	diagram Education	maybe	allergy	angels baptism	appendix	agouti airedale terrier
affirmative	arrogant	chill	alienation	look	bite	blast	University	choose	aspirin	baptize	arm	laskan malamut
affluent	artificial	choice	amazement	looking	blow	blood	concert	opinion	asthma	belief	armpit	alligator
agree	ashamed	classic	amazing	ruff	borrow	blue	company	decide	balance	bible	arms	alpaca
agreeable	atrocious	classical	amusement	see	bow	bodied	business	guess	bandage	biblical	arous	amoeba
ahhh	Awful	commited	anger	seen	break	bold	market	guesses	bandaid	bishop	arse	American bison
alert	Bad	commitment	angry	shown	brew	bottom	market share	build	binge	bless	arses	rican cocker spa
amazing	banal	compassion	anguish	sight	brightened	breathe	pro tip	whats your	binging	buddh	arter	merican crocodi
amused	barbed	confusion	annoyance	sighted	bring	building	tip	What's your	bipolar	catholic	artery	merican flaming
angelic	belligerent	congrats	anticipation	smelled	build	campfire	which one	what's your	bleed	chapel	asleep	rican golden ple
appealing	bemoan heneath	congratulations	anxiety	smelling smelt	build	cash	witness	What are your	blind	chaplain	ass	American Robin
approve aptitude	beneath bewildered	consciousness consider	apprehension assertive	taste	buy call	cheek	witnesses	what are you're give	broncni bulimi	christ christian	asses back	erican tree span amphibian
attractive	bored	consideration	assertive	taste	catch	clinic	venture	make	buro	christmas	back	anaconda
awesome	boring	constrain	astonishment		celebrate	cold	volunteer	fave	cancer	church	ball of the foo	
beaming	broken	cool	attachment		cheer	commodity	news	vote now	cardia	clergy	bellies	angelshark
beautiful		cool down	attraction		click	cook	check out	whats in	cardio	confess	belly	angonoka
believe	can't	could	awe		collect	crafted	check-out	what's in	checkup	convent	belly button	
beneficial	clumsy	courage	beleaguered		commit	creamy	details	are you comin	chills	convents	bicep	anole
benefit	coarse	crave	bewitched		compare	crisp	detail	are you coming	chiropract	crucifist	big toe	ant
best	cold	culture	bitterness		compliament	crispy	host	go on then	chlamydia	crusade	bladder	anteater
Better	cold-hearted	dedication	bliss		compress	crumb	ventures	how do you	cholesterol	demon	blood	antelope
bliss	collapse	delicious	blue		consent	culture	whats in	create	chronic	devil	blood vessels	
bountiful	concerned	describing	boredom		consume	cupping	Did you know	how does	clinic	divin	bloody	ape
bounty brave	condemned confused	diet dream	calculating		continue	Cute	Did you know Have	how do are you	codeine	doom xmas	bodied body	aphid arachnid
brave	contradictory	earn	capricious		cool	devour	What's in	send us	coma	evangel	bone	archaeopteryx
bright	contrary	effect	capricious		could	devouring	survey	send	congest	faith	hones	arctic fox
brilliant	corrosive	enjoy	caring		cover	dish	customise	submit	constipate	fundamentalism	bony	Arctic tern
bubbly	corrupt	entrance	cautious		crave	dispense	customize	apply now	contagion	gentile	boob	arctic wolf
bye	crazy	envy	celebrate		decide	dress up	isnt	apply	coronary	god's	bottom	armadillo
calm	creepy	evolution	celebrating		describe	drizzle	isn't	take	cough	gospel	bowel	Arsinoitherium
celebrated	criminal	excuse	celebration		develop	eat	apply	have you	cramp	heaven	brain	arthropod
certain	cruel	excuses	charmed		devour	embody	apply now	are you	cyst	hell	breast	artiodactyls
champ	cry	exit	cheerful		dig	entrance	yes	are we	deaf	hellish hells	breath bum	asp
champion charming	crying cutting	experience experiences	compassion		dip dispense	exit extra large	no hint	are let us know	decongest dentist	neiis hindu	bum	assassin bug ave-ave
cheer	damage	faith	complacent		donate	face		hat you love abou		holies	buttock	baboon
cheerful	damaging	familiar	compliant		down	fat	police	want to	detox	holy	buttocks	bactrian camel
cheers	dangerous	fan	composed		download	feast your eyes	police officer	take a	diabet	hymn	butts	badger
cheery	dark	fast	conceited		dream	feast your eye's	store	watch her	diagnose	immoral	calf	bald eagle
choice	dastardly	feel	concerned		drop	feel	who wants	watch him	diarr	immortal	capillary	bandicoot
classic	dead	fit	contempt		duck	flaky	who want's	watch	diet	islam	carpal	barnacle
classical	decaying	fix	content		dunk	flexi	breaking news	like	digest	jesuit	cartilage	barracuda
clean	defeated	flavor	contentment		eat	flexible	enquiries	listen	disease	jesus	cell	basilisk
comfortable	defiant	flavour	crabby		end	Floral	enquiry	hear	dizz	jew		ra basking shark
commend	deformed	fly	crazed		enjoy	flu	best of	catch	doctor	jewish	cheek	bass
composed	deny	forget	crazy		enter	fortune	we've got	guess	dosage	jews	chest	basset hound
Congrats congratulation	deplorable depressed	forgive forgiveness	cross		excite exit	front fuchsia	fact Fact	bring come	dose dosing	jihad juda	chin rculatory syste	bat er beagle
congratulation	aepressea deprived	forgiveness form	defeated		exit expand	full	don't forget	come	dosing	juda karma	clavicle	er beagle hear
constant	despicable	freak	defiance		fall	fuzzy	dont forget	take	drs	kippur	clothes	bearded dragon
cool	detrimental	freakin	delighted		feast	gate	get here	record	drug	koran	coccyx	beaver
cooperative	dirty	freaking	dependence		feed	gem	pop in	tape	drugs	kosher	cock	bed bug
		-										

# Appendix G: Study 5 – Value Taxonomy Corpus

#### **Product**

{®,©,TM,2000GT,300style,2WD,4WD,4x4,4Runner, acai, acorn, Accord, Acura, affogato, Affogato, alcohol, Alcohol, alfalfa, alfredo, Almond, almond, amaretti, Amaretti, ambrosia, americano, Americano, Amys Blend, Amy's blend, Amy's Blend, Alltrack, AMG, Amazon Prime, anchovy, Anchovy, Android, angelfood cake, Angry Birds, Anise, aioli, Aioli, airbag, Airbag, Alphard, Apparel, appetizer, Appetizer, App Store, apple, Apple, apricot, Apricot, artichoke, Artichoke, Argula, argula, argula, Asiago, asparagus, Atlas, Audi, AUDI, Auris, Automated Driving, Avant, Aval on, Avensis, avocado, Avocado, AWD, bacon, Bacon, BaCON, bagel, Bagel, bagel-wich, Bagel-wich, bagelwich, bage apple, Baked goods, baked, baking, bakery, Bakery, baklava, balsamic, bamboo shoot, banana split,banana,barbecue,barbeque,barley,Basil, basil,battery,Battery,Baguette,BBQ,Bbq,bbq ,BEAMS,Bean, bean,beancurd,Beef, beef, beer, Beemer, beemer, beetroot, bell pepper, berries, Berries, berry, BERRY, Beverage, beverage, big grill, Big grill, big-grill, biscotti, biscut,Biscut,bistro box,black forest,black tea,black-eyed bean,black-eyed peas,blackberries,blackberry, blend ,Blend,blood orange,BLT,blueberries,Blueberry Muffin,blueberry,bluetooth,BMW,Boston cream pie,boston creme,bottle,Bottle,Bouquet,Bouquet,bourbon,Bourbon,Box o joe,Box o' joe,boysenberries,boysenberry,Bran ,bread pudding,bread,Bread,breadstick,break-fast,breakfast,Breakfast,BREAKFAST,brekky,Brekky, brew,BREW,brewed coffee,Brewed coffee,Brewed Coffee, Brewed Tea, Brewed tea, brewer, brie, Brie, brioche, Brioche, brioche, Brioche, Bronco, Broccoli, broccoli, brown rice, brownie, Brownie, brûlée, Brûlée, Brulée, Brulée, Brunch, Brunch, brussel sprouts, brussels sprout, Brussels sprouts, Bubble tea, Bubble Tea, buckwheat, Budino, buffalo, Buffalo, Bugoti, bun, Bun , bourbon, Bourbon, Buffalo, buffalo, bufgar, Bulgur, Burger, Burger, Burger, Burger, Burrito, Burrito, Burrito, Butter, butter, buttercream, butterscotch, Butterscotchtch,bvrgs,Bvrgs,cabbage,Cadbury,Caesar salad,Caesar,caffe con panna,caffe latter,caffe,caffeine,Caffeine,café mocha,CaffeVerona,C-HR,Cake, cake, Camatte, Camry, camembert, Candy, candy, candy, candol, cantaloupe, Cantaloupe, Capers, Cappuccino, CAPPUCCINO, caramel apple, Caramel, Caramel, Caramel, Carbonara, Carbonara, Cardonara, ,CarNet,CarPlay,Carplay,carplay,carrot,cashew,CasiCielo,Casi Cielo,castania,Castania,cauliflower,celeriac,celery,Celica,ceramic,Ceramic,Chai, chai, chamomile, Chamomile, champagne, Cheddar, cheese, Cheese, CHEESE, Cheese burger, cheese burger, cheesy, Cheesy, Cherry pastry, cherry pie, cherry, Cherry, Cherry, cherries, chest nut, chestnut, Chevrolet, chia, Chia, chick peas, Chicken Bacon Sandwich, Chicken Salad Sandwich, chicken salad, chicken wrap, Chicken, chicken, chickpea, Chickpea, chiffon, Chiffon, chili, Chili, Chinese cabbage, chip, Chipotle, Muffin, chocolate pastry, chocolate, Chocolate, CHOCOLATE, chorizo, chowder, chorizo, CHR, Chrysler, churro, Churro, ciabatta, Ciabatta, cidar, Cidar, cinabun, cinnabon, cinnabon, cinnamon roll, cinnamon, citron, citrus, Citrus, Civic, civic, Classic Hot Chocolate, classic salad, CLA, Clover, cobbler, Coca Cola, Coca-Cola, coca-cola, cocktail, Cocktail, cocoa, Cocoa, coconut cake, coconut cream pie, coconut, coffee cake,coffee,Coffee,Coffee,Coffee,Coke Zero,Coke, coke ,cold brew,Cold Brew,CoLD BREW,coldbrew,Coldbrew,Cold press,Cold press,Cold Press, ColdPress, ColdBrew, Cold Brew, Cold brew, ColdCup, collard greens, compote, confectionery, Confectionery, conewich, Cone-wich, Cone-wich, Cone-wich, Convertible, Cookie, Cookie, COOKIE, Coolatta, Coolatta, Cookie, Coo orolla,cortado, corn ,Corn ,cortado,Cortado,cotton,corvette,Covvette,Cougar,Cougette,Coupé,Coupé,Coupe , coupe ,crabapple,cracked wheat,cracker,crafted press,Crafted Press,Crafted press,cranberries,cranberry,Cranberry,Crème,Crème Brulee,Crème brulee,Crème brulee.cream cheese. cream, Cream, CREAM, crepe, Cressida, croissant, Croissant, Croissant, Croissant, Croimosa, Croimosa, Cronut, Croque, Crumpet, cr bar, CR-V, CR-Z, cucumber, cumin, Cumin, cupcake, cuppa, Cuppa, currant, Currant, custard, Custard, CX-5, daikon, dandelion greens, Danish pastry,danish,Danish,darjeeling,Darjeeling,dark chocolate,Dark Roast,dark roast,decaf coffee,Decaf,dessert,devil's food cake, dill ,diesel,Diesel dinner, Dish, dish, Doekies, doeks, donut, Donut, DONUT, dorito, Dorito, Doubleshot On Ice, double chocolate, Dough, dough, Doughnut, doughnut, dr pepper,Dr pepper,dragonfruit,drink,Drink,DRINK,Dry Rye Gin,dry rye gin,Dry rye gin,dukkah,dumpling,Dunkaccino,durian,earl grey,eclair, Eclair, Éclair, Éclair, edamame, Edamame, Earl Grey, Earl Grey, Easter Egg, eclair, Egg, egg,eggplant,Eggplant,eGift,egift,e-Gift,e-gift,Elantra,elderberry,Emmental,enchilada,Enchilada,endive,engine,Engine,english breakfast,espresso

shot,espresso,Espresso,Etron,E-tron, etron, etron, EXL-R,fajita,Fajita,falafel,Fanta,fanta,fava bean,fennel,Feta, feta, fiber,Fiber,Fiesta,Fig,filter

coffee, fish,Fish,fishandchip,Fizzio,fizzio,FJCruiser,Flat bread,flat bread,Flat-white,Flat-White,flat-white,FlatWhite,Flat White,Flat

white,flat-bread,flatbread,Flavor,flavor,flavour,flavour,focaccia,flower,Flower,FLOWER,Focus, food,food,fondant,fortune cookie,Fortuner,Ford,Frap, frap ,frappe,frappuccino,Frappe,french onion soup,french onion,french toast, fries ,Fries,fritter,frosting,frostino,Frostino,FROSTINO,frozen yogurt,fruit cake,fruit cocktail,fruit

salad,Fruit,fruit,FRUIT,FT4X,FT-4X,fudge,Fudge,garlic,Garlic,garnish,Garnish,geo filter,Geo

filter,Geo-filter,geo-filter,geofilter,geofilter,gelatin,gelato,gherkin,Gherkin,Gift card, gift ,Gift,gift card,ginger

bread,ginger,Ginger,gingerbread,gingersnaps,glacé,Glace,Glacé,GLE,guacamole,Guacamole,gluten free,gluten,gluten-free,glutenfree,goat cheese,Go-GURT,Google Play, gourd,Gouda,graham cracker,Graham Cracker, grain,Grain,Grand Turismo,granita,Granita,Granola,Granola, grape,Grape,grape-fruit,grapefruit,gravy,green bean,green tea,Green Tea,Green tea,Green Straw,Green straw,green straw,greenbean, greens,grilled wrap,grocery,Grocery,groceries,Groceries,ground coffee,Growler,GT86,GTI,GTR,guava,GXL,habanero,Habanero,Ham & cheese,Halloumi,halloumi,Ham ,Happy Meal,Harley,Hash brown,Hash Brown,hash brown,hashbrown, hatchback,Hatchback,havana cappuccino, hazel,Hazelnut,hazelnut, herb ,Herb,Hibiscus,hibiscus,Highlander,Hilux,HiLux, hilux ,hollandaise,Honda,honey

comb,Honey,honeycomb,honeydew,hot chili peppers,hot chocolate,hot dog,Hot macchiato,hot-fudge

sundae, House Blend, HRV, hydrangea, Hybrid, Hyundai, hummus, Icecream, ice cream, Ice Tea, ice-cream, iceberg lettuce, iced brev, Iced Capp, Iced coffee, Iced Latte, Iced Macchiato, Iced mocha, iced mocha, iced tea, Iced

amanns, Kouign-Amanns, kouign-amanns, kumara, kumquat, ladyfingers, Lamb, lamb, Land Cruiser, Land

