What Language Reflects and Predicts in the Consumption of Cuteness and Foreign Entertainment

by

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Abstract

Language is ubiquitous and impactful in the marketplace, constantly being generated and consumed in speech, text, word of mouth (WOM), and online exchanges (Berger, 2014; Berger, Packard, et al., 2022; Moore & Lafreniere, 2020). For example, the choice of words, concreteness of language, and exposure to WOM have implications for consumers' sharing intentions and satisfaction, and firms' sales (Babić Rosario, Sotgiu, et al., 2016; Babić Rosario, De Valck, et al., 2020; Moore, 2012; Packard & Berger, 2021). Thus, language is a powerful tool for studying consumer relevant problems and marketing constructs (Berger, Humphreys, et al., 2020). Fundamentally, language reflects information about the consumer, context, and consumption, or can be used to understand and predict consumer behaviour. In this dissertation, I study the reflections and predictions that can be gleaned from language about two consumption phenomena: cuteness and foreign-language entertainment. Across two essays, I examine language as a resource that reflects consumers' associative networks and perceptions, and test how these predict subsequent behaviours.

First, both essays focus on what is being reflected in the language. In essay 1, I explore everyday language as a resource that reflects consumers' varied associations and perceptions of the construct of cuteness. The consumption of cuteness is growing, and so too is the language used in conjunction with it. Using natural language processing tools, I rely on this language to dissect and analyze the network of linguistic associations around cuteness. Embedded within this language I identify dimensions, contexts, and characteristics commonly associated with cuteness. I use these to generate eight propositions that conceptually advance the construct. Similarly, in essay 2, I study what language reflects about the motivations inherent in the consumption of

foreign language content (FLC). Here, I focus on what is revealed about consumers when they consume FLC in the form of movies. I find that the consumption of FLC signals expertise to observing consumers and leads to inferences about the motivations behind such consumption, which I label search for excellence. This novel construct captures the motivational inferences that are reflected by consuming FLC.

Second, both essays examine how language predicts consumer-relevant downstream consequences. In Essay 1, I first show how cute-centric language in review text influences and predicts helpfulness. I then show that the semantic relationship between sweetness and cuteness leads to an increase in sweet food preference upon encountering cuteness. In essay 2, I demonstrate how the consumption of FLC, and the motivational perceptions it generates, predict increased expertise evaluations, along with increased recommendation-seeking from the FLC consumer.

While both essays treat language as a rich resource that simultaneously reflects and predicts consumer perceptions and behaviours, each essay approaches language in a novel way, theoretically and empirically. In Essay 1, language is treated as a resource that contains information about how cuteness is collectively perceived and understood by consumers. This approach has been used to study marketing constructs in prior work (e.g., brand personality, Pamuksuz et al., 2021). However, I use a unique combination of text analysis techniques to generate insights, offering a methodological roadmap for how to study other consumer-relevant constructs. Further, I demonstrate how to apply these insights using field data (reviews) and experiments. In Essay 2, language is treated as a resource being consumed. To my knowledge, this is the first research to study language itself as an object of consumption. I use an

experimental approach to determine the causal link between the motivations reflected by FLC consumption and how these predict expertise perceptions.

Finally, both essays expand the scope of language research in marketing. Traditionally, language research in consumer behaviour has focused on word-of-mouth, persuasion, and marketing communications such as advertising and customer service. However, language offers numerous possibilities to study and understand consumer behaviour phenomena. As text-analytic techniques evolve and as consumption and production of language itself grows, studying language in unique and novel ways holds immense potential for marketing research. The two essays in this research build on such momentum and show how diverse and interesting phenomenon can be studied under the umbrella of language research in marketing.

Preface

This thesis is an original work by Shaheer Ahmed Rizvi. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name “Cuteness and Consumption”, No. Pro0007619, February 20, 2018, and Project Name “Consumption of Entertainment Content”, No. Pro00107569, February 3, 2021. No part of this thesis has been previously published.

Dedication

To my parents, Naveed Ahmed Rizvi and Tabinda Naveed, for being my anchors and pillars of unconditional love. To my wife, Swebah Javed, for the limitless support and unwavering love, without whom none of this would be possible.

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I would also like to thank one of my mentors, Dr. Adnan Zahid who started me on this journey of academic scholarship and ignited in me the passion to pursue a PhD.

Last but not least, I want to thank my family. Thanks to my *Nani*, my brother Rauhaan, and my cousins Faiz, Noyan, Abdu, Hassaan, and Fahd, for always being my source of peace and happiness.

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Chapter 1 – Introduction

Cuteness attracts attention instinctively and immediately (Esposito et al., 2014) and elicits positive responses from consumers (Steinnes et al., 2019), making it an extremely popular consumable commodity. Cute content is shared widely online: YouTube offers more than 2 million cute cat videos with over 25 billion views (Marshall, 2014), and multiple platforms, such as 9gagcute, Subreddit aww, Instagram, and Tumblr, specifically curate cute content (Brosch, 2016; Marshall et al., 2015; Wagner & Gasche, 2018). In fact, cat videos are considered to be one of the primary drivers of the explosive growth of YouTube (Moss, 2021). Similarly, people's fascination with cute content has led to the subreddit on cuteness having the fifth largest subscriber base on the Reddit platform (Baer, 2022).