Cruiser, Landcruiser, lasagna, Lasagna, latte, LATTE, Latte, latté, Latté, lavender, leaf, leek, lemon meringue pie, Lemon,

lemon,lemonade,lentil,Lentil,lettece,lettuce, lexus,Lexus,Lima bean, lime ,Lime,LIME,Limousine,limousine,lingonberry,liquid nitrogen,liquid, loaf,lobster,lollipop,long black,Long Black,loquat,Lucuma,Lúcuma,lunch,Lunch,lychee,lychee,Mac & cheese,mac & cheese,mac n cheese,mac n' cheese,macadamia,Macadamia,macaron,Macaron,macaroon,macchiato,Macchiato,Mac Junior,Macnara,Maharaja Mac,Major Dickason's Blend,MajorDickasonsBlend, maize,Mallowtop,mandarin orange, mango,Mango,

maple,Maple,marionberry,marijuana,Marijuana,marshmallow,Marshmallow,massimo,Ma

mayo, mayona ise, Mazda, MBTL, mbtl, McAloo, McDouble, McFlurry, McGriddle, McGrill, McMuffin, mcmuffin, McTaster, McWrap, meatball, Meal, meal, meat, Meat,

medio,Medio,MEDIO,melon,Mercedes,Mercedez,merchandise,Merchandise,merchandising,Merchandising,meringue,Miata,Microbus,MightyAn gus, milk,Milk,milkshake,Milkshake,MilkShake,minivan,Minivan,mint choc chip,mint choc-chip,mint choc-chip,mint,Mirai,Miso, miso ,MK2,MmmBox,Mobile App,mocha cortado,Mocha, mocha,mojito,Mojito,molasses,Monopoly,monopoly,MONOPOLY,mountain dew,mousse,Mousse,mozzarella,Mozzarella,Muffin,muffie,Muffie,mulberry,MulledWine,Mulled Wine,multi grain,Munchkin,munchkin,Munchkin,mung bean,museli,Museli,mushroom,Mushroom,Mustang,mustard greens,mx5,MX5,MX-5,Nankhata,Nan khata,neapolitan ice

cream,nectarine,Nectarine,netflix,Netflix,nitrogen,noodle,Noodle,Noodles,nougat,nugget,nut brittle, nut ,Nut ,Nutella,nutella,Oat ,Oats, oat , oats ,oatmeal cookie,Oatmeal,oatmeal,Odyssey,offering,OJ, okra,OLED,olive, oj ,

OJ, omelet, Omelette, Omelette, onion, Onion, Option, option, options, orange juice, orange, Orange, Orange, Oreo, OREO, Oreo, ornament, Ornament, Orzo, Pacifica, pain au raisin, palm, pancake, pancakes, paneer, Paneer, Panettone, Panini, panini, Panna Cotta, panna cotta, papaya, Papaya, Papaya, Papaya, Parfait, parfait, parsley, parsnip, parmesan, Parmesan, passion fruit, Passion

fruit,Pasta,pasta,pastrami,Pastrami,pastries,Pastries,pastry,pav-wich,Pav-wich, peach,Peach,PEACH,peanut butter,Peanut Butter,PB&J,peanut,peanutbutter cookie,peapod, pear,Pear,pecan braid,pecan pie,

pecan,Pecan,Pepper,pepper,peppermint,Peppermint,Pepperoni,Pepperoni,Pepperoni,Pepsi,PEPSI,Pepsi,perennial,Perennial,

,Pie,pillow,Pillow,pineapple,Pineapple,Piri-Piri,Pistachio,pistachio,Pista Nankhatai,pizza,Pizza,Pizza,Pizza, plaid,plantain,platter,Platter,PlayDoh, plum ,Plum ,pluot,Poha ,poached pears,Polaris,polenta,pomegranate,pomegranite,pomelo,popcicle,popcorn,Popcorn,poppy,poppyseed,Pork, pork,porridge,Potato,potato,Potatoes,pound cake,Prado,praline,Praline,Praline,praline,

prawn, Prawn, Preservatives, Preservatives, pretzel, Pretzel, Prius, Produce, product, Product, prune, PSF, psl, PSL,

pudding,Pudding,PuMPKIN,Pumpkin,pumpkin,pure cane sugar,Purple straw,purple straw,purplestraw,purplestraw,PurpleStraw,Quesadilla,quince,Quinoa,quiona,Quiona,radicchio,radish,Radish,raisin,Raisin, ramen ,Ramen,Ranger,raspberries,raspberry,Rav4,recipe,Recipe,Reese's,reese's,REESE'S,RedCup,Redcup,red velvet,Red Velvet,red wine,refreshment,rhubarb pie,rhubarb,ribena,Ribena,rice pudding,Rice, rice ,rich-wich,Rich-wich,ricotta,Ridgeline,Risotto,risotto,ristretto,Ristretto,Roadster,roast leg,roast,rocket,Roll, roll ,rolled oat,Rooibo,romaine, rose ,Rose ,rutabaga,RWD,RX-9,Rye, rye , sabzi,Sabzi,Salad, salad, salmon,Salmon,salsa,

salt, Salt, samosas, Samosas, Sandwich, SANDWICH, sandwich, Sangria, sangria, Santa,

sauce,Sauce,sausage,Sausage,Savoury,savouries,SbuxCard,scallion, scone,Scone,scrambled eggs, sedan,Sedan,Sedan,Sedona,Sea salt,sea salt, sesame,Sesame,Sea Salted,seaweed,Sequoia,serrano,sesame, seed ,Seed ,Semolina,semolina,Sencha Green Tea,Setsuna,shallot, sheep,sherbet,short black,Short bread,Shortbread, shrimp,Shrimp,Sienta,SignatureBlendNo3,SignatureBlendNo4,SignatureBlendNo5,Siren Card,Sirius,skim milk,SKOL, slice,slushie,smoked ham,smoked salmon,smoothie,Smoothie,smore,s'more,S'More,S'more,Smore,Snack N' Go Chicken wrap, spack Spack spickers only spickers soda bread, soda Soda Sodium soft dripk soft serve Soft Serve sorbet sorrel

Chicken wrap, snack, Snack, snickerdoodle, snickers, Snickers, soda bread, soda, Soda, Sodium, soft drink, soft serve, Soft Serve, sorbet, sorrel, sonata, Sonata, souffle, Souffle, souffle, soup, Soup, sour cream, sour dough, sourdough, soy

"Soy,soybean,souvenir,Souvenir,spaghetti,Spaghetti,specialities,speciality,spice,Spinach,spinach,splenda,sponge cake,Spread,SpringCup,spring water,Sprite zero,Sprite Zero,Sprite,sprouts, spuds,spumoni,square,squash,SR Coupe,Srikaya,srikaya,sriracha,Sriracha,SRIRACHA,Starbucks Card,StarbucksCard,StarbucksCard,StarbucksCalendar,Starbucks Calendar,StarbucksPlanner,Starbucks Planner,StarbucksCollection,Starbucks Collection,star fruit,steak wrap, steak,Steak, stew,Stew ,Sticker,sticker,Stock,stock,straw,strawberries,strawberry

suja,Suja,sundae,supper,supplies,Supra,sushi,SuV,sweet potato pie,swagbag,sweet potato,sweet roll,Sweet tea,Sweets, Swiss chard,syrup,Syrup,T-Roc,tablet,Tacoma,Taco, taco,tahini,Tahini,Takata,tangelo,tangerine,tapioca pudding,Taro,taro,Tart,tassimo,Tazo,tea,Tea

,TEA,teavana,Teavana,TEAVANA,technology,Technology,tenderloin,Tenderloin,Tequila,teriyaki,Teriyaki, tesla,Tesla,thai chicken wrap,thaichickenwrap,thick shake,thyme,Thyme, ticket,Ticket,Tiguan,Tim card,Tim

shortcake, strawberry, StreetFighter, string bean, Stroopwafle, strudel, succotash, sugar cookie, sugar, Sugar,

Card, TimsDark, timbit, Timbit, tim(bit), TimCard, tiramisu, Tiramisu, Tims Card, Toast, toast, toast, toastadas, toasted marshmallow, toastie, Toastie, toffee, Toffee, tofu, Tofu, tomatillo, Tomato, tootsie pop, torte, tortellini, tortilla, Tortilla, Tote Bag, tote

bag, Toyota86, ToyotaCentury, ToyotaCrown, ToyotaCHR, ToyotaHybrid, ToyotaIMV, ToyotaMarkII, ToyotaPublica, ToyotaStarlet, ToyotaiTril, ToyotaU2, trading cards, Trading Cards, traveler cup, Traveler cup, Traveler Cup, traveler mug, Traveler mug, Traveler Mug, TRDPro, Treat, trenta, Treffen, TributeBlend, truck, Truck, truffle, True North, TrueNorth, TS050, TSL, tumbler, Tumbler, Tuna, Tuna Salad, tuna, Tuna, Tundra, tundra, tundra, turkey, Turkey, turnip, Tucson, TV, Twix, TWIX, Type R, Uber, UTap, ukra, umami, upside-down cake, vada pav, Vada pav, van, vehicle, Vehicle, vanilla, Vanilla, Verismo, verismo, vege, veges, Vege, Vegetable, Veggie, veggie, veggies, Veloster, venti, Venti, VENTI, VIA, vinaigrette, Visioni, vodka, Vodka, Volvo, VWGolf, wafle, waffle, wafel, Wafel, Wagen, Wagon, WAGON, wagons, walnut loaf, walnut, Walnut, warrenties, Warrenties, WARRENTIES, warrenty, Warrenty, WARRENTY, wasabi, Wasabi, water chestnut, water, Water, watercress, watermelon, Wedges, wedges, Weed, weed, weed, wEED, WeetBix, Weet-Bix, Wheat, white chocolate, white tea, white wine, Wifi, wine, Wonton, wonton, wrap, Wrap, Wristband, X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, Xrunner, yam, Yaris, yellow cake, yoghurt, Yoghurt, yogurt, Yogur, zabiglone, zucchini};

#### **Price**

{\$,€,¢,¢,£,£,½ off,½ OFF,1/2 
,kopek,leasing,lender,Lira,loan,Loan,loose

change, lotter, lottery, luxury, Lux

penny, pennies, Penny, Peso, PESO, percentage, Php, PHP, poor, Poor, portfolio, poverty, pre

order,pre-order,preorder,price,Price,PRICE,pricing,Pricing,Profit,purchase,Purchase,Purchase,PuRCHASE,quarter,Raiffeisenbank,rebate,Rebate,rec ession,Recession,refund,Refund,Refund,Refund,Refund,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Reimburse,Retail,Retail,revenue,Revenue,Rp.,Rs.,Ruble,rubles,Rupee, rupee,salary,Salary, sale,Sale,Sale,Sale,Save,Save,Save,SavE,scholarship,sell,Sell,Sell,selling,shilling,shopaholic, shop,Shop,Shop,Shopping, sold,Sold,Sold,Sold,Spend,S

 $tax, TAX, taxable, taxage, taxed, taxing, thrift, thrifty, transaction, Transaction, Treasure, treasury, Treasury, tuition, underpaid, visa, VISA, wage, Wage, wager, wallet, Wealth, wealth, wealthy, withdraw, worth, yen, yuan \};$ 

#### **Place**

{adelaide,Abdullah Al-Salem,Adelaide,Afghanistan,africa,Africa,Alabama,alamsutera,Albania,alberta,Alberta,Al
Bidaa,Albuquerque,al-desko,aldesko,Aldesko,Algeria,altitude,airport,Airport,airways,Airways,Alps
,Alsancak,america,America,analemma,Andes,Andorra,Anfield,Angola,Ankara,Antarctic,Antarctica,Antigua and
Barbuda,Antigua,antipodes,apartment,arabic,Arabian,arabian,Arctic Circle,Arctic,are happening here,Area,
area,Arabella,Argentina,Armenia, asia,Asia,at home,athome ,atlanta,Atlanta,atlantic,Atlantic,Atlas, atlas
,Auckland,austin,Austin,australia,Australia,Austria,Avenue,avenue,Azerbaijan,azimuth,backyard,Backyard,Bahamas,Bahrain,Bangkok,Balcony,

balcony,Bali,Bangladesh,bangalore,Bangalore,Bank, bank,Barbados,Barcelona,Bar Kuningan,BayArea,Bay Area,bavaria,Bavaria,be there in person,beach,Beach,beijing,Beijing,Belarus,Belgium,BELGIAN,Belize,Bengaluru,Benidorm,Benin,berkeley,Berkeley,berlin,Berlin,Bhutan,Bilke nt,Bihar,Bilbao,Birmingham,birmingham,Bissau,blvd,Blvd,Bolichera,bolivia,bolivian,Bolivia,border,Bosnia and

Herzegovina,Boston,Boston,Botswana,Boulevard,Boulogne,brazil,Brazil,Brighton,brighton,BRIGHTON,brisbane,Brisbane,Bristol,bristol,Britain,britain,Brussels,brussels,Brunei,Buenos Aires,building,Building,Bulgaria,Burkina Faso,Burma,burundi,Burundi,Busan, CA,calgary,Calgary,Calais,Calangute,California,california,cambridge,Cambridge,Cambodia,Cameroon,cameroon,Camp,camp,Campinas,Canada,canada,Canadian,Canal,Canggu,canberra,Cannes,Canyon,CapeTown,Cape Town,Cape Verde,capital city,capital,Carioca,carlton,cartographer,cartography,Central African

Republic, Center, Centre, Cheongdam, Cheongju, chicago, Chicago, Chile, China, china, Chinese, Christchurch, chinese, Chuncheon, church, CN Y, colorado, Colorado, Cilandak, Cilegon, Circle, Cities, cities, City, city, Cincinnati, cincinnati, cleveland, Cleveland, Clinic, clinic, Coast, coast, college, College, colombia, Colombia, Columbus, commute, Commute, Comoros, compass rose, Congo, continent, Continent, contour line, Córdoba, Coruña, Coruna, Costa Rica, costa rica, Costa Rica, Cote d'Ivoire, Consell de Cent, country, Country, COUNTRY, Croatia, croatia, CT, Cuba, cuba, Cuzso, cyprus, Cyprus, cyberspace, Cyberspace, Czech Republic, Côte

d'Ivoire,Daegu,Dakota,dallas,Dallas,danish,darwin,Darwin,degree of latitude,degree of longitude,delivery,Delivery,Denmark,desert, desk,Desk, delhi,Delhi,deliver,Deliver,destination,Destination,Detroit,detroit,Djibouti,Dobsonville,Dongdaegu,Dome,Dominica,dominican republic,Dongducheon,downhill,Dresden,drive thru,drive-thru,Drive

thru, Drive-thru, Drive-way, driveway, dubai, Dubai, Dublin, dublin, duluth, Duluth, Durban, dynasty, EARTH, Earth, earth, East Timor, east , East, Eastern Hemisphere, ecuador, edinburgh, Edinburgh, Egypt, Empire, empire, environment, Environment, Estancia, El Guapo, El Salvador, el salvador, el evation, Ellenwood, England, england, equator, Erikslund, Eritrea, Esmeralda, Estonia, España, españa, ethiopia, Europe, Eu

Factory, factory, farm, Farm, federal, ferry, Ferry, Fiji, Finland, France, france, France, French, french, Frank furt, field, Field, floor, Floor, florida, Florida, foliage, fort, Fort, Forest, Fujisaka, Fullerton, ferguson, Gabon, garden, Garden, Garda, Garzón,

gate,Gate,GCC,Geneva,Genoa,Génova,geographic

 $coordinates, Geography, geography, Georgia, Germany, germany, glasgow, Glasgow, Ghana, global, globe, Global, Globe, goa, gold \\coast, GPS, Gracia, Gränby, graveyard, gravel, Greece, greece, Greek,$ 

greek, greenbelt, Greenbelt, Grenada, grotto, ground, Ground, Guatemala, guatemala, Guarulhos, Guinea, ground, Groun

gulf,Gulf,Gurgaon,GURGAON,Gujrat,Guyana,Gwangju,Gwanghwamun,Habaneras,Haeundae,haiti,halifax,Halifax,Hampton Downs,happen at work,hamburg,Harajuku,harbour,Harbour,Harbor,Harbor,Havana,havana,Hemisphere,hemisphere,Henan,highway,Highway,Hokkaido, Home, home,honduras,Honduras,hong kong,Hong kong,Hong Kong,horizon,Horizon,hospital,Hospital,House, house