Cuteness also has a tremendous footprint in the marketplace. Out of the top 10 largest media franchises by valuation, the top 7 entries heavily incorporate design elements of cuteness (Hallman, 2022). These include Pokémon ($92 Billion), Hello Kitty ($80 Billion), Winnie the Pooh ($75 Billion), Mickey Mouse ($70 Billion), and Anpanman ($60 Billion). Taking the example of the market leader, Pokémon's free-to-play game *Pokémon Go*, which features a variety of cute, collectible characters, generated over $900 million in 2021 alone (Clement, 2022). Similarly, the toy industry incorporates cuteness into designs to attract children and sell merchandise (Allison, 2006; Wang & Mukhopadhyay, 2015). Ultimately, companies have a strong incentive to capitalize on the immense popularity of cuteness, and on consumers' positive responses to cuteness (Goggin et al., 2016; Etcoff, 1999).

On the academic front, cuteness has attracted scholarship across diverse fields, including ethology, neuroscience, psychology, and marketing. Research has explored the construct of cuteness and examined how exposure to—and consumption of—cuteness affects consumers (Epley et al., 2007; Trevathan & Rosenberg, 2016; Wang et al., 2017). Prior work has

established two underlying dimensions of cuteness: kindchenschema (Alley, 1983; Lorenz, 1943) and whimsical (Nenkov & Scott, 2014). Prior work in kindchenschema cuteness has focused on its characteristics (e.g., physical features; Alley 1983) and associations (e.g., vulnerability; Wang et al., 2017) as well as its behavioural (e.g., protectiveness and caretaking; Brosch et al., 2007; Sherman, Haidt, & Coan, 2009) and emotional impacts (e.g. positive affect; Steinnes et al., 2019). Whimsical cuteness (e.g., a pretty top, a pink coffee mug) is a more recent conceptualization of cuteness, and has been linked to mental representations of fun and reward-seeking motivations (Nenkov & Scott, 2014).

Nevertheless, research on cuteness within marketing remains relatively scant and certainly does not match the extensive consumption of cuteness in the marketplace (Wang & Mukhopadhyay, 2015). Furthermore, other dimensions, characteristics, and outcomes of cuteness (different from kindchenschema and whimsical) likely exist and merit exploration. Cursory evidence of these other facets of cuteness is present in everyday speech, where the words "cuteness" or "cute" are widely used to describe attractiveness, behaviour, and other aesthetics.

I propose there is room to explore and extend cuteness and its dimensions through investigating the ways in which cuteness populates language. In human-relationship contexts, for example, cuteness may be employed as an evaluation of attractiveness that is not a clear instantiation of the kindchenschema or whimsical concepts. Further, consumers often dub behaviours as 'cute'—as when someone acts in a silly, humorous, or subtle way. Finally, there may be additional features that foster perceptions of cuteness, such as those related to size. In this paper, I am motivated to broaden our understanding of the rich concept of cuteness. I aim to extend and clarify the existing dimensions of cuteness (kindchenschema or whimsical) and to identity novel dimensions. To do so, I adopt a linguistic lens.

Language offers a resource that can be mined to unearth the various perceptions, expressions, and contexts associated with a construct (Berger, Humphreys, et al., 2020; Cavanaugh et al., 2016). Rich constructs such as cuteness can have multiple semantic associations—links—between lexical representations (concepts stored as words) in memory (e.g., up is good, warm is friendly; Dagenbach et al., 1990; Dimofte & Yalch, 2011; Meier, Hauser, et al, 2007; Meier & Robinson, 2004). These associations originate from the variety of ways people use the concept in lexical exchanges, such as speech, written text, digital communication, etc. By focusing on the language used by consumers about a certain concept, I can access their associations, evaluations, judgments, and knowledge surrounding a variable of interest (Berger, Humphreys, et al., 2020; Berger, Packard, et al., 2022; Humphreys et al., 2021). Applying such a linguistic perspective to cuteness allows me to uncover its associations, to paint a broader picture of the construct, and to offer insights into the nature of cuteness. To do so, I adopt a methodologically-driven approach. I use recent natural language processing (NLP) techniques to deconstruct—and subsequently expand and extend—the concept of cuteness. NLP offers numerous text analysis techniques, such as topic modeling, that can illuminate how consumers conceptualize popular marketing constructs (Amado et al., 2018; Reisenbichler & Reutterer, 2019). The text analysis tools I use to examine cuteness include word2vec, multidimensional scaling, hierarchical clustering, and topic modeling. Furthermore, using review data from amazon, I analyze the performance of the multiple associations (novel dimensions and features) extracted from the text analysis across the span of numerous industries involving toys, food, pets, clothing etc.

This research offers two primary contributions. First, I explore semantic associations and language to broaden our understanding of the construct of cuteness. Second, methodologically, I

illustrate how the study of everyday language helps uncover embedded associations regarding a target concept in consumer culture. Such an approach could be applied to various marketing concepts, such as like warmth and competence (Aaker et al., 2012), to substantiate existing theory and generate viable leads for future investigation.

The substantive side of this research has value for marketers and managers because cuteness is increasingly utilized as a tool for attracting and selling to consumers (Govers et al., 2003; Wang & Mukhopadhyay, 2015). The fast-food industry capitalizes on cute toys to increase sales for their core products directed at children (Longcare et al., 2016). The toy industry is also an example of a multibillion-dollar business where cuteness is highly relevant in promoting sales (Marcus et al., 2017; Ni et al., 2016). In short: cuteness sells.

Before proceeding, I present a roadmap for how this essay is organized by chapter. In Chapter 2, I offer a theoretical review of cuteness and discuss the network of associations in memory. I then argue that text analyses techniques can leverage these associations, manifest in everyday language, to explore and extend cuteness. In Chapter 3, I apply a combination of text analysis techniques to two datasets to examine cuteness and provide insight into the focal construct's associations. Limitations are also addressed. In Chapter 4, I build on the text analysis results to generate a set of propositions regarding new dimensions, characteristics, and contexts of cuteness. I outline multiple possibilities to research, develop, and extend the concept of cuteness. In Chapter 5, I investigate the implications of the associations extracted from the text analyses. Using Amazon data, I explore cuteness-related language and review helpfulness across a number of product categories. In Chapter 6, I dig deeper into one of the propositions from Chapter 4. Specifically, I theoretically develop and experimentally investigate the proposed

association between cuteness and food. Finally, Chapter 7 summarizes my findings, and discusses the theoretical contributions and managerial implications of this research.

Chapter 2 – Theoretical Background

Cuteness

Cuteness is an evolutionary attention-grabbing strategy that elicits immediate, automatic, and unconscious responses from humans (Esposito et al., 2014; Kringelbach et al., 2016). These responses are biologically coded and innate (Berridge & Kringelbach, 2008), and serve the essential evolutionary purpose of enhancing the fitness of the species. From an evolutionary perspective, cuteness is an adaptation that promotes the survival of vulnerable infants. Our attention to cuteness is hardwired and helps direct attention and resources toward child rearing and protection. It is no surprise, that the highest degree of cuteness is observed at the stage of infancy, when the child is in its most helpless and fragile state. This infantile cuteness is termed kindchenschema (baby-schema; Lorenz, 1943) cuteness.

Kindchenschema cuteness physically corresponds to infantile features of adorability, such as big eyes and large foreheads (Alley, 1981), often found in human babies, pets, and small animals. Other concepts that are associated with kindchenschema cuteness can be positive, such as innocence and youthfulness, or negative, such as vulnerability and helplessness (Jia et al., 2015; Wang et al., 2017).

Research on kindchenschema cuteness has also investigated its influence on behaviour. Behaviourally, kindchenschema cuteness incites caretaking, attentiveness, and protectiveness directed towards the cute object (Alley, 1983; Demirbilek & Sener, 2001; Glocker et al., 2009; Sherman, Haidt, & Coan, 2009; Sherman, Haidt, Iyer, et al., 2013), thereby enhancing the rate of survival of the infant (or object). For instance, Glocker and colleagues (2009) experimentally

enhanced caretaking motivations in participants by increasing the cuteness of a target. They manipulated cuteness using Alley's (1981) proposed attributes – large forehead, big eyes, etc. – and found that greater cuteness elicited stronger caretaking.

Kindchenschema cuteness has also been studied in relation to affect. By and large, the effect of cuteness on the affective system is a positive one. In their investigation of the affective response to cuteness, Steinnes et al. (2019) discussed the *Kama Muta* emotion, which translates to the *heart-warming* emotion. This is the feeling of your heartstrings getting pulled, and it does not have an exact word denoting it in the English language but can be described as the feeling of 'aww' (Buckley, 2016). At the neurochemical level, cuteness releases dopamine, which generates pleasure and makes us feel happy (Berridge & Kringelbach, 2008; Karkun et al., 2018). Cuteness also informs empathy and may influence prosocial attitudes. Wang et al. (2017), show that people high in behavioural approach (those motivated to pursue and respond to rewards; Carver & White, 1994) respond positively to donation appeals leveraging cuteness. The emotional effects of cuteness have implications for cognition as well. Cognitively, cuteness has been shown to increase humanization of others through mentalization (Sherman & Haidt, 2011) – attributing mental content to a target – and thus can be vital to achieving socialization goals. Another benefit of this mentalism is that cuteness can be incorporated into product design elements to increase anthropomorphization (Wang & Mukhopadhyay, 2015). As an example, cuteness can increase AI application adoption (Lv et al., 2022). Adoption increased as the perceived cuteness of the AI application increased, as long as the application's focus was on relationship building or entertainment (but not when the applications' focus involved objective or professional knowledge).

A less commonly explored dimension of cuteness is whimsical cuteness. This type of cuteness is linked to mental representations of fun, playfulness, and entertainment, and increases indulgent consumption (Nenkov & Scott, 2014). For instance, a cute top, a pink mug, patterns on packaging, or anthropomorphized items can be classified as whimsically cute. Whimsical cuteness activates the reward-seeking drive, increasing motivations to consume indulgently. In one experiment, Nenkov and Scott (2014) demonstrate that a whimsically cute gift card leads to greater indulgent purchasing compared to neutral and kindchenschema cute gift cards.