,Houston,Howth,HQ,Hungary,Hyderabad,hyderabad,Iceland,in

restaurant, Incheon, India, india, indonesia, Indonesia, indonesia, indoor, in-door, In-door, In-house, in-house, inhouse, Instore, In-store, instore, in-store, instore, in-store, instore, ins

iraq,Ireland,ireland,irish,Irish,Ishbilya,istanbul,Istanbul,island,Island,israel,Israel,italian,Italian,Italy,ITALY,italia,Italia,Italia,Itaquera,Iwate,Jabod etabek,Jakarta,jamaica,Jamaica,japan,Japan,Jeju,Johannesburg,Johor,Jongno-gu,Jordan,Kadikoy,Kansas,Kazakhstan,kentucky,Kentucky,Kenya,kenya,kiosk,Kiosk,kilometers,Kiribati,kitchen,kolkata,Kolkata,KolkATA,korea,Korea,Krasnodar,kitchen,Kitchen,kuwait,Kuwait,Kyrgy zstan,Kyoto,LA ,Labuan, lake ,Lake ,Langhorne Pa,langhorne pa, land ,Land,landmark,Landmark,landform,Laos,las vegas,Las vegas,Latitude,latitude,Latvia,Larcomar, lawn

, Lawn, lebanon, Lebanon, Lebono, Lesotho, Liberia, Libertad, Library, library, libya, Libya, Liechtenstein, Lithuania, Liverpool, liverpool, location, Location, london, LONDON, Long distance, longitude, los

angeles, louisiana, Louisiana, Luxembourg, luxembourg, Macedonia, madagascar, Madrid, Magaluf, magnetic

pole,Maine,Malaga,Malaga,Malang,Malawi,Malaysia,malaysia,Maldives,Mali,Mallorca,Malta,manchester,Manchester,manila,Manila,map projection,Map,map-maker,Manawatu,manhattan,Manhattan,map-making,Marbella,Maremagnum,Mars,Market,Marshall

Is lands, Mart'inez, Marunouchi, Maunganui, Mauritania, Mauritius, Mayan, mayan, mediterranean, Megamal, melbourne, Melbourne, Melaka, Menlyn, Mercator

Projection, meridian, metro, Metro, Mexican, mexico, México, méxico, Miami, michigan, Michigan, Micronesia, Midwest, middle-east, Middl

MI, Mississippi, Missouri, MN

, Mobile, mobile, Moldova, Monaco, Mongolia, Montenegro, Morocco, moscow, Moscow, Mosque, mosque, motorway, Molicentro, Mountain, mountain, Mozambique, Mt Cook, Mt Druitt, Mt.

Fuji,MtFuji,Mumbai,Mungyeong,Murcia-San,museum,Museum,Myeongdong,Namibia,Nariño,Nariño,Narino,nationwide,Nationwide,Nauru,nautical,nea rby,Nearby,nearest,neighborhood,nepal,Nepal,Nest, nest, NE,Netherlands,new castle,New castle,New Castle,new orleans,New orleans,new south wales,New york,new york,New York,New Zealand,newberg,Newport,newcastle,New Castle,New

castle,Neworleans,Nevsky,Nicaragua,nicaragua,Niger,Nigeria,new jersey,New jersey,New Jersey,NeW JERSEY,New York,NewYor

, NZ, ocean, OCEAN, office, Office, ohio, Ohio, OHIO, Oman, Omotes and o, online, Online, on tario, On the analysis of the contraction of the co

go,On-the-Go,On-The-Go,Online,online,orange county,Orange

County,Oregon,oregon,orchard,Orchard,Ortega,Osaka,out-door,outdoor,Outdoor,outdoors,outlet,Outside,outside,oxford,Oxford,pacific,Pacific,Pakistan,Palau,palestine,Palestine,Palmanova,Palmerston North,Pampanga,panama,Pangyo,papua new guinea,Paraguay,Paranaque,Park, park,PARK, paris ,PARIS,Paris,Parramatta,parramatta,patio, path,Path,Patra Jasa,Penang,prefectural,prefecture,Prefecture,Prefecture,Pelai, perth,Perth, peru,Peru,PJ8,Philippine,Philippine,Philly,picnic,Picnic,Place, place,planet,Planet,PLANET,plaza,Plaza,Poland, pond,Pond,Pool, pool,Porch,porch, port ,Port,Portland,portsmouth,Portsmouth,portugal,Portugal,Position,position,post shop,post-shop,postshop,Pretoria,prime meridian,projection,promenade,Promenade,province,Province,Publika,Pudsey,puerto rico,Puerto Pico,Puerto rico,punxsutawney,Putxajaya,PyeongChang,qatar ,Qatar,Québec,queensland,Queenstown,QLD, Rd,RD

,Rathmines,region,Region,relief map,Republic,resort,Resort,restaurant,Restaurant,RioDeJaneiro,Rio De Janeiro,River,river,road atlas,Road,road,roadtrip,Roadtrip,Roadtrip,Rochaverá,Roman,roman,Romania,Rome,Ronda,Roppongi,Rosebank, route ,Rua

Funchal,russia,R

Islands,Somalia,Seodaemun-gu,seoul,Seoul,Shanghai,showroom,Showroom,South, south Africa,south america,Southall,south australia,south korea,South Magnetic,South Pole,South,South Carolina,south carolina,southeast,Southern Hemisphere,southwest, space ,Space,Spain,spain,speedway,Speedway, spot,Spot,Square,Sri Lanka, ST, state , station,Station,Stockholm, store ,Store,STORE,St. Petersburg,St Petersburg,street,Street,

coast, Sutherland, Suriname, Sulawesi, Sulawesi, Sydney, sydney,

swamp, Swaziland, sweden, Swedish, swedish, Swedish, Switzerland, swiss, Swiss, switzerland, Sydney, sydney, synagogue, syria, São Tom'e and Príncipe,

table, Table, takeaway, Täby, Takeaway, Tajikistan, tanzania, tasmania, temple, Temple, tennessee, Tennessee, terrain, Terrain, territory, Territory, texas, Texas, thai, Thai, THAI, Thailand, thailand, The Gambia, thousand miles, time

zone, Togo, To-go, To-Go, Tohoku, tokyo, Tokyo, Tonga, topographic map, topography, Torrevieja, toronto, Toronto, tower, Tower, town, Town, Trafalgar, traffic, Traffic, transport, Transport, travel, Travel, Tree, tree, tributary, Trinidad and Tobago, trip, Trip, Tropic of Cancer, Tropic of Capricorn, tropics, Tunisia, Turkey, Turkmenistan, Tuvalu, Rock, rocks, washington, Washington, u.s., U.S., US

,USA,UAE,Uganda,Ukraine,Ulsan,Uludag,underneath,United Arab Emirates,UK,United Kingdom,United States of America,United Kingdom,united kingdom,united states,universe,Universe,University,university,Upper Darby,Uppsala, urban,Urban,Uruguay,Utah, utah ,Uzbekistan,Valencia,Vancouver,vancouver,Vanuatu,Västerås,Vatican City,Vegas, vegas,venezuela,venice,Venice,Venice,Venue, venue,Verde-Fogo,Verona,victoria,VIC,vicinity,Vicinity,vietnam,village,Village,Ville Parle,

visit, Waitangi, Washington, waterfall, Waterfall, weather map, Wellington, west ham, West Ham, west ,West, western australia, Western Hemisphere, Westminster, where, Where, were here, winnersh, Wollongong, World,

world, Worldwide, worldwide, Yangpyeong, Yemen, yemen, Yongin, Yosemite, yosemite, Yukon, Zambia, Zaragoza, Zimbabwe, zip code, zurich, Zurich };

#### **Promotion**

{1/2 off,1/2 Off,1/2 OFF,\$1 off,2 for \$2,\$2 off,\$5 off,% off,% Off,2 for 1,50p off,12hradventure,AD, ads ,Advert, advert,advertise ,Advertise,advertisment,advertising,Advertising,Answer using,answer & win,Answer & Win,Apprenticeextra,best offer,bonus,Bonus,BONUS,BOGO,Bogo,bogo,bundle,Bundle,Buy One, Get One,buy one, get one,Buy one, Get one,buy one get one,Buy one, Free one, buy one free one, Buy 1 Take 1, B1F1, B1G1, cafe smart, cafe smart, Caption this photo using, chance to win, Chance to win, Check out, check out, check-out, clubvips, CLUBVIPS, coffee club, Contest, contest, combo, Combo, commercial, Commercial, competition, comment below, Comment below, comment using, Comment using,complimentary,Complimentary,Comptetion,contest,Contest,Contestant,Coupon,coupon,DDIcedTeaSweeps,DDSummerSoundtrack,Deal, deal ,discount,Discount,Duelling,duellingdonuts,DuellingDonuts,e-club,eClub,enter to win,enter to WIN,Enter to win,Enter to Win,Enter to WIN, event, EXCLUSIVE, Exclusive, exclusive, fest, festival, Festival, first ever, first-ever, Free, FREE, free, Freebie, freebie, get one free, Get one free,get 1 to share,get one to share,gift card,Gift Card,give away,give-away,giveaway,Aishtag,Hashtag,Hashtag,half off,Half off,half price, Half price, Half the price, Half the price, Half Price, HALF PRICE, Hit 'Like', Hit 'RT', hot special, Invite, invite, launch, Launch, Like our page, like our page,Limited,LimitedTime,Limited Time,Limited time,Limited time,LiMITED,live show,lottery,Lottery,McPick2,Members get half off, members get half off, Mention to redeem, mixtwogetone, Mobile Order & Pay, Mobile Order And Pay, MSR, offer, Offer, Offer, Offer, Order & Pay,participating location,partnering,Partnering,Pay 1 for 2,pay 1 for 2,Pay 1 take 2,Peet's ads,PeetsOnTheRoad, perk, perks, Perk, Premium, premium, prize, Prize, promo, Promo, promotion, Promotion, quiz, Quiz, raffle, Raffle, rebate, Receipt, receipt, redeem, Redeem, Reserve, RT, Replyusing,repost,Repost,RePOST,Retweet,RETWEET,reward,Reward,REWARD,sacramento,Sacramento,SacRAMENTO,sample,Sample,send in your pic, Send in your pic, Send in your entries, send in your entries, sign up, sign, Sign, Sign, SipPeelWin, special menu, Special, special, stamp, submit, Submit, Submit, supplies last, sweeps, Sweepstakes, Sweepstakes, Sweepstakes, ag someone, Tag someone, for the price of one, for the price of 1, Tim card, tim card, Tim Card, tim's freeze tag, Tims card, tims freeze tag, TimsFreeze Tag, Tweet the, Tweet your, tweet your, Unlimited refills, upgrade, Upgrade, use the code, Use the code, Valid, valid, VIP, volunteer, Volunteer, Voucher, Voucher, win, Win, WIN, workshop}

#### **Social**

 $\{ \mathcal{Q}, \mathcal{S}, \text{ accountant, Accountant, adoption, adoptive, adult, Adult, adviser, Adviser, affair, affiliation, alien, Alien, ambassador, Ambassador, ancestor, Ancestor, amigo, amuse, ancestor, approve, Arabian, arabian, armies, army, Army, artist, Artist, aunt, Aunt, Aussie, babe, babies, baby, Baby, bachelor, Bachelor, bachelorette, Bachelorette, Band, band, barista, Barista, beastie, best friend, Best$ 

friend,best-friend,BestFriends, bf ,birds,Birds,blogger,Blogger,Boss, boss,both of us,boy friend,Boy, boy,

boy's,boy-friend,boyfriend,bride,bridegroom,Brigadier,brother,Brother,brother-in-law,brotherhood,Brotherhood,brotherly,buddies,

buddy, Buddy, Call us, call us, camel, Camel, can't wait to see you, captain, Captain, Captain, care-giver, cat

,Cat,candidate,Candidate,celebrity,Celebrity,Celebrities,Celebrities,Celebrities,Celphone,CEO,Chat, chat,

chef, Chef, children, Children, childhood, Childhood, church, Church, Chuck Norris, citizen, Citizen, clan, Clan, close-knit, coffee date, Coffee date, Colonel, colleague, commander, Commander, Comment,

comment, communities, Community, community, companion, companion

Companies, comrade, Comrade, confides, confided, confided, confided, confiding, congregate, connect, Connect, connection, Connection, conservative, consult, consultant, Con

co-worker, crowd,Crowd,customer,Customer,Dad, dad ,daddy,dating,daughter,Daughter,daughter-in-law,Dave Dobbyn,

 $debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, Debate, descendant, dialogue, Dialogue, discuss, Discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, descendant, dialogue, discuss, divorce, \ dog\ , Dog, dolphin, Dolphin, each \ debate, d$ 

other, Einstein, email, Email, emperor, Emperor, enemies, Enemy,

enemy, engaged, engagement, enthusiast, Enthusiast, equality, entourage, Entourage, estranged, everybody, Everybody, Everyone, exercise and exerci

 $hus band, ex\ wife, exbf, exboy friend, exgf, exgirl, exhubby, exhus band, extended\ family, exwife, face\ to$ 

face,face-to-face,facebook,Facebook,FACEBOOK,families,family tree,Family,family, fan

,Fan,FAN,farewell,Farewell,father,Father,father-in-law,FB page,fb page,fellow,female,festive,fiance,fiancé,fiancé,fiancee,Filipino,filipino,Find your other half,first born,first cousin,flatter,flesh and blood,flock,follow,Follow,folks,forgave,forgive,foster child,foster father,foster mother,foster parent,foster,fought,FoxNews,Fox News,fox news,Fraternal,fraternal,frenchie,friend,Friend,friendly,Friendly, gamers,Gamers, gang ,Gang ,gathering,genealogy,generation,Generation,gentlemen,Gentlemen, gf ,girl friend,girl,Girl,girl's,girl-friend,girlfriend,Girlfriend,god father,god-father,gossip,Gossip,grampa,grampma,grand parent,Grand

parent, grand child, grand child, grand dad, grand dad, grand dad, grand daughter, grand f, grand father, grand kid, Grand ma, grand ma, grand ma, grand daughter, grand parent, grand parent, grand parent, grand parent, great grand parent, great grand parent, great grand parent, great-uncle, greeting, Greeting, Greeting, Grand parent, 
groom, Group, grown-up, grown-up, grownup, guest, Guest, guy, guys, Guy, Gürkan, half-brother, half-sister, heiress, herself, herd, hero

 $, Hero, hereditary, heritage, Heritage, himself, \ hive\ , horse, Horse, hookup, Hookup, Hook-up, hook-up, Howard, h$ 

Schultz, hubby, Hubby, human, Human, HUMAN, husband, Husband, kuz, Kuz, identical

twin,illustrator,in-law,infancy,infant,infant's,Infant,inheritance,Instagram,instagram,INSTAGRAM,insult,leader,Leader,LewisHamilton,Jo in the club,Jonny knows whats up,Justin Timberlake,juvenile,Kartini, kid ,Kid,kidding,kinship,JakeMiller, jew ,Jew,ladies,Ladies,

 $lady, Lady, leader, League, league, let's \ go, Let's \ go, Lets \ go, Let's \ talk, let's \ talk, Lewis \ has \ summed \ it \ up \ for \ lady, leader, league, league, let's \ go, let's \ go, let's \ go, let's \ lady, let's \ talk, let's \ talk, let's \ lady, leader, league, league, let's \ go, let's \ go, let's \ go, let's \ lady, le$ 

us,LGBT,lgbt,lineage,lieutenant,Lieutenant,Los Juanelos,love bird,Love bird's,love-bird,lovebird,loyalty,MacKinnon9,ma'am,maiden name, male,Male, mama,mamma,Man, man ,Mandira Bedi,Men, men ,Marriage,marriage,MARRIAGE,mariflordarosa,mariaselena\_,MaryCatherinerh, marry,Marry,mate's,maternal,mates,mating,matriarch,matrimony, meet,Meet,meeting,Meeting,Member,member,MEMBER, men