Moving forward, I will explore cuteness as a semantically rich concept and use the term cuteness to encapsulate both the kindchenschema and whimsical dimensions.

Probing the Semantic Network of Associations of Cuteness

I contend that cuteness is stored as a rich concept in memory that branches out in a relational network with connections to multiple other concepts. These associations may relate to the different dimensions and characteristics that underlie cuteness, or to the variety of contexts or products relevant to the concept.

Consumers encode and store concepts in memory semantically, that is, we assign words (lexical representations) to concepts to refer to them (Klix, 1980; Kounious & Holcomb, 1992). For example, the idea of lower temperatures is labeled ‘cold’. Whenever we encounter lower temperatures, we probe semantic memory and retrieve the term ‘cold’ to afford a description. Concepts can also relate to one another linguistically to generate a semantic network of associations (Nelson et al., 2013). Ultimately, we end up with a repository of semantic memory where various concepts are stored in relational networks – a web where concepts tie to each other (Norlin, 1981). The associations of a concept can be traced to its frequency of use with, and recall of, interrelated concepts, evident in speech and thinking (Dagenbach et al., 1990; Funnell,

1995). Hence, an interplay of language, thinking, and memory contributes to the encoding, retrieval, and depth of a construct – and its connections – in the network of association.

For example, the idea of cold can be stored in memory with a link to temperature, products, places, and even people (metaphorically - Barsalou, 2008; Lakoff & Johnson, 2008). As such, when a concept is primed, the interrelated constructs stored in memory also become accessible to varying degrees (Carr & Dagenbach, 1980; Fischler, 1977). In the example of cold, a range of activations may emerge: ice cream (hedonic product), air conditioner (utilitarian product), hot (antonym), winter (season), Iceland (place), a hostile person or death (metaphor). Some of these associations may be implicit and non-consciously processed (cold-ice, Graf & Schacter, 1985; Meier, Hauser, et al., 2007) while others may be consciously retrieved through sifting the network (e.g. locating a superhero who has cold-based powers – superman-icebreath; Marko & Riečanský, 2021).

Semantic concepts stored in memory manifest in language which can be studied to extract the relationships and shared perceptions about the concept in the minds of consumers (Amado et al., 2018; Humphreys & Wang, 2018; Rocklage & Rucker, 2019). Thus, analyzing language offers researchers the ability to access, identify, report on, and test propositions related to certain constructs, in ecologically valid contexts. It also enables proposing directions for future research.

I discussed earlier that cuteness may have a number of understudied dimensions and characteristics, and further contend that these may be evident in the frequent associations manifesting in language. I posit that cuteness has multiple associations that can be explored and examined textually to broaden our theoretical understanding of the construct. From prior established research, I can predict certain themes that are likely to be observed in relation to

cuteness such as adorability, infantility, whimsicality, innocence, and vulnerability. Furthermore, other lexical associations can be extrapolated to exist. These could include the themes of love (e.g. loving cute things such as babies and pets), size (cute things are small), and other features of attractiveness (a mature view of cuteness). Cuteness can also be argued to hold metaphorical associations, for example, to the constructs of sweetness, romance, kindness, and naiveté. Cute things, for example children, are often linguistically termed sweet. Romantic partners are often described with cute descriptions, such as cutie. Wang et al. (2017) revealed that cuteness can increase prosociality via the activation of empathy, suggesting that it might have a relationship with kindness, in general. Naïve behaviours like silly mistakes and juvenile acts are also often labeled cute. I turn to natural language processing and text analysis to explore these potential relationships.

Language and communication offer a fertile resource to examine a construct's associations through the investigation of semantic relationships available in text data (Mikolov, Yih, et al., 2013). For example, two words that are closely semantically related, like 'king' and 'man', are likely to co-occur in written or spoken language. Natural language processing (NLP) enables the wrangling and querying of text corpora for the purpose of studying sentiment and semantic and/or syntactic relationships (Albert & Thomas, 2018; Berger, Humphreys, et al., 2020; Humphreys & Wang, 2018; Pennebaker et al., 2015; Rocklage & Rucker, 2019). Since words that are associated tend to co-occur, we can use a variety of tools to probe, mine, and confirm the potential associations for cuteness. I do this through multiple NLP techniques applied to two datasets: the pre-defined Google News corpus; and a custom generated Reddit corpus.

Chapter 3 – Text Analysis

I use a combination of text analysis techniques to investigate and classify close semantic associations of cuteness: word2vec, MDS, cluster analysis, and topic modeling.

First, I use word2vec to identify words that have close semantic associations with cuteness. Word2vec is a popular neural network model used to investigate semantic relationships and closeness of words/concepts (Goldberg & Levy, 2014). I use word2vec on the existing Google News corpus to find the relative strength of associations between the word 'cute' and 78,000 other words from a dictionary.

Second, taking the top 100 closest word associations from the word2vec output, I create a correlation matrix and submit it to multidimensional scaling (MDS) to visualize, interpret, and group these associations by mapping them on to a two-dimensional space (Jaworska & Chupetlovska-Anastasova, 2009). Further, I conduct a cluster analysis to formally and objectively sort and classify the top 100 words generated from word2vec into clean groups of closely associated terms (Murtagh & Contreras, 2012). I then use cuteness theory to assess and collapse the clusters into refined groups in a theoretically informed manner. Together, these techniques allow me to probe cuteness, and to identify dimensions, characteristics, and contexts relating to the concept.

Third, I turn to topic modeling, a technique used to extract topical content from a corpus (Jelodar et al., 2019), to delve deeper into the conceptual relationships kindchenschema cuteness has, and to corroborate my findings from the preceding analyses. For this analysis, I focus specifically on kindchenschema cuteness as it is the most widely researched and experienced phenomenon of cuteness (Kringelbach et al., 2016; Sherman & Haidt, 2011; Wang & Mukhopadhyay, 2015). I use latent dirichilet allocation (LDA), a popular topic modeling technique (Vayansky & Kumar, 2020), on a custom-generated Reddit corpus to extract groups of

words corresponding to potential topics related to kindchenschema cuteness. This technique enhances our understanding of kindchenschema cuteness and its associations.

Word2Vec

The tool I used to examine the semantic relationships between cuteness and its associations is a text-analysis algorithm called *word2vec*. Word2vec is a neural network language model (NNLM) which produces vector distributions of words in a semantic space (Jatnika et al., 2019; Mikolov, Chen, et al., 2013; Mikolov, Grave, et al., 2017). The resulting vector representations can be studied with respect to their syntactic and/or semantic relationships (Goldberg & Levy, 2014). Word2vec allows for the analysis of multiple degrees of similarity between words and phrases (Ma & Zhang, 2015; Mikolov, Sutskever, et al., 2013). Word2vec is a prediction-based model, with the model being trained to maximize the ability to predict closely associated words (Rocklage & Rucker, 2019).

A pre-trained model of 3 million vector representations produced from 100 billion words in the Google News corpus can be used to examine word relationships in conjunction with a list of words or a dictionary (Handler, 2014; Hollis & Westbury, 2016). Text analyses may also be performed on smaller portions of the pre-trained model (Hollis & Westbury, 2016) I took the latter approach due to computational constraints.

Cosine distances are applied to vector representations to obtain the degree of similarity between target terms (Coccaro & Jurafsky, 1998; Liao & Xu, 2015). This method was used to identify close associations for the focal word – 'cute'. Using a portion of the Google News vector database (filtered to 300,000 word vectors), I calculated the cosine distance between cute and words in a dictionary of over 78,000 unique entries (Hollis et al., 2017). The output of cosine distances (r) ranged from 0 – 2. The distribution of distances was normal with a mean of 0.87,

where numbers below the mean indicate similarity, numbers above the mean indicate dissimilarity, and numbers close to the mean indicate random association.

With an output spanning 78,000 distances, I narrowed the focus to the top 100 words (see Appendix A), which corresponds to the top 0.1% associations with our target term. The strength of these top 100 associations is illustrated by the fact that the observed similarities are 4 standard deviations below the similarity mean ($p < 0.0001$). Notable mentions here include adorable, girly, goofy, funny, sexy, lovely, silly, playful, creepy, sassy, gorgeous, endearing, yummy, teeny, whimsical, sweet, fluffy, stupid, and dork. Many others in the top 100 were close synonyms or variations of these words.

Already, the results reveal patterns composing cuteness; word2vec helps identify the various relationships and associations cuteness has. However, one of the limitations of this technique is that word2vec does not account for out of vocabulary words. This means that any words absent from the Google News corpus and the 78,000 word dictionary, would not have been treated as a potential association in the word2vec analysis. Additionally, word2vec does not provide a classification scheme or visualization tools to arrange the obtained words into groups. In order to enhance the resolution of my findings, I conducted multidimensional scaling to generate thematic clustering with greater visual clarity.

Multidimensional Scaling (MDS)