,Men,mention,Mention,message,Mickey Mouse,Military,military,minister,Miss,Mom,

mom, mommy, momma, monogamy, mother, Mother, mother-in-law, motherly, mothers, MR, MRS, MsConnie, model and model

mtv,Mtv,Mtv,Mum,Mama,mum's,mummy,mums,munchkins,muslim,Muslim,Nainggolan,neighbor,neighborhood,Neighborhood,neighbors,neighbour,Neighbour,nephew,network,Network,newborn,newlywed,niece,nuclear family,nuptial,Nurse,nurse,nurture,offspring,Oilers,one for me,one for you,orphan,outsider,overhear,owner,Owner,paneradates,PaneraDate, papa,pappy,parent,Parent,partnership,Partnership, partner

,Partner,party,Party,partying,paternal,patriarch,peetnik,Peetnik,People,People,Personal assistant,Peruvian,phoning,Pirate,

pirate, police, Police, Popular, Popular, Popularity, pregnant, Pregnant, pregnancy, Pregnancy, President, P

team, professional, Professional, profile, Profile, progenitor, progeny, ppl, Protege, protege,

 $puppy, quadruplets, queen, Queen, quintuplets, raditya\_dika, raphael maitimo, Raptors, R.A. And the puppy of the puppy o$ 

Kartini, rebel, Rebel, re-connect, reconnect, relations, relationship, Relationship, relative, Relative, replies,

 $reply, Reply, republic, Republic, respond, Respond, Rianti \ Cartwright, Ricky PD illon, role$ 

model,rookie,Rookie,Romans,roomate,Roomate,roomie,roomie,rooming,rumor,rumour,Ryan Gosling, saint,Saint,Sbuxcha

share, Share, SHARE, shared, Sharing, sharing, sheriff, Sheriff, sibling, Sibling, sister, sister-in-law, sisterhood, sisterly, Snapchat, snapchat, SNAPC HAT, social, Societal, Societal, Society, Society, Solicate, Solicate, son-in-law, soulmate, spouse, Squad, squad, staff, Staff, step dad, step kid, step

mon, step brother, step child, step child, step child, step dad, step daughter, step father, step kid, step mom, step mother, step sister, step son, stories, Stories, story telling, story-telling, student, Student, Student, Suggestion, Suggesti

mother, sweetie, Talk, talk a tive, talked, talker, talking, teacher, Teacher,

team, Team, teamed, Teamed, teaming, Teaming, TeamTalk, Tereza, telephone, Telephone, The Reds, titan, Titan, Team, Te

 $tribe, Tribe, triplets, troop, Troop, trust, Trust, trustworthy, twin\ brother, twin\ sister,$ 

twin, Twin, Twitter, twitter, TWITTER, uncle, Uncle, uncle's, unity, ValtteriBottas, veteran, Veteran, villain, Villain, visitor, Visitor, VIP, Vivienne Tam, WarrenMiller, wedding, Wedding,

wife, Wife, wive, Worker, Worker, Worker, Youth, youth, youtube, Youtube, YouTube }

# **Sport/Entertainment**

{ \$\mu\$,49ERS,49ers,2015PBC,2016PBC,2017PBC,acoustic,activity,Activity,Activities,Activities,Adventure,Adventure,Adventurous,AF Laerobics, ALCS, Angels, archer, archery, architecture, Architecture, arena, Arena, arrow, art, Art, artist, Artist, artcenter, artwork, Artwork, ARX, athlete, Athlete, Athletic, Athletic, Athletic, Atlanta Falcons, album, Album, audio, Audio, Aus Open, AUS vPAK, Aus vPak, aus vpak, auto show, badminton, ball, Ball, batman, Batman, baseball, Baseball, basketball, baton, batter, batting, biathlon, bicycle, Bicycle, bicycling, bike Bike,biking,billiards,blockbuster,Blockbuster,Blu-ray,BLU-RAY,BlueJays, bluejays,BlueJays,bollywood,Bollywood,Book, book, boomerang, bowler, bowling, Bowling, boxer, boxing, bronze medal, canoe, canoeing, catch,catcher,capoeira,Capoeira,carnival,Carnival,challenge,Challenge,champ,Champion,Champion,Championship,Ch coach, Coach, Coachella, comedy, Comic, Compete, compete, competing, competition, Competition, Competitor, Competitor, Concert, C Contest, craft, Craft, CRAFT, cricket, Cricket, dance, Dance, dancing, Dancing, dart,dartboard,deadmau5,deadlifting,decathlon,defeat,Defeat,defense,defensive, derby,Derby,diamond, dive,diver, diving,Driving, DJ,DNCE,dodgeball,Dodgers,dodgers,doodle,Doodle,Dracula,drawing,Drawing,DunkinRun,DWTS,DVD, entertain ,entertainment,Entertainment,entertaining,Entertaining,enthusiast,Enthusiast,equipment,EURO2016, event,Event,exercise,exercise, expo, Expo, EXPO, Fan, fan, fashion, Fashion, FALCONS, festive, Festive, festival, Festival, fencing, field hockey, field, field goal, fielder, fielding, FieldPass, FIFA, fifa, Fifa, fight, Fight, figure skating, Film, film, fitness, Fitness, Football, Football, Footby, Forza, free throw, frisbee, Frisbee, fun ,Fun, Fun, funventures, Funventures, game ,Game, gamers, Gamers, GAME, Game of Thrones, Gameof Thrones, gear ,geocaching,Ghostbusters, goal,Goal,gold medal, golf,Golf,golfing,GRAMMY,grand prize,Grand Prix,GYM,Gym, gym,gymnasium,gymnastic,Gymnastics,halftime,handball,hang gliding,hardball,helmet,high jump,HipHop,hip hop,hip-hop,hockey,HoCKEY,hole-in-one,home plate,home run,home team,homerun,Homerun, hoop ,horseshoes,HouseOfCards,huddle,hurdle,ice hockey,Ice hockey,Ice Hockey,ice rink,ice skate,ice skating,iceskating,IndVsSA,LetsGoDucks,infield,inline skates,javelin,Jays, jazz,Jazz, jog,jogger,Journey, judo,jump rope, jumper, jumping, Justin Beiber, karate, kayak, kayaker, kayaking, kickball, kung fu, Kung fu, Kung-fu, kite ,kneepads,LAGalaxy,latteart,LatteArt,lawn bowling,league,LFC,live show,Live show,lollapalooza,Lollapalooza,long jump,Lord of the Rings, major league, ManUtd, marathon, Marathon, martial art, MayThe4thBeWithYou, medal, Medal, minor league, MLB, mls, MLS, MNWild, mnwild, Monopoly, monopoly, MONOPOLY, MotorShow, Motorsport, mouthguard, movie title, movie, Movie, music, Music, mural, Mural, MVP, NASCAR, NESN, NBA, netball, Netball, NFL, Nintendo, NHL, NRL, ootd, Ootd, OOTD, olympic, Olympic, Oscar, outfield, outfielder and the control of the c

party,Party,partying,parties,Pedaling,pentathlon,performance,Performance,performing live,Photo,

,paddle,paddleball,paddling,paint,Paint,Paralympic,parasailing,parkour,

 $photo, photograph, Photograph, Pikachu, pikachu, piggybacking, Piggybacking, ping\ pong, pitch, pitcher,\ play$ 

,Play,PLAY,playground,Playstation,player,playing,playoff,Playoff, poet,Poet,pogo stick,pokemon,Pokemon,Poké,poke ball,Poke ball,pole vault,pole, polo ,Pool, pool, puck,Puck,quarterback,Quidditch,quidditch,quiver,Quiz, quiz,QUIZ, race ,Race, racer,racewalking, racing,Racing,racket,racquetball, radio,Radio,RADIO,rafting,raiders,Raiders,RAIDERS,Rallycross,Rangers,Rapper,recreation,Recreation,red sox,Red sox,Red Sox,referee,Referee, relay, ride,Ride,riding,Rio2016,rock climbing,roller skates, roller, rower,rowing,Rowing, ryhme,Ryhme,rugby,Rugby, run ,Run,RUN,running,sailing,science,Science, score,scoreboard,scuba,seehawk,Seahawk,Sens ,SFGiants, shop,Shop,SHOP,shot put,SHOW,silver medal, sing,Sing, skate,Skate,Skating,skateboard,Skateboard, sketch,Sketch,skiing, sled,sledding,snorkling,snowboard,Snowboard,Snowboard,soccer,Soccer,softball,somersault,soundtrack,Soundtrack,StanleyCup,StarbucksSessio

ns,starwars,star wars,Star wars,Star Wars, story,Story,speed skating,Spider-Man,Spongebob,

sport,SpORT,sportiness,sportsmanship,squash,stadium,Star Wars,StarWars, stick,strike,stroke, study,Study,Sumo wrestling,Superman,super bowl,SuperBowl,Superbowl,surfer,Surf,surfing, swim,Swim,swimmer,swimming,synchronized,table

tennis,taekwondo,Taekwondo,Team,

team, TEAM, teach no logy, Teach no logy, telephone, Telephone, tenn is, Tenn is, tether ball, the atre, The Atre, The Lion King, throwing, touch down, Touch down, tournament, Tournament, Tournament, Trailer, Trailer, Trailer, Trailer, Trampoline, Trampoline, triathlete, triathlon, TRY athlon, tug of the tenn to th

war,trivia,Trivia,UEFA,ultramarathon, umpire,unicycle,unicyclist,uniform,van gogh,Van Gogh, video,Video,Video,Vikings,volley ball,Volleyball,wakeboarding, walk

,Walk,walking,walker,walking,waterski,waterskier,waterskiing,Warriors,WCH,WEC,weightlifter,weightlifting,wetsuit,water rafting,wicket, wifi,Wifi,WiFi,WiFi,wimbledon,Win, win ,Win,windsurfer,windsurfing,Win10,Windows xp,Windows XP,winner,winning, witch,Witch,workout,Workout,world cup,World Cup,World Series,world series,WRC,wrestler,wrestling,Xbox,X-Men,Victory,victory,Video game,Video Game,Video game,Yoga}

#### **Emotion**

 $\{ \oplus, \mathbb{R}, \mathbb{Q}, \mathbb{Q}, \mathbb{Z}, \mathbb{Z}, \mathbb{Y}, :], :-], \oplus, \mathbb{Q}, \mathbb{Q}, \mathbb{Q}, \mathbb{Q}$ 

acheive, abysmal, addicted, Addicted, admiration, adorable, Adorable, ADORABLE, adoration, adrenaline, Adrenaline, affection, afraid, aggra vation, agree, aggressive, agitation, agony, agreeable, amazement, amazing, Amazing, AMAZING, ambience, amusement, anger, Anger,

angry, Angry, anguish, annoyance, anticipate, anticipation, anxiety, appetite, Appetite, appetizing, apologise, Apologise, Apologising, apologising, apologizing, apologizing, apology, Apology, Apology, appetite, applause, Applause, apprehension, appreciation, Appreciation, argue, Aroma, aroma, assertive,

assured, astonish, attract, attitude, Attitude, atmosphere, auspicious, awesome, Awesome, Aww, aww, Awake, awake, Awwdorable, bad, Bad, astonish, attract, attitude, attract, attitude, atmosphere, auspicious, awesome, Awesome, Awesome, Awake, awa

battle, Battle, BATTLE, beautiful, Beautiful, BEAUTIFUL, beau-tea-ful, Beauty, beauty, believe, Believe, bestie, best, 
 $, BEST, be witched, beware, Beware, BEWARE, \ bigot, \ binge, Binge, \ bite, Bite, BiTE, bitter, bitterness, blasphemy, \ bless, BLESS, blessing, \ bliss,  

bored,boredom,boring,Boring,boycott,Boycott,BOYCOTT, brave,Brave,Break the rules,break the rules,Breath,

 $breath, brilliant, Brilliant, buzzing, Buzzing, caffeination, caffeinate, \ calm\ , Calm, captivating, captivate, Care\ , \ careful, Car$ 

caring, cautious, Celebrate, celebrating, Celebrating, Celebration, 
charm, Charm, Cherful, cherish, Chill, chill, choice, Choice, Charisma, Charisma, classy, clever, Cleaver, Cleaver, closeness, clumsy, comfort, Comfort,

comfy, Comfy, commemorate, Commemorate, Complex, Complex, Complex, Complement, Complemen

condemn, condolence, Confidence, Confidence, Confident, confident, confront, Confuse, confuse, contempt, contempt, contempt, contempt, confuse, c

comedy,Comedy,commemorate,Commemorate,Complex,Complex,compliment,Compliment,Complaint,Complaint,compromise,Comformise,Confidence,Confidence,Contemplate,Contemplation,Contemplation,Cosy,Cosy,cozy,Cozy,Cozy,coziness,Coziness,cute,Cute,Cuties,Cuties,crave,Crave,craving,Craving,Craving,crazed,crazy,Crazy,creative,Creative,Creativity,Creativity,creepy,Creepy,cruel,cuddle,Cuddle,Cultivate,cultivation,cupid,Cupid,curiosity,Curiosity,curious,Curious,daunting,decadent,decadence,Decadent,decoration,

decide, Decide, decision, Decision, decipher, dedicate, dedicating, defeated, defiance, delectable, delicacy, Delicacy, Delicious, delicious, delight, Delight, depravity, depressed, deserve, Deserve, desire, Desire, determination, devour, Devour, Dig

in.,dilemma,Dilemma,Disappoint,disapproval,disapprove,Disapprove,discipline,Discipline,discontent,discover,Discover,disenchanted,disgrace,disgust,Disgust,Disgust,Disgust,disglise,disillusioned,dislike,

 $dismay, displeasure, dissatisfied, disguise, Disguise, Distract, distract, Distraction, distraction, distracts, Distress, Distress, disturbed, dominance, doom \,, and the property of the pr$ 

doubt, Doubt, drama, Drama, dramatic, Dramatic, drained, dread, Dream, dream, dreaming, drool, drowsy, drunk, Drunk, dry

,Dry,eager,earnest,easy-going,eclectic,Eclectic,ecstasy,ecstatic,effort,Effort,Eid