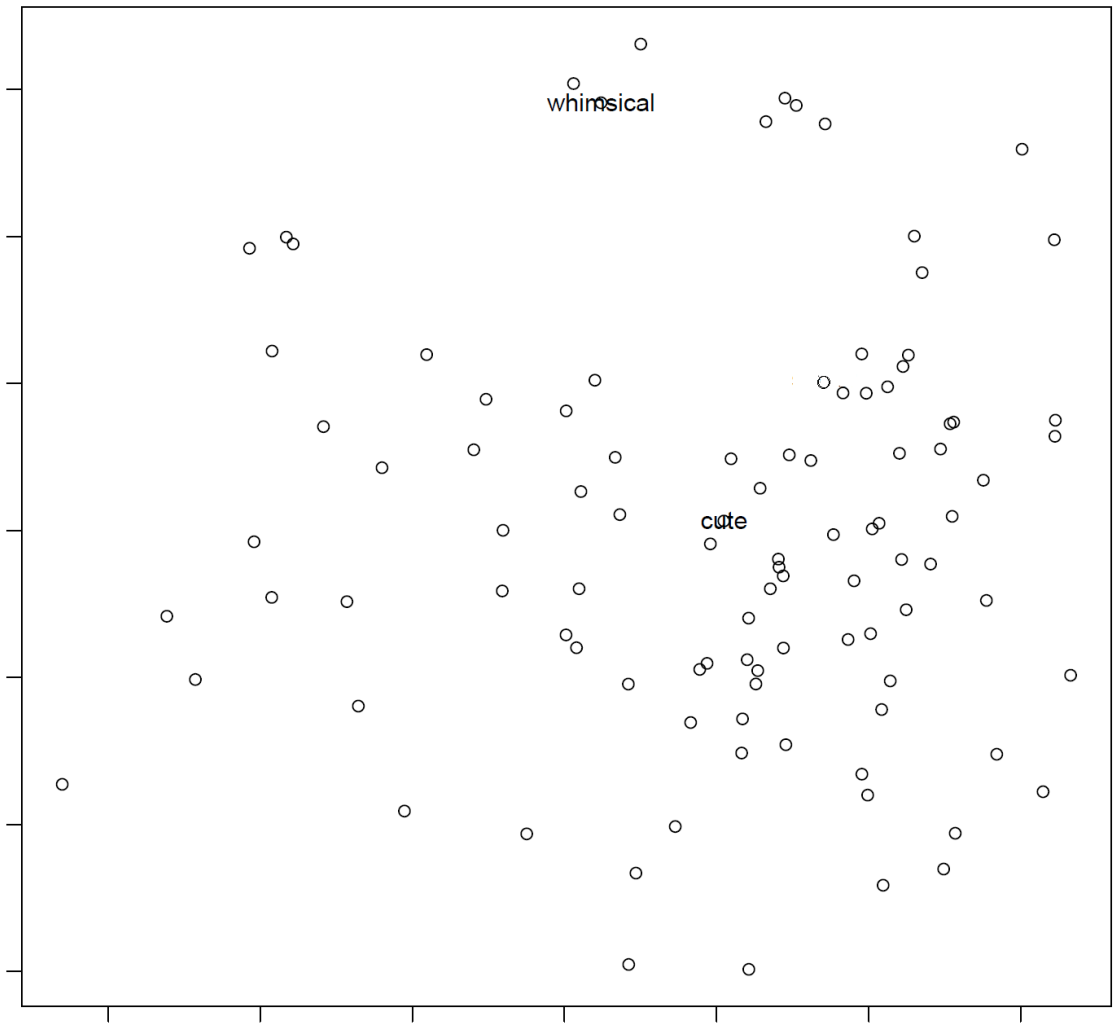
I further probed these semantic associations by taking the cosine similarities between the top 100 words (0.1 percentile) for cute and producing a 100x100 distance matrix. With these 10,000 cosine distances I examined the relationships between these words using multidimensional scaling (MDS; Arnold, 1971; Green & Carmone, 1969). MDS permits the

visualization and interpretation of similarity between cases (words) in a dataset by plotting each word in a lower N-dimensional space, that preserves the original pairwise distances as much as possible (Borg & Groenen, 2005; Cox & Cox, 2008; Mead, 1992). MDS essentially transposes a higher dimensional arrangement into a flattened lower dimensional (2D) space to facilitate clearer visualization of the relationships between word pairs, while retaining their original cosine distances (Borg & Groenen, 2005; Carroll & Arabie, 1998; Cox & Cox, 2008).

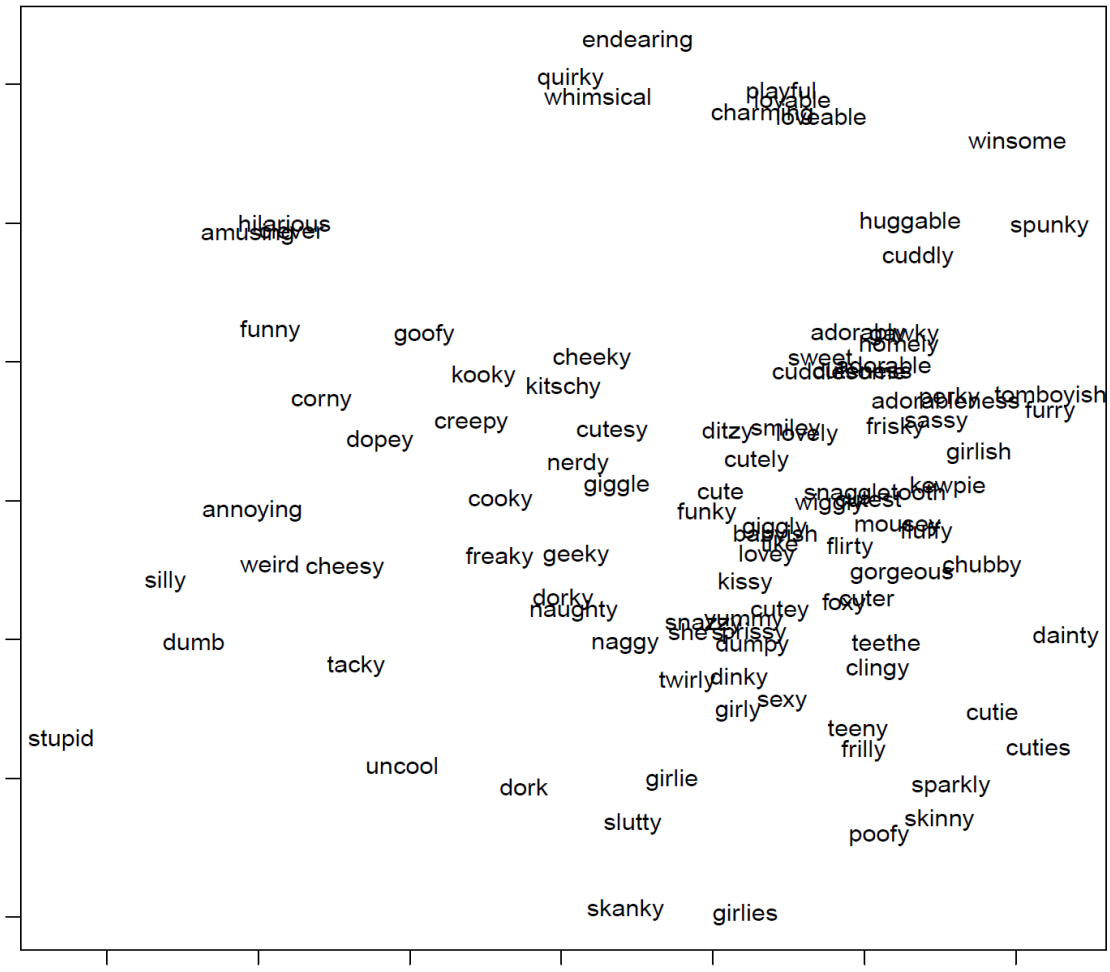
In short, the word2vec output, based on word decompositions and their similarities in a high-dimensional semantic space, can be visualized into a 2D diagram, where the 100 words are arranged according to their closeness to each other. The output from MDS applied to our distance matrix is shown in Figure 1. The top figure shows the unlabeled output, with three key terms highlighted; the bottom figure shows the labeled output, with all 100 words.

Figure 1. Relationships among top 100 words closest to cute

1A - Starting point: Cute (unlabeled)



1B - Starting point: Cute (labeled)



The MDS analysis revealed a scatterplot with multiple word groupings, where each word group is composed of a cluster of words with high cosine similarity to each other. Approximately 6 clusters can be identified in the plot. A concentrated cluster encompassing the kindchenschema dimension is located near the heart of the plot. This cluster is comprised of words such as sweet, adorable, babyish, girlish, and cudy. Whimsicality can be found at the top in a cluster that contains playfulness, as originally conceptualized by Nenkov and Scott (2014).

Looking at the left side, we find two clusters with traits and concepts tied to varying degrees of negativity. A cluster connoting stupidity and dumbness can be observed in the far left

of the plot. This means cuteness entails a negative profile highlighting negative evaluations of intellect. A less negative, but equally intriguing, cluster is composed of the goofy theme containing words like nerdy, freaky, geeky, and dorky.

As we move lower on the right side of the plot, two clusters of attractiveness emerge. The first one pertains to traditional, non-promiscuous beauty conceptualizations with words like gorgeous, flirty, cutie, skinny, sparkly, and dainty. This cluster is closely neighboured by a more sexualized dimension of cuteness enveloping words like sexy, girly, slutty, and skanky.

A final observation can be made about metaphorical associations – romance, sweetness, kindness. Words like love and kiss are sprinkled in various clusters and are also situated in the sexually oriented cluster of attractiveness. This indicates a degree of metaphorical relatedness between cuteness and romance. Similarly, sweet is located in the kindchenschema cluster, illustrating a strong relationship with kindchenschema cuteness.

The combined results from word2vec and MDS reveal many interesting associations. We can observe clear pathways from cuteness to conceptions of kindchenschema and whimsical cuteness, established in prior research. We also see potential extensions to kindchenschema cuteness, with words related to love, size, clothing, and sweetness emerging as strong associations within the kindchenschema cluster. Interestingly, cuteness as an evaluator of physical attractiveness appeared to divide into dual streams, with one of them relating to mature attractiveness. This insight reveals how cuteness is applicable to both traditionally-cute and sexually-cute physical features. Additionally, some associations were the negative personality traits. Silliness and stupidity seem to be clearly negatively valenced evaluations that are closely tied to cuteness perceptions. This may emanate from the close relationship of cuteness with infantility, youthfulness, naiveté, and innocence, or be an instance of irony or sarcasm.

MDS is a technique applied using correlation or distance matrices from the outputs of other techniques. This means that MDS is inherently constrained to present relationships from the date fed into it, and will not highlight or produce relationships on its own. Consequently, it is possible that other associations, dimensions, or characteristics relating to cuteness were not accessible because of the restricted number of words used in the word2vec analysis. Expanding the selection of closely associated words, may reveal other associations. Another limitation of this analysis is the manual encoding and labeling of clusters. Word2vec generates raw data and MDS organizes it in a visual space. Ultimately, MDS requires the researcher to derive the classifications from the data or the diagram. To avoid the pitfalls of researcher bias, attain a reasonable degree of impartiality, and as an additional step of substantiation, I turn to an automated clustering approach to determine the classification of the words obtained from word2vec.