Mubarak, Eid Mubarak, elegant, Elegant, elegance, Elegance, elixir, emoji, Emoji, EMOJI, EHmoji, empower, Empower, encouragement, Encouragement, encore, Encore, endure, Endure, energise, Energise, energising, Energising, Energising, energising, energise, 
elation, elegant, Elegant, elegance, Elegance, elevate, embarrass, embrace, Embrace, embracing, Emotion, emotion, empath, Empath, enamored, enchant, Enchant, encourage, Encourage, encouraging, energize, energy, enjoy, Enjoy, ENJOY, enraged, enraptured, enthusiast, enthu

evoke,euphoria,exasperation,exceptional,Excited,excited,Excitement,excitement,exciting,Exciting,exhaust,Exhaust,Exhaust,exhilaration,exhilarating,exhilaration,exhilarating,exhilaration,exhilaration,exhilarating,exhilaration,ex

favorite,FAVORITE,Favorite,favourite,Favourite,FAVOURITE, fear,Fear,feeble,Feeble,Feeling,feeling,ferocity,festive,Festive, fever, fight,Fight,flattered,flummoxed,flustered, focus,Focus,fondness,fortune,Fortune,fortunate,forward to seeing you, feast ,Feast, fool ,fragrent,Fragrent,freedom,Freedom, fresh,Fresh,friendly,Friendly,fright,Fright, frugal,Frugal,frustration,Frustration,frustrating,Frustrating,fuck,Fuck,F\*\*\*,F\*\*K,FUCK,fulfill,fulfilling,fulfillment, fun ,Fun,FUN,furious,Furious, fury,Fury, gasp,Gasp,generous,Generous,giggle,Giggle,glad,Glad,Glamour, glamour, glee,gloating,glorious,Glorious, glory,Glory,gloomy,Go bold, god ,God,GOD,Gong Xi Fa Cai, good ,Good,gorgeous,Gorgeous,GORGEOUS,grateful,gratitude,Gratitude, greed,Greed,grief,Grief, grim,grouchy,gross,Gross,GROSS,grumpy, guess,Guess,guilty,gutsy,Haha, haha,HAHA,handsome,Handsome,hangover,Hangover,Happiest,happiest,Happiness,happiness,Happy, happy,HAPPY,harmony,Harmony,have a good time,having a good time,Heart, heart,Heartache,heartache,HEART,heaven,Heaven,hectic,Hectic, hell ,Hell ,Help, help,HELP,hibernation, hide,Hide,hiding,Hiding,hilarious,hipster,Hilarious,hobbies, honest,Honest, honor,Honor, holy,Holy,homesick,honored,hooray,Hooray,Hope, hope,hopeless,Hopeless,hoping

your,horror,Horror,horrible,Horrible,horrific,Horrific,hostility, hug,Hug,HuG,humiliation,

hurt, Hurt, hungry, Hungry, hunger, Hunger, hungover, Hungover,

hype,Hype,HyPE,hypnotic,hypnotise,Hypnotise,hypnotising,Hypnotising,hypnotism,Hypnotism,Hypnotism,hysteria,

idea,Idea,idiot,Idiotic,ignore,Ignore,imagination,Imagination,Imagine,imagine,impatient,Impatient,impressive,Impressive,indulge,Indulge,infatua te, infuse,Infuse,infusion,Infusion,ingenious,Ingenious,insecurity,inspiration,Inspiration,inspire,Inspire,

insult,Insult,intense,Intense,intense,intenset,Interest,Interest,Introverted,invigorate,invigorating,irrational,Irrational,irresistible,IRRESISTIBL E,irritation,isolation,lipsmacking, look,Look,luscious, jaded,jesus,JESUS,Jesus,Jealous,jealous,jittery, joke,Joke,jolliness,jolly,Jolly,joviality,Joy, joy,JOY,joyful,Joyful,joyous,Joyous,jubilation,judged, keen ,Kidding,kidding, kind ,Kind ,kindhearted,kindly,kissing,Kissing,laid back, laugh,Laugh,laughter,Laughter, lazy,Lazy, learn,Learn,legecy,Legecy,legendary,Legendary,let us brighten up your,let's go,Let's go,Lets go,lets go,liberation,Liberation,LiFE,Life, life , like ,Like,liking,Liking,lmao,LMAO,loathing, lol ,Lol,LOL,loneliness,lonely,longing,looking forward to,Looking forward to,looks perfect, love,Love,LoVE,loving,Loving, loyal,Loyal,lulled,lucky,Lucky, lush,Lusher,luscious,Luscious, lust,Lust,luxurious,Luxurious, mad ,Mad,madness,Magic,magic,MAGIC,magnificent,Magnificent,majestic,Majestic,make me feel,makes me feel,Makes me feel,malice, manic,mantra,Mantra,meaningful,Meaningful, merry,Merry,melody,Melody,mellow,Mellow,mesmerize,Mesmerize, mighty,Mighty,miracle,Miracle,mischief,misconception,mistake,Mistake, mind,Mind,mind blowing,misery,modesty,moment special,monster, mood

, Mood, mortified, mortification, motivate, Motivate, motivation, Motivation, mouth-watering, mystery, Muahaha, Mubarak, Muse, mwahha, nau ghty, Naughty, neediness, neglect, nervous, nerves,

nice, Nice, NICE, nirvana, NOMNOMNOM, nonsense, Nonsense, nostalgia, nostal

GOD, obsessed, Obsessed, obsession, Obsession, optimism, optimistic, outrage, OUTRAGE, outstanding, Outstanding, overwhelm, Overwhelm, painful, Painful, Patriot, Patriot, Pamper, Pamper, panic, Panic, party, Parssion, passion, 
peace, Peace, PEACE, peaceful, Peaceful, Personality, Personality, Perfect, PERFECT, pessimism, philosophy, Philosophy, Phobia, Phobia, pick-me-up, pity, placid, Please, PLEASE, PLZ, plz, pleasant, Pleasant, Pleasure, Plight, potential, Potential, Potential, Pleasant, Pleas

power, Prower, precious, Precious, Pretty, Pretty, praise, Praise, Precious, Precious, Precious, Prepare, Prepare, Prepare, Prepare, Preparing, Preparing, Pretend, Pride, pride, PRIDE,

primo, priority, Priorities, Priorities, Problem, problem, productivity, Productivity, Promise, Promise, PROMISE, prosperous, Prosperous, Protest, Protest, proud, Proud, PROUD, pumps me up, pump you up, pumped, Pumped, put your feet up, Put your feet up, Quarrelsome, queasy, quench, quenched, quenching, querulous, quick-witted, quiet, quirty, Rage, rage, rage, ragture, ready, Ready,

reason, Reason, recharge, recite, Recite, Refreshing, refreshing, reflection, Reflection,

refuel, Refuel, regret, Regret, reject, Reject, rejuvenate, Rejuvenate, rejuvenating, Rejuvenating, Relax,

relax,relief,reliable,Reliable,relieved,remarkable,remedy,Remedy,remorse,repentance,reputable,resentment,resigned, resist,Resist, rest Rest, respect, Respect, respite, Respite, revitalize, revitalizing, revulsion, Revulsion, revulting, Revulting, ridiculous, Ridiculous, RIDICULOUS, Ridicku lous,ridickulous, ritual,Ritual,Rofl,rofl,ROFL,romance,Romance,rooting, rooted,roused, rude,Rude,RUDE,Sad, sad, sadness,Sadness, Safe,Safe ,safety,Safety,Salute,Salute,Sarcastic,satisfy,Satisfy,satisfied,Satisfied,satisfaction, savor,Savor,savoury,Savoury,scandal,Scandal,ScANDAL, scared,Scared,SCARED,Scary, scary,SCARY, scent,scintillating, scorn, scoff,Scoff,scrumptious,Scrumptious, secret, Secret, self-assured, self-congratulatory, self-satisfied, select, Select, Selfish, Selfish, SELFISH, sentiment, Sentiment, Serious, Seriou nse, sense, serenity, Serenity, sex ,Sex, Shame, shame, SHAME, shameless, Shameless, Shameful, SHAMEFUL, shock, Shock, sip,Sip,sinful,Sinful,SINFUL,sinuous,simple,Simple,simplistic,Simplistic,Simplicity,Simplicity,Skillful,Skillful, sleep,Sleep, slurp,Slurp, smart,Smart,smartest, smell,Smell, smile,Smile,SMILE,smiling,Smiling, smug ,snooze,Snooze,snuggle,Snuggle,solidarity,Solidarity,sophisticate,Sophisticate,sophistication,Sophistication,sorrow,Sorrow,Sorrow,Sorry,sorry,SORRY, soothe, Soothing, Soothing, Soothing, Soulful, spark, Spark, sparkle, spellbound, speech, Speech, speak, Speak, spiritual, Spiritual, spite,spooky,Spooky,SPOOKY,spiteful,Spiteful,Starbucktacular,starbucktacular,state of mind, steady,stress,Stress,sticky,Sticky,Stingy,Stingy,stinky,Stormy,Story, story,strange,struggle,stubborn, sry,Sry,stoical,Stoical, stunning, Stunning, subdued, sublime, Sublime, submission, succulent, suffer, Suffer, suffice, suffocation, Suffocation, Suffocating, Suffocation, Suffocating, Suffoc superb, SUPERB, surprise, Surprise, Surprising, Surprising, Survive, surpvive, support, Support, Sympathy, Symmathy, Symmetry, Symmathy, metry, Tantalize, tantalize, taste, Taste, tasty, Tasty, TASTY, tear, Tear, temptation, Temptation, tenderness, tense,tension,terror,Terror,terrible,Terrible,terrific,Terrific,tranquil,Tranquil,treason,Treason,TREASON,THANK YOU,Thank you,thank you, Thank You, Thank, thankful, Thankful, thx, Thx, THX, therapeutic, Therapeutic, therapy, Therapy, Think, think ,thought,Thought,THOUGHT,threatening,thrill,thrive,thriving, think,Think,thirst,Thrist,timidity, tired,Tired, tiring,Twist, twist,to refresh,torment,Torment,tolerate,Tolerate,tradition,Tradition,Treat yourself, treat ,Treat,trouble,Trouble,TROUBLE,triumphant, trust, Trust, unexpected, unforgettable, Unforgettable, unleash, Unleash, unproductive, unreal, Unreal, upset, Upset, UPSET, unwind, Unwind, valentine, Valentine, Valentine, valued, vain , Vain, VAIN, vanity, variety, vengeful, variety, Variety, Velvety, Velvety, versatile, vexed, voice, Voice, voodoo, Voodoo, vibe, Vibe, vibrant, Vibrant, vigilance, visionary, Visionary, vivacious, wacky, Wake, wake , War, war , WAR, warm , Warm , Warm up, warm wishes, Warm Wishes, WarmWishes, watchful, We got it covered!, weariness, weary, woe, Wonder, wonder ,wonderful,Wonderful,WONDERFUL,wisdom,Wisdom, wish ,Wish,withdrawal,Withdrawal,witness,Wonder, wonder, Wonderful, WONDERFUL, worried, Worry, worry, wow, Wow, WOW, wuv you, Wuv you, wrathful, wtf, WTF, Wtf, YAS, vas ,Yas,YASS,Yawn,yawn,YAY,Yay, yay,xenophob,XOXO,xoxo, zeal, zest}

#### **Informative**

{°C,°F, 20WaysToCare,account information,asktheworldaquestion,AskTheWorldAQuestion,alert,Alert,ALERT,Allowed, allowed,anniversary,Anniversary,announce,Announce,announcing,Announcing,announcement,Announcement,answer,Answer,Answer,AnsWER,apply now,Apply now, apply,Apply,arrives soon,Attention,attention,ATTENTION,at participating,At participating,Available,available,AVAILABLE,Award, award,breafast until,breakfast is over,breaking news,Breaking news,Breaking News,BREAKING NEWS,brewing method,Brewing method,certified,Certified,Check it out,check it out,Check our,check out,check out,check out,check it out,Check it out,Check our app,check this link,Check this link,closed for renovation,CoffeeHack,Coffee101,coming soon,Congrats to,congratulations,Congratulations, contains,Contain,Contest ends today,contest ends today,Details here,Did ya know,Did you know,did you know,Did You Know,Did You Know,disclaimer,Disclaimer,DIY time,DM us your details,dont forget,don't worry,download,Download,DYK,eligible,Eligible,ends soon,enquiries,enquiry,enroll,Enroll,ENTER HERE,Enter here,Fact, fact ,FACT,FAQ,find out more,Find out more,Follow the T&C,For more details,for more details,For more info,for more info,for a chance to win,for your chance to win,FYI, guide,Guide,has arrived,Heres how,heres how,Here's how,here's how, hint,Hint,Hint, how to,How to,how to participate,How to participate,knowhow,KnowHow,ICYMI,If you qualified,if you qualified,if you qualify,if you qualify,in-house,in store,in-store,including,Including,information,Information,informational,informative,Informative,informed,informing,institution,instructive,International,Internationally,introducing,Introducing,is ready,isn't ready,is not open,isn't open,It is officially,it is officially,know more,Know more,know the details,Launching today,launching today,Law, law ,Learn more,LIVE on, live ,Live,LIVE,Menu, menu ,MENU,Min

activation,more detail,More detail,more info,More info,National, news ,News,NEWS,next week on,no purch nec,NO PURCH NEC,No purch nec,No prch nec,No Purch. Nec,now available,Now available,now is available,now open,Now open,Now is available,now in stores,Now in stores,now on our,offer valid,Offer valid,Offer Valid,Offical,Offical,Official rules,others are reporting,others have reported,ONLY,Please DM us,postponed,Postponed, poll ,Poll,Poll,Presenting our,presenting,Presenting,pro tip,Pro-tip

### Time

 $\{1 am, 2 am, 3 am, 4 am, 5 am, 6 am, 7 am, 8 am, 9 am, 10 am, 11 am, 12 am, 1 pm, 2 pm, 3 pm, 4 pm, 5 pm, 6 pm, 7 pm, 8 pm, 9 pm, 10 pm, 11 pm, 12 pm, 12 Hr, 24 Hr, 12 HR, 13 HR, 14 HR, 14 HR, 15 HR, 15 HR, 16  ,24HR,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018,2019,2020,abrupt,after,afterlife,aftermath,Afternoon,afternoon,afterthought,afterw ard, Afterward, age ,agenda, Age, alarm clock, all day, all morning, all time, all-day, all-time, always, Always, ALWAYS, AM, analog clock,ancient,Ancient,anniversary, annual,Annual,any time,anytime,april,April, Apr,august,August, Aug, Autumn, autumn, available, Available, AVAILABLE, bedtime, before, Before, began, begin, beginning, Begin, belated, born ,breakfast,Breakfast,breaktime,brunch, busy,Busy,Calendar,calendar,century,Century,childhood,Childhood,chinese new year, christmas, Christmas, Classic, Classic, Classic, Classic, Clock, Clock, Countdown, Countdown, COUNTDOWN, Daily, daily, Date, date, dawn, Dawn, Day, day, deadline, Deadline, Decade, Decade, December, Dec, december, déjà-vu, Déjà-vu, déjà vu, Déjà vu, delay, Delay, Diwali, dynasty, Dynasty, earliar, early, easter, Easter, eternity, eternal, equinox, Equinox, evening, Evening, event, Event, everyday, fall ,Fall ,February,february, Feb, finish,Finish,forever,Forever,forecast, forget,Forget,fortnight,frequently,friday,Friday,Fri ,future,Future,Good morning,good morning, goodnite, Goodnight, Goodnight, Goodnight, groundhog day, Halloween, her itage, Heritage, Historic, Historic, History, history, Holing, Goodnight, Goodnig,Holiday,holiday, hour ,Hour, hourly,hurried, hurry ,Hurry, iftar,Iftar,immediate,immediately,Impromptu,impromptu,Infinite, infinite, instant,Instant,Interval,interval,january,January, Jan, july,July, Jul,June, june, Jun,last minute,lately, later,Later,latest,Latest, live, Live, LIVE, lunchtime, March, march, Mar, May, meanwhile, memories, midnight, Midnight, midweek, mid-week, millennium, millisecond, minute, Minute, modern, Modern, moment, Moment, monday, Monday, Mon, month, Month, MONTH, Morning, morning, never, Never, New Year, NEW, new ,New , night, Night, Noon, november, November, Nov, now ,Now ,NOW, occasion, Occasion, Oct, october, Octo time, origin, overtime, pause, Pause, PM, prior, proceed, pronto, punctual, quick, Quick, Ramadan, ramadan, Ramadhan, ramadhan, Ramathan, ramathan, ready,Ready,READY, recent,remember,Remember,routine,Routine,Sankranti,sankranti,saturday,Saturday, Sat ,schedule,Schedule, season, Season, SEASON, second, Second, semester, Semester, September, september, Sep, slow, Slow, soon,sooner,Soon,SOON,spring,Spring,SPRING, start,Start,Stay awake, sudden,Sudden, summer,Summer,SUMMER, sunday, Sunday, sunrise, Sunrise, Sunset, Sunrise, Sunset, supper, tbt, TBT, temporary, Temporary, TGIF, TGIM, Thanksgiving, thanksgiving, Thursday, thursday, Thur ,time zone, Time, time ,TIME, timing, Timing , today, TODAY, Today, Tomorrow, tomorrow, TOMORROW, Tonight, TONIGHT, tonight, tradition, Tradition, tuesday, Tuesday, Tue, tues , Ugadi, update, Update, UpDATE, wait, Wait, WAIT, wake up, Wake up, Wakeup, wednesday, Wednesday, WEDNESDAY, Wed, Week, week ,Weekday, weekday, Weekend, weekely, Weekly, whenever, whenevs, Whenevs, winter, WINTER, x-mas, X-mas, xmas, Xmas, xmas, X-mas, xmas, year, Year, YEAR, yearly, yesterday, Yesterday }

### Health

#### {愛,梦,賞,

Ache,aching,acid,Acne,addict,Addict,alcohol,allergy,antibiotic,Antioxidant,antioxidant,aspirin,asthma,autism,bandage,bandaid,binge,Binge,bingi ng,bipolar,bleed,blind,bronchi,bulimi, burp,cage-free,cage

free,calorie,Calorie,cancer,Cancer,Cardio,Cardio,Cholesterol,Chronic,Chronic,Clean,Clean,CLEAN,clinic,Clinic,cool down,cramp, cure,Cure,dairy free,Dairy free,Dairy-free,dairy-free,dangerous,detox,Detox,diabet,diagnose,diarrhea, diet,Diet,digest,disease,doctor,Doctor,dosage,dosing,drug,Drug,exercise,Exercise,exhausted,exhausting,exhaustion,faint,fat free, fat ,Fat,fat-free,fatigue,fatty,fever,fitness,Fitness, flu ,Flu,GF,Gluten,gluten, gmo ,GMO,GYM,Gym, gym ,gymnasium,Halal, halal,HALAL,hangover,Hangover,headache,

heal, Heal, healed, healing, health, Health, healthy, hormone, hungover, Hungover, Hydrate, Hydrate, Hydration, Hydration, illness, Illness, immune, indigest ion, infection, inflamme, ingest, Ingest, injury, Injury, insulin, loseweight, low carb

diet, meatless, Meatless, medic, Medic, medicine, Medicine, nurse, Nurse, nutrient, Nutrient, nutrition, Nutrition, nutritious, obese, 
pain, Pain, painfull, pesticide, Pesticide, pharmacy, Pharmacy, phobia, poison, Poison, potassium, Protassium, Pregnant, Pregnant, Pregnant, Protein, puke, queasy, sick, Sick, soothing, sore, superfood, symptom, Symptom, therapy, toxic, Toxic, puke, queasy, sick, Sick, soothing, sore, superfood, symptom, therapy, toxic, Toxic, puke, queasy, sick, Sick, soothing, sore, superfood, symptom, therapy, toxic, Toxic, puke, queasy, sick, Sick, soothing, sore, superfood, symptom, therapy, toxic, Toxic, puke, queasy, sick, Sick, soothing, sore, superfood, symptom, symptom

tumor,unhealth,Unhealthy,un-healthy,vegan,Vegan,Vegen,Vegetarian,Vegetarian,Vitamin,vitamin,vomit,Workout,workout}

# Hiring

{Apprenticeship,apprenticeship,Become a Partner at Starbucks,Career,career,contract,Contract,cover letter,covering letter,CV,employ,Employ,employment,Employment,front of house,full time,full-time,hire,Hire,hiring,Hiring,immediate start,Immediate start,job opening,Job opening, job,Job,join the Starbucks team,Join the Starbucks team,Join the team,Join our team,Join our team,Join our team,lay-offs,part time,Part-time,Part-time,work position,profession,Profession,Recruitment,recruit for,Recruiting,recruiting for,Recruiting for,reference,Reference,staff,Staff,work here,youth,Vacancy,vacancy}

## Charity

{affected by a natural disaster,AidRefugees,altruism,Altruism,American\_Heart,Amnesty International,Amnesty,amnesty,awareness about autism,Autism awareness,BeyondType1,Blood Drive,blood drive,Breast Cancer,BreastCancer,Cancer Center,Cancer fund,cancer fund,CARE,casalinfants,charitable aid,charitable,charities,Charities,Charity,Charity,Child Fund,Child fund,child fund,disaster relief,doctors without borders,Donate, donate,DONATE,donating,donation,Donation,earthquake disaster,extrashotofgood,feeding america,Feeding America,FeedingAmerica,financial,flood relief,Flood relief,foundation, fund,Fund,fundraiser,Fundraiser,FUNdraiser,Future Fund,FundGolDeLetra,generosity,give help,GMoS2017,Gol de Letra,Green peace,green peace,Greenpeace,greenpeace,Green Peace,homeless,hunger,HurricaneFlorence,IYFcharity, koha,Koha,Lovepink,make a wish,Make a wish, msf,MSF,NGO,non profit,non-profit,osonrisape,orphan,Orphan,Oxfam,oxfam,PETA,peta,philanthropist,philanthropy,Pink Ribbon,PinkRibbon,poverty,Poverty,projectwaterf,Project24,ProtecCivile,RAFWingsAppeal,raise money,recovery support,red crescent,Red Cross,red cross,redcross,Refugee,refugee,aid relief,rescue,salvation army,Salvation army,Salvation Army,save the children,Save the children,Save The Children,SbuxCareers,sponsor,Sponsor,street children,UNICEF,Unicef,unicef,United Way,Volunteer,volunteer,World Vision,world vison,World wildlife,world wildlife,world wild life,world wild life, world wild

#### Weather

pressure,airway,almanac,altocumulus,altostratus,anemometer,astronomy,Astronomy,atmosphere,Atmosphere,atmospheric pressure,Aurora,aurora,Autumn,autumn,avalanche,Avalanche,balloon, balmy,barometer,barometric,Beaufort wind scale,biosphere,black ice,blizzard,Blizzard,blustery,breeze,Breeze,Chaud, chili,Chili,chinook,cirriform,cirrus,climate change,climate,Climate,climatology,cloud bank, cloud,Cloud,cloudburst,cold front,cold

wave,compass,condensation,contrail,convergence,cosmic,Cosmic,cumuliform,cumulonimbus,cumulus,cyclone,Cyclone,cyclonic flow,day light,daylight,degrees,Degrees,dew point,disturbance,doldrums,downburst,downdraft,downpour,downwind,drifting snow,drizzle,drought, dry

,Dry,duststorm,earthlight,easterlies,EF-scale,El Nino,El Niño,emergency radio,Equinox,equinox,evaporation, fall,Fall,FALL,feeder bands,firewhirl,flash flood,flood stage,flood,Flood,flurry, fog,Fog,forecast,Forecast,freeze,Freeze,freezing,Frost,frost,FROST,Fujita scale,funnel cloud, gale,Gale,Global warming,global warming,graupel,greenhouse effect,greenhouse,ground fog,gully washer,Gust, gust,gustnado,haboob, hail,Hail,halo,harvest,Harvest, haze, heat,Heavy

rain,humid,Humid,humidity,Humidity,hurricane,Hurricane,hydrologic,hydrology,hydrometer,hydrosphere,hygrometer,ice age,ice crystals,ice pellets,ice storm,icicle,inversion,isobar,isotherm,jet stream,Kelvin,lake effect,land breeze,landfall,landspout,leeward,lightning,Lightning,low clouds,low pressure system,Lunar,macroburst,mammatus cloud,meteorologist,meteorology,meteor,Meteor,microburst,Mist, mist,mistral wind,misty,moisture,monsoon,Monsoon,Moon, moon,muggy,National Weather

Service, NEXRAD, NHC, nimbostratus, nimbus, nor'easter, nowcast, NWC, orographic cloud, overcast, Overcast, ozone, Ozone, parhelion, partly cloudy, Perseid, permafrost, pileus cloud, polar front, polar, Polar, pollutant, precipitation, prevailing wind, radiation, Radiation, Rain, Rainy, rain, rainbands, rainbow, Rainbow, relative humidity, ridge, rope tornado, sandstorm, Sandstorm, Santa Ana wind, scattered, sea breeze, Season, season, shower, Shower, sky, Sky, skies, Skies, sleet, Sleet, slush, Slush, smog, Smog, smoke, Smoke, snow flurry, snow level, snow line, snow shower, Snow, snow, snow, snowfall, snowflake, snowsquall, snowstorm, Snow storm, snow storm, Spring, spring, squall line, squall, St. Elmo's fire, stationary front, storm surge, Storm, storm, stratocumulus, stratosphere, stratus, subtropical, Subtropical, summer, Summer, sun pillar, sunscreen, Sunscreen, Sun, SUN, sunshine, sun-shine, Sundown, sunrise, sunset, Sunset, Sunshine, sunshine, supercell, temperate, temperature, Tem perature, thaw, Thaw, thermal, Thermal, thermometer, thunder, Thunder, thunderstorm, Thunderstorm, Thunder storm, Thunder storm, Thunder storm, Tornado alley, tornado, Tornado, triple point, Tropic of Cancer, Tropic of

Capricorn,tropical,Tropical,troposphere,trough,turbulence,twilight,Twilight,typhoon,Typhoon,updraft,upwelling,upwind,vapor trail, vapor,Vapor,visibility,Visibility,Vortex,Vortex,wall cloud,water cycle,waterspout, wave,Wave,weather front,weather satellite,weather,Weather,weathering,weathervane,westerlies,whirlwind,whiteout,wind chill factor,wind chill,wind shear,wind vane,Wind, wind, windsock,Winter,winter}

# **Eco-friendly**

{Act for Climate,biodegradable,Biodegradable,Bio-degradable,bio-degradable,CO2 emission,cleaner air,clear up litter,clean tech company,Climate Action,climate action,Climate Change,climate change,costacleanup,community clean-ups,Community clean-ups,ConservationWeek,Day Without Cars,Department of Conservation,energy consumption,earth hour,Earth Hour,EarthHour,earth day,Earth Day,EarthDay,eco action,Eco action,eco-action,Eco-action,eco-friendly,Eco-friendly,ecological,Ecological,energy efficient,end to littering,Environment Day,Environmental,environmental,enviro-friendly,Enviro-friendly,environmentally friendly,environmentally-friendly, emission,Emission,Emission,Emission,Emission,Ethical,Fair trade,fair trade,Fair-trade,fair-trade,fairtrade,FairTrade,fossil fuel,FSC,GlobalWarming,grass root,Grass root,grass-root,grass-roots,grassroot,Grassroots,InternationalDayofEnvironment,KeepBritainTidy,locally manufactured,Ministry of Environment, organic,Organic,planetwaterlive,PlasticFree,pollution,polluting,Protecting nature,protect our planet,Rainforest Alliance,rainforest-alliance, recycle,Recycle,Recycling,Reduce, Reuse, Recycle,recycling,Reduce & reuse,reduce waste,Reduce waste,reduce cup waste,Reduce cup waste,RefillRevolution,Renewable,renewable,responsible origin,responsibly-grown, reusable,Reusable,Re-usable,Reduce. Recycle. Reuse,Save The Earth,SAVE THE EARTH,save the environment,single origin,single-origin,Single-origin,streets are about to get even greener,Sustainability,sustainable,Sustainable,TheOceanCleanup,Zero emission,zeroemission}

### **Positive**

, :D,^\_^;-),;),>:P,:-p,:-P,:-),:'),:'-),:'^),:-D,<3,:-],:3,:-3,:D,C:,:o,:o),:^),:p,:P,:p,;P,:],;),gr8,gr8t,admiration,admire,Admire,Admire,Adorable,ADOR ABLE,affection,Affection,ahead of the game,Amazement,amazement,Amazing,amazing,AMAZING,applause,Applause,astonish,as if I would,attractive,Attractive,awesome,Awesome,AWESOME, best,Best,BEST,beautiful,Beautiful,BeAUTIFUL,Beauty, beauty, bless ,BLESS, blessing,brilliant,Brilliant,cant live without,Cant live without,can't live without, caring

, Celebrate, celebrating, Celebrating, Celebration, Celebration, CELEBRATION, celebratory, Cheers, cheers, charisma, Charisma, charming, Charming, Cheerful, cherish, classy, clean, Clever, Clever, Celever, Comforting, Comforting, Comfy

,Comfy,compassion,Compassion,complement,Complement,Compliment,confident,Confident,Confident,Confidence,Confidence,Comfort,Comfort,Congratulations,Congratulations,CoNGRATULATIONS,congrats,Congrats,Congratz,Congratz,Congratz,Cool,COOL,Cool, cosy,Cosy,cozy,Cozy,Cozy,coziness,Coziness,

cute, Cute

eager, Eager, ecstasy, Ecstasy, ecstatic, Ecstatic, elegance, elegant, Elegant, empower, Empower, enamored, enchanting, Enchanting, encouraging, Encouraging, energising, energising, enjoy, Enjoy, ENJOY, epic, Epic

,EPIC,excellent,Excellent,EXCELLENT,excited,Excited,excitement,Excitement,exciting,Exciting,exhilirate,exhilaration,exhilarating,extravagant,Extravagant,fabulous,Fabulous,Fabulous,Fabulous,Fahrastic,Fantast

,favorite,FAVORITE,Favorite,favourite,Favourite,FAVOURITE,flattered, fresh,Fresh,Fresh,Fresh,Friendly,fulfilling,fulfillment, fun ,Fun,FUN,fun-loving,funloving,generous,Generous, glad,Glad,glorious,Glorious, glory,Glory,genius,Genius, good ,goood,gooood,Good,GOOD,gorgeous,Gorgeous,GORGEOUS,grateful,Grateful,Great,GREAT,great,Haha, haha,HAHA,Happiest,happiest,Happiness,Happy, happy,HAPPY,

healthy,Healthy,heartwarming,Heartwarming,Heart-warming,Heart-warming, heaven,Heaven,HEAVEN,hooray,Hooray,HOORAY, hug ,Hug,HUG,imagination,Imagination,INCREDIBLE,impressive,Impressive,IMPRESSIVE,incredible,Incredible,Indulge,Indulge,Ingenious,ingenious,inspiration,Inspiration,Inspiration,inspire,Inspire,interesting,Interesting,invigorating,i dig it,I dig it,I'm about to order it,I'm about to order it,I'm getting this,in getting this,i need this,I need that,I need that,I NEED,I want it,I WANT IT,i want this,I want this,I want that,I want that,I want rn,I want one,I want one,I so want,I so want,I SO WANT,I'm getting this,Im getting this,IM GETTING THIS,irresistible,Irresistible,IRRESISTIBLE,keep it up,Keep it up,KEEP IT UP,kind word,kool,Kool,KOOL,Kind Word,lets go,Lets go,Let's go,Let's go,lipsmacking,Imao,LMAO, lol ,Lol ,Lol,looking forward to,Looking forward to,looks perfect, love,Love,LOVE, loving,Loving,luscious,Luscious,luxurious,Juxurious,jolliness,jolly,Jolly, joy ,

joyful,JoY,joyous,kindhearted,kindly,magnificent,Magnificent,Magic, magic,MAGIC,majestic,Majestic,meaningful,Meaningful,mind blowing,motivating,Motivating,motivated,Motivated,motivation,Motivation,mouthwatering,mouth-watering,Mouthwatering,mouth watering,NEED TO TRY THIS,Niiiiiice, nice,NICE,Nice,nicely priced,Nicely priced,nourish,Nourish,Omg, omg,OMG,outstanding,Outstanding,overjoyed,Overjoyed, party,Party,PARTY,Passion,passion,

peace,Peace,peaceful,Peaceful,Perfect,Perfect,PERFECT,pleasant,Pleasant,pleasurable,Pleasurable,pleasure,Pleasure,Positive,Positive,powerful,Powerful,Precious,Precious,Precious,Pretty,PRETTY,primo,Primo,PRIMO,pristine,Pristine, proud,Proud,PROUD, pumped,Pumped,put your feet up,Put your feet up,refreshing,Refreshing,Rejuvenate,Rejuvenate,Rejuvenating,Rejuvenating,Relax,

relax,reliable,Reliable,relief,relieved,Relieved,Remarkable,remarkable,resentment,Resentment,resentful,Resentful,rewarding,robust,Robust, rocks,Rocks,satisfactory,satisfied,satisfying,scrumptious,Scrumptious,secure,Secure,serenity,Serenity,simple,Simple,skilled,skillful,smile,Smile,Smile,Smile,Smiling,Sophisticated,Sophisticated,Sophistication,

soothe, Soothe, Soothing, Special, Sp

sweet, Sw

tasty,Tasty,TaSTY,tempted,Tempted,tempting,Tempting,temptation,Temptation,terrific,Terrific,that's lit,That's 
 $wishes, wauw, Wauw, WAUW, Woo-hoo, wonderful, Wonderful, WONDERFUL, wuv\ you, Wuv\ wishes, water, which will be a supported by the property of the property$ 

you,yaaas,YES,upbeatable,Unbeatable,Unforgettable,Unforgettable,unreal,Unreal,versatile,very safe,Very safe,very reliable,Very reliable,Very durable,Very durable,very secure,Very secure,vibrant,Vibrant,visionary,Visionary,you know thats my drink,you know that's my drink,You know thats my drink,You know that's my drink,you are much better,You are much better,your much better,Your much better,YUAS,yuas,yum,YUM,XOXO,xoxo}

#### **Negative**

#### { X , 🎉

bad,Bad,BAD,BS,behemoth,BEHEMOTH,beware,Beware,BEWARE, bigot,Bigot,blasphemy,Blasphemy,BLASPHEMY,blocked,BLOCKED, bored,boredom, boring,Boring,boycott,Boycott,BOYCOTT, burnt,Burnt,BURNT, chaos,Chaos, clumsy,Complaint,Confusing, confusing, creepy,Creepy, cruel,Cruel,daunting,abandon, abuse,abusing,abysmal, ache

,aching,adverse,afraid,aggravate,aggression,aggressive,agitate,agonize, agony,Agony,alarming, anger,Anger,

ANGER, angry, Angry, ANGRY, Annoy, annoy, annoyed, annoying, anxious, argue, arrogance, arrogant, a

sham,asshole,Asshole,ass-hole,Ass-hole,atrocious,Awful, awful,AWFUL,bastard,Bastard,BASTARD,

bigot,Bigot,bitch,Bitch,BITCH,bitter,blasphemy,Blasphemy,BLASPHEMY,

bored,boring,boycott,Boycott,BOYCOTT,broken,Broken,BROKE,brutal,Bullshit,bullshit,BULLSHIT,buying my coffee elsewhere,buying elsewhere,Buying my coffee elsewhere,Buying coffee elsewhere,Buying coffee elsewhere,Buying elsewhere,cancer causing,Cancer causing,catastrophic,catastrophy,cesspool,Cesspool,CEO nuts,CEO is nuts,

cock, cockroach, Cockroach, CoCKROACH, cold-hearted, complain, Complain, CoMPLAIN, concerned, concerning, condemn, confused, confusing, Corrupt, corrupt, crap , Crap, CRAP, crazy, CRAZY, creepy, criminal, Criminal, crooks, Crooks, cruel, Cruel, Cry, CRY, crying, crap, CRAP, crazy, CRAZY, creepy, criminal, crooks, Crooks, cruel, Cruel, Cry, CRY, crying, crooks, Crooks, Crooks, cruel, Cruel, Cry, CRY, crying, crooks, C

cunt, Cunt,

coupon,dirty,Dirty,DIRTY,disappoint,Disappoint,Disappoint,Disapoint,Disapoint,disgrace,Disgra

dismay,dislike,Dissapoint,dissapoint,dissatisf,distress,Distress,distrust,disturbed,divorce,Divorce,dosnt have it,dosn't have it,dog shit,Dogshit,Don't wanna buy,Dont buy,don't wanna buy,Dont buy,DontCare,Dont give my business,done with your company,Done with your company,dont give my business,don't give my business,don't want your business,don't want your business,don't want your business,don't want my business,Don't want my business,Don't give my business,Don't pay enough,Dont pay enough,don't pay enough,don't pay enough,dreadful,Dreaful,DREADFUL,dreary,drowsy, dull, dumb,Dumb,DUMB, eew,Eew,EEW,emailing work from your bathroom toielt,embarrass,Embarrass,ended up

leaving,enraged,enraging,Error,error,ERROR,evil,Evil,EVIL,expensive,Expensive,ExPENSIVE,explain yourselves,Explain yourselves,Explain yourself,exploit, fail,Fail,FAIL,false advertising,False advertising,FALSE ADVERTISING, fart ,Fart,FART,faulty,Faulty, fear,Fear,feeble,fiery,fight,filth,Filth,Filth,Filth,flustered,flys are, fool ,Fool,

foul, Foul, fraud, Fraud, FRAUD, Frigging, frigging, frugal, frugal, frustrat, frustrat, fuck, Fuck, F\*\*\*, F\*\*K, furious, Furious,

 $fury, Fury, garbage, GARBAGE, GET\ UR\ FACTS\ STRAIGHT, get\ your\ facts\ straight, get\ ur\ facts$ 

straight, ghastly, Ghastly, goddam, Goddam, GMO tree, greed, Greed, grief, Grief, grieve, grieving,

grim, Grim, gross, GROSS, grumpy, grotesque, Grotesque, grumpy, Grumpy, guilty, Guilty, hectic, Hectic, hell , Hell, HELL , Hate, grim, Grim, gross, GROSS, grumpy, grotesque, Grotesque, grumpy, Grumpy, guilty, Guilty, hectic, Hectic, hell , Hell, HELL , Hate, grim, Grim, gross, GROSS, grumpy, grotesque, G

hate,HATE,hating,hatred,heartless,Heartless,hideous,hopeless,Hopeless,horrendous,horrible,Horrible,HORRIBLE,horrific,Horrific,horror,Horror,humiliation,Humiliation,humiliating,Humiliating,hysteria,hysteric, hurt,Hurt,idiot,IDIOT,issue,Issue,I don't think they'll miss your

business,ignorant,ignore,Ignore,IgnORE,impatient,Impatient,inadequate,inappropriate,Inappropriate,inferior,insane,insecurity,insecure,insidious,insipid, insult,Insult,irritate,irritating,irrational,Irrational,its worse,Its worse,It's worse, jerk,Jerk,Jerk,Jerk,keep your coffee and liberal views,Keep your coffee and liberal views,Kill,Kill,Kill,Kill,Kill,AlbelGMO,labelGMO,lame,Lame,

lazy,Lazy,Leaking,LEAK,leaking,liar,Liar,LiAR,liberal agenda,Liberal agenda,Liberal agenda,livid,Livid,loathing,Loathing,Lose,loser, loss,Loss, lost,Lost,lousy,ludicrous,lying, mad ,Mad,maddening,madness,Madness,makes no sense,Makes no sense,Malfunction,Malfunction,malice,malicious,maniac,melancholy,menacing, messy,mine wasn't even sweet,Mine wasn't even sweet,misery,mistake,Mistake,misunderstood,

moldy,Moldy,monstrous,moron,Moron,mortified,mortification,Nastiest,nastiest,nasty,Nasty,NASTY,never go there,Never go there,never pay,Never pay,Never buy,Never buy,Never Buy,Never Buy,Never Buy,Never return,Never return,never spend,Never spend,Never spend,negative,Negative,Negative,Negative,Neglect,nervous,Nervous, nigga,nigger,NIGGA,nightmare,Nightmare,not a fan,Not a fan,not going to drink,Not going to drink,no hairnet,nonsense,Nonsense,Nonsense,Nonsense,Nonthanks,No thanks,No Thanks,No Thanks,No trust,No trust,No TRUST,not buying,Not Buying,Not Buying,Not Buying,not worth it,Not worth it,Not WORTH IT,not safe,Not safe,Not safe,Not satisfied,Not

#### satisfied, Not Satisfied, NOT SATISFIED, no

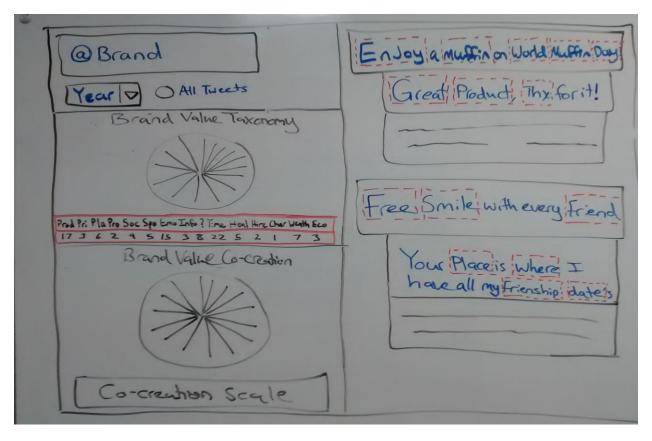
visor, obnoxious, offence, Offence, Offend, Offend, offensive, Offensive, Omfg, Omfg, OMFG, oppressive, Outrage, Outrage priced,Overpriced,Overpriced,Over Priced, pain,Pain ,painful,Painful, panic,PaNIC,paranoid,pathetic,Pathetic,pay your taxes,pay your taxs, Pay your taxes, Pay your taxes, Pay YOUR TAXES, PAY YOUR UK TAXES, pile of crap, pile of junk, piss, Piss, Piss, Pisty, Pitty, Pi poison, Poison, polluting, poor, Poor, Poor, Porn, prejudice, prices are too high, Prices are too high, Prices are to high, prices are to high,prick,Prick,PRICK,problem,Problem,PROBLEM,punish, pussy,Pussy,PUSSY,questionable,quirky,racism,racist,raise price,RAISE PRICE, rage,Rage,RAGE,raging, rape,Rape,RAPE,rapist,reject,Reject,remorse,remove the #GMOs,remove the GMO,repellant,repugnant,repulsive, resent, revenge, revolting, ridiculous, Ridiculous, RIDICULOUS, Ridickulous, ridickulous, Riot, riot, Rip you customer, rip you customer, Rip customer,rip customers,rotten,Rotten,RoTTEN, rude,Rude,RUDE,run out,ruin ,Ruin,RUDE,return my wrong order,return my order,Sad, sad ,sadness,Sadness,savage,selfish,Selfish,SelFiSH, scam,Scam,SCAM,scandal,Scandal,SCANDAL, scare,Scare,SCARE, scary, Scary, scream, Scream, Screwed, selfish, Selfish, sexual deviates, shabby treatment, Shady, shaking my head, Shaking My Head, shame ,Shame,SHAME,shameless,Shameless,Shameful,Shameful,SHAMEFUL, shit,Shit,SHIT,shocking,shoddy,shut up,SHUT UP, sick,Sick, silly, Silly, sinister, Sinister, Sinful, Sinful, Sinful, Slob, Slob, SLOB, slut, Slut, SLUT, smelly, Smelly, smh, SMH, Smh, smoke and mirrors, Smoke and Mirrors, smoke & mirrors, snob, Snob, sobbed, sobbing, sorrow, SORROW, spiteful, Spiteful, starve, Starve, Stale, stale, Stain, stain, stingy, Stingy, stinky, Stinky, Stoical, Stoical, Stoical, Stubborn, Stubborn, Stupid, StuPID, substandard, Substandard, Spoilt, SPOILT, sucks, suffer, Suffer, suspicious, sweaty, tantrum, taunt, Taunt, tear, Tear, temper, Temper, tense, tension, Tension, terror, TERROR, telling us to go somewhere else,terrible,Terrible,TERRIBLE,terrify,Terrify,terrorist,TERRORIST,Thanks for nothing,thanks for nothing, theif, Theif, thieve, Thieve, theiving, theft, Theft, Theiving, THEIVING, the profit margin, they don't all smile, thug, Thug, tired of, Tired of, tiring,too liberal,too cheesy,Too cheesy,Too salty,too sweet,too

sour,torment,Torment,tragic,trash,Trash,TRASH,treason,TREASON,Trouble,trouble,TROUBLE,Your antisemitic,your antisemitic,you're antisemitic,Ugly,ugly,UGLY,waste,Waste,Waste,Waste,Waste,won't be buying,won't be buying,Won't be buying, unclean,Unclean,unconscionable,Unconscionable,

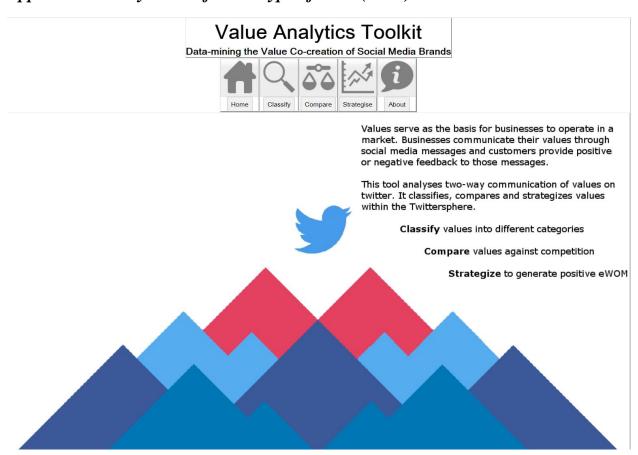
uncomfort,Uncomfort,undermine,underwhelm,unfair,UNFAIR,Unfair,unfavorable,ugliest,UgLiest,UGLIEST,ugly,Ugly,UGLY,unhappiness,Unha ppiness,unhappy,Unhappy,unhealthy,Unhealthy,unimportant,Unimportant,unjust,unlucky,unpleasant,Unpleasant,unsatisfactory,Unsatisfactory,un sightly,unsuccessful,unwelcome,unwholesome,unwieldy,unwise, upset,Upset,UPSET,uptight,useless,USELESS, vain ,Vain ,VAIN ,vanity,Vanity,vicious,Vicious,victim,villain,Villain,vindictive,violate,Violate,violent,Violent, whine,whining,whore,Whore,WHORE,why change your policy,why support,Why support,WHY SUPPORT,woeful,Worried,worried,worthless,Wrong,wrong,WRONG, yell,YELL,yuck,Yuck,YUCK,

yuk, Yuk, YuK, unaffordable, Unaffordable, UnAFFORDABLE, unconscionable, unhealthy, Unhealthy, UnHEALTHY, Unfortunately, unlortunately, vulgar, what a waste, why is it off the menu, why not brew, Why not brew, will not buy, Will Not Buy, WILL NOT BUY, will not purchase, WILL NOT PURCHASE, worst, WORST, wtf, WTF, Wtf, Yawn, yawn, yuck, Yuck, YUCK, xenophob }

Appendix H: Study 6 – Lo-fi Prototype of VAT (2015)

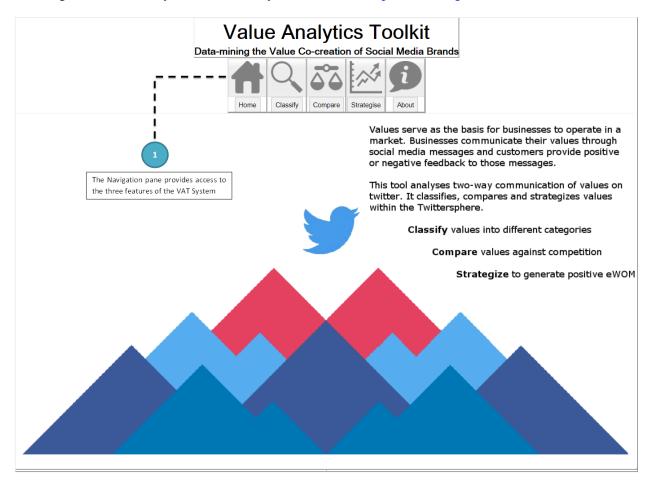


# Appendix I: Study 6 – Hi-fi Prototype of VAT (2018)

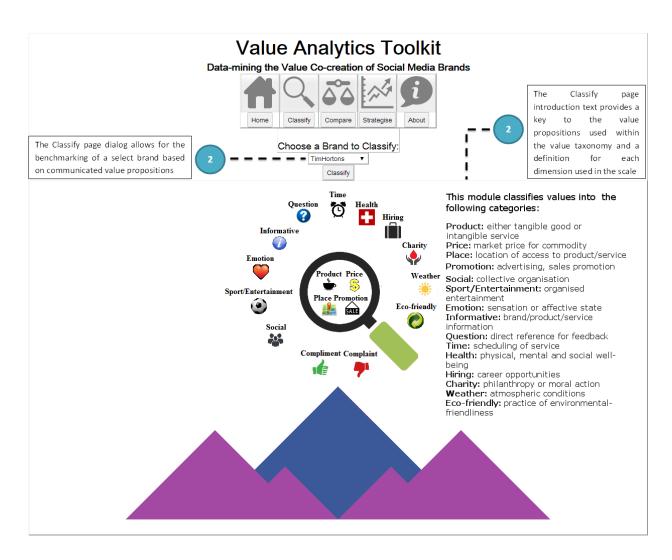


Appendix J: Study 6 – VAT User Tutorial (Classify, Compare, Predict)

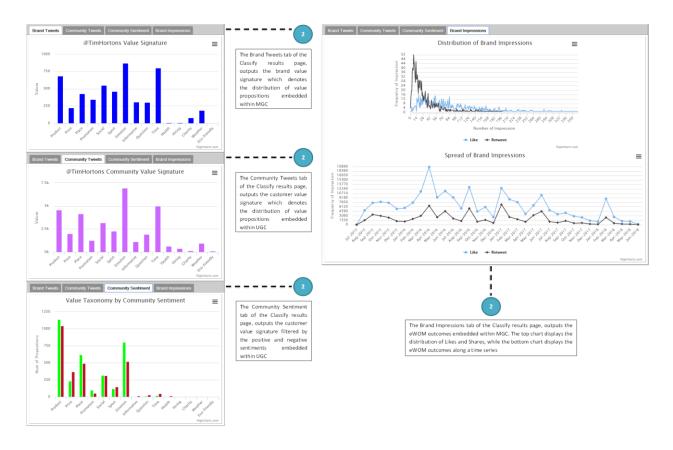
To navigate to the VAT system, users firstly enter the URL <a href="http://value.otago.ac.nz">http://value.otago.ac.nz</a> into a web browser.



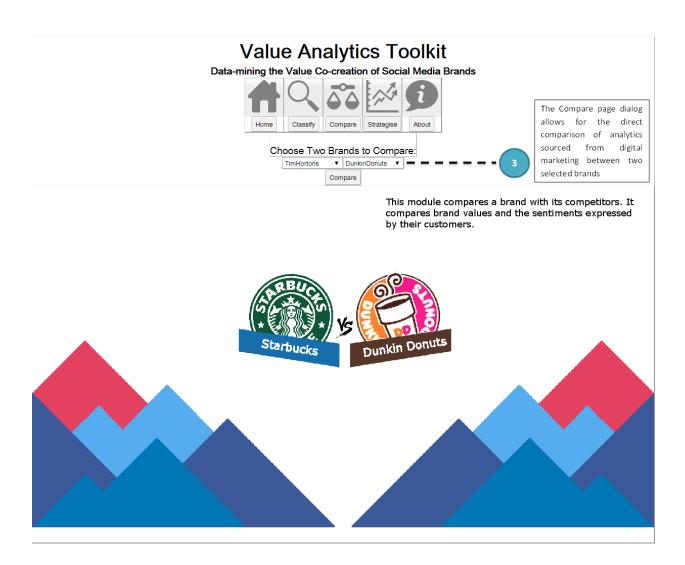
The browser then displays the VAT Main Menu, with a Navigation bar at the top allowing forward and backward navigation through the system. VAT provides five pages to navigate to, first is the home page that anchors the navigation of the system. Classify is the first module of VAT, whereby content marketing from a select brand is text mined to produce descriptive and diagnostic analytics on the basis of value propositions and sentiments embedded in tweets. Compare is the second module of VAT, which contrasts the aggregate details from text mining the content marketing of two select brands. Strategise is the last module of VAT, which produces predictive analytics on the brand value propositions which influence positive eWOM outcomes. The About page provides architectural and technical development details relating to the VAT system.



The following Classify introduction page provides a profile to the value taxonomy construct used to text mine social media content and presents a dialog to select a brand to Classify. The user clicks the button under the dialog to categorize and visualise content.



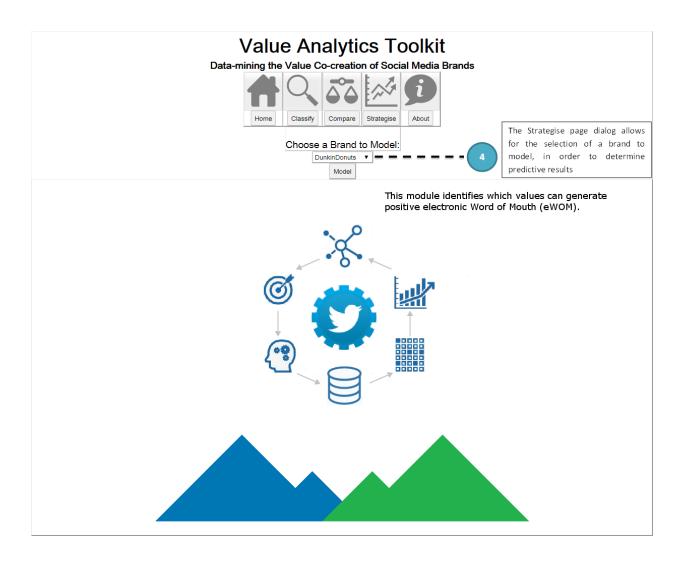
The results page of the Classify module produces a benchmark of the selected brand across four tabs. The Brand Tweets tab presents the distribution of the value taxonomy dimensions embedded within MGC. The Community Tweets tab presents the distribution of the value taxonomy dimensions embedded within UGC. The Community Sentiment tab presents the distribution of the value taxonomy dimensions, organised by consumer sentiments embedded within UGC. Lastly, the Brand Impressions tab presents the frequency distribution of eWOM outcomes relating to MGC. In the two charts produced, distribution of eWOM metrics and spread of metrics over time is output. Next, a walkthrough of the Compare module of VAT is presented.



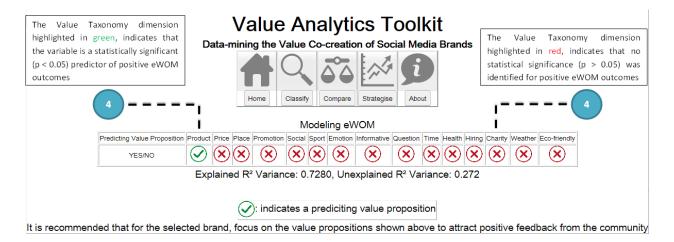
The introduction page for the Compare module in VAT provides two dialogs in order to directly contrast two select brands for similarities and differences within Twitter marketing. The user chooses two Twitter business pages and clicks the button under the dialogs to categorize and visualise results.



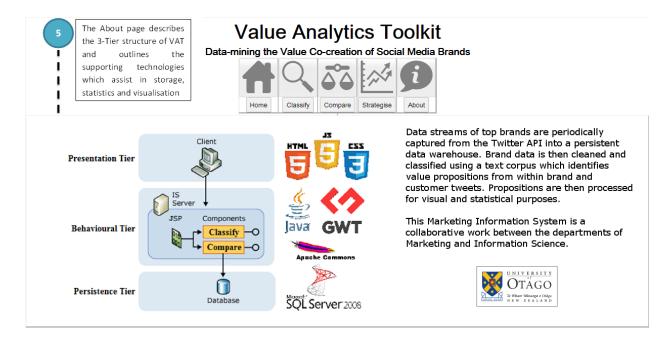
The results page of the Compare module produces comparative statistics of the two selected brands and aligns these measures on the same scale. The Brand Tweets tab presents the top-down brand value signature of both brands embedded within MGC. The Customer Tweets tab respectively presents the bottom-up customer value signature of both brands embedded within UGC. Lastly, the Brand Impressions tab presents the eWOM outcomes which relate to the performance metrics of MGC between brands. In the two charts produced, frequency distribution of eWOM metrics and metrics spread over time is output. Next, a walkthrough of the Strategise module of VAT is presented.



The introduction page for the Strategise module in VAT provides a single dialog in order to select a brand to perform multiple regression. The user clicks the button under the dialog after selecting a brand to model and the results are then reported for the regression analysis.



The results page of the Strategise module produces the predictive analytics results using the independent variables of the brand value propositions (encoded as a binary vector) found in MGC and the dependent variable of positive sentiments found in UGC (encoded as an aggregate sum of valence). The report returns the key parameters from an Ordinary Least Squares (OLS) model, used to estimate the relationship between value propositions and positive sentiments in community discussions. The predicting variables are identified using colour coding and amount of variance explained in the data is given by the R<sup>2</sup> of the model. Next is the About page, which describes the background of the VAT system.



The About page of the VAT system, briefly details the structure of the MkIS and specifies the technologies which supports its procedure. Respectively, MS SQL Server was used to persistently host data for VAT, open source libraries were used to perform the business logic of VAT and web technologies were used to interface the end-user with the VAT system. This completes the tutorial walkthrough of the VAT system.

# Appendix K: Study 6 - VAT Utility Respondent Task sheet



## **VAT System Task sheet**

In this Study you will have the chance to data mine business knowledge through a developed application. Please read the task description which will provide you with the instructions for using the VAT system. These tasks will allow you to operate the system freely so that you can independently evaluate the systems features.

(Please read the below tasks carefully and complete the set of tasks provided)

You are the brand manager responsible for online engagement for your business. You seek to understand the value that is offered by your business and your competitors. An Online Tool called *Value Analytics Toolkit (VAT)* has been developed to assist you in understanding the value embedded in the communication via Twitter. Tweets from both the brand and customers are examined to identify value propositions and these are summarised and visualised by the tool to assist in strategic decision-making.

The tool is hosted at <a href="http://value.otago.ac.nz">http://value.otago.ac.nz</a>.

Based on the scenario above, please complete the following tasks using the VAT tool by selecting the brand that is of interest to you (e.g. Dunkin Donuts). If you have questions when answering the following questions please feel free to ask the researcher.

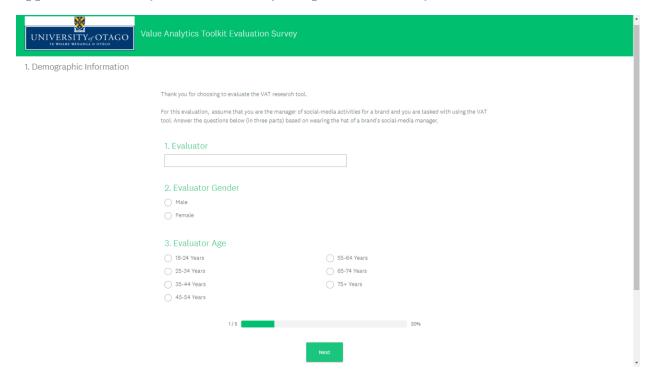
Please indicate th tasks 1-3 below.	e brand you have chosen:	You should use the same brand for
	• •	sen brand's tweets. You are free to select any the top 3 value propositions below:
1		
2		

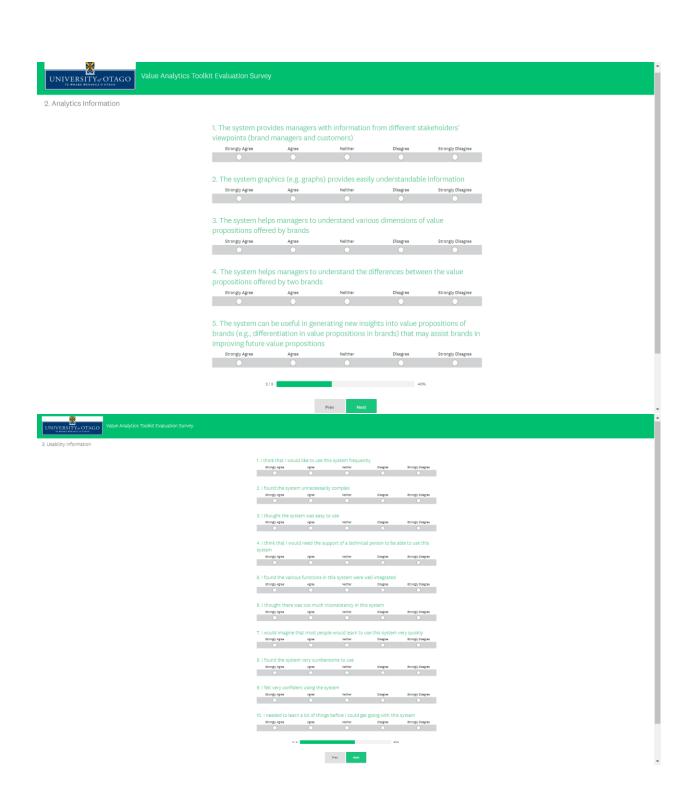
3
<b>Task 3:</b> Find the value proposition for the chosen brand which holds the most positive (+) and negative (-) sentiment.
The value proposition with the most positive sentiment was
The value proposition with the most negative sentiment was
<b>Task 4:</b> Compare two selected brands from the same domain and identify how they differentiate themselves using value propositions.
The two brands that were compared were:
Brand A:
Brand B:
Briefly discuss below, the differences between the two brands you selected in at least one dimension of value proposition (e.g. product, price).
Task 5: Compare two selected brands from the same domain and identify which brand has more online engagement (e.g., Like's, Retweet's).
The two brands that were compared were:
Brand A:
Brand B:
Which of the two had more likes? Answer:
Which of the two had more retweets? Answer:
Post-System Tasks
With the system freshly in your mind, Please fill out a simple survey on your perceived utility. (https://www.surveymonkey.com/r/NPKZ8KJ)

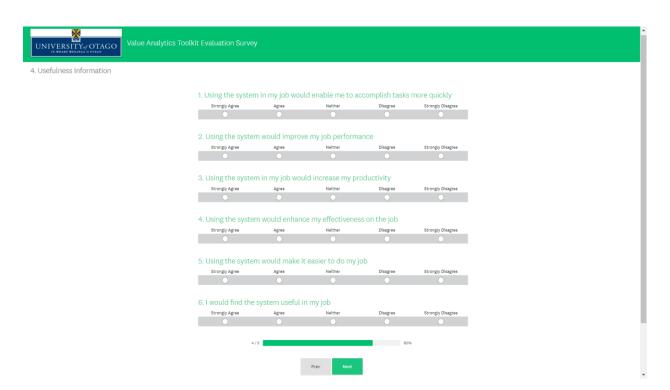
# Conclusion

Thank you for your time and effort in evaluating the VAT system. Your feedback and input is invaluable.

# Appendix L: Study 6 – VAT Utility Respondent Survey









## Value Analytics Toolkit Evaluation Survey

5.

Thank you for your time and effort in evaluating the VAT system, the information from this study will be crucial in improving the design of the marketing research.

# 1. Additional Comments