Hierarchical Clustering

Clustering is a popular technique used to sort data into objective classes/groups on the basis of distances or similarity (Johnson, 1967; Nielsen, 2016; Vilnai-Yavetz & Tifferet, 2015). It is used to identify and extract important and interesting features from a dataset, such as dimensionality or previously ignored relationships (Ferreira & Hitchcock, 2009). Clustering is commonly practiced with the k-means algorithm and the hierarchical clustering schemes, both of which are unsupervised techniques (the clusters are created by the algorithm but the final labeling has to be done by the researcher; Mann & Kaur, 2013) to group data. The primary methods of hierarchical clustering are agglomerative and divisive (Roux, 2018). The dominant approach to constructing classification schemes with embeddings is agglomerative clustering,

where each data point starts as its own cluster and close points are successively merged until only one group remains (Lee, Andrade, et al., 2013; Müllner, 2011; Murtagh & Contreras, 2011).

The advantage of using clustering is that it unbiasedly and automatically creates unlabeled groups which can then further be probed for insight. This is a step above the MDS as MDS only depicts a visual arrangement of the data points, without any formal classification. A limitation of clustering is that it is dependent on the quality and quantity of data provided to it. Thus, it is unable to produce novel associations or detect relationships that are not present in the data. Additionally, clustering is a technique that purely relies on statistics to arrange data into groups based on the relatedness of the items fed to it. However, this means it can end up generating distinct clusters that theoretically overlap. That is, cluster analysis does not account for the theory behind the data. Accordingly, after conducting the analysis, I will consider the clusters and possibly collapse some, if they appear to theoretically correspond to the same substrate or dimension underlying the cuteness construct.

For my analysis of the top hundred words from the word2vec output, the most suitable clustering model is the hierarchical agglomerative scheme. This technique relies on the pairwise distances or similarity between data points arranged in a row of arrays or a matrix to classify them into groups (Murtagh & Contreras, 2011; Jain & Dubes, 1988; Gordon, 1987). Hence, it serves as an excellent method to classify my pairwise distance matrix of cuteness related words generated from the word2vec output. The technique works by starting out with each item in the dataset being treated as its own cluster. The algorithm then successively merges each cluster together. There are four major algorithms available for agglomerative clustering – the single, complete, average, and ward linkages. The method I use is the ward linkage which uses the total

within-cluster sum of squares error (SSE) at each step between the data to decide which two groups merge together (Ferreira & Hitchcock, 2009).

Running the hierarchical clustering analysis with the ward linkage produced a dendrogram which could subsequently be probed for the extraction of relevant clusters. A dendrogram is a diagrammatic representation of the clustering output, where the data is arranged in a tree-structure (cluster tree, see Appendix C) with data points organized together based on their closeness to one another (Langfelder et al., 2008; Nielsen, 2016). The number of clusters obtained are a function of where the cluster tree is sliced. At the highest level each data point (word) is a unique cluster, and the lowest level all the 100 words are part of the same cluster. The optimal number of clusters has to strike a balance between too many and too few. Here, a measure of theoretically informed insight has to be applied on to the clustering output to figure the ideal number of clusters. I experimented with 5, 7, 11, 12, and 16 clusters and found the 16 cluster output to be the most theoretically rich and fine-grained classification scheme. The 16 clusters are presented in Table 1. With these 16 clusters in hand, I examined whether they could be further collapsed in a theoretically informed manner.

Table 1. Hierarchical clustering with ward linkage.

Cluster	100 Words Clustered into 16 Groups
K1	frilly, sparkly, poofy, dainty, snazzy, funky
K2	sweet, yummy, gorgeous, lovely
K3	frisky, playful, naughty, cheeky, whimsical, quirky, cutely, clever
K4	dinky, teeny, skinny, tike, teethe, wiggly, twirly
K5	cuties, cutie, girlies, cuter, cutest
K6	fluffy, furry, huggable, cuddly, cuddlesome, adorableness, cuteness
K7	foxy, sexy, skanky, slutty, clingy, flirty, girlie
K8	cooky, cutey, she's, naggy, kewpie, snaggletooth, giggle, giggly, kissy, lovey
K9	girly, cutesy, adorable, cute
K10	dumpy, homely, prissy, mousey, ditzy, smiley, adorably, babyish, gawky, chubby
K11	winsome, spunky, perky, sassy, tomboyish, girlish
K12	endearing, charming, loveable, lovable
K13	uncool, dork, geeky, nerdy, dorky
K14	dopey, silly, annoying, amusing, hilarious, funny, kooky, goofy, freaky, creepy, weird
K15	kitschy, tacky, cheesy, corny
K16	dumb, stupid

Among these 16 clusters, some exhibit consistent themes, which could enable their collapsing into composite superclusters. For example, K5 and K9 are both referential of the root word cute and align towards a similar overarching dimension. After labeling each cluster according to its central theme, I collapsed five of them to arrive at a total of 11 finalized, theoretically derived clusters. They are provided below (Table 2).

Table 2. Theoretically derived finalized clusters

Cluster No	Cluster Label	Composing Cluster	Words
C1	Fashion	K1	frilly, sparkly, poofy, dainty, snazzy, funky
C2	Food	K2	sweet, yummy, gorgeous, lovely
C3	Kindchenschema	K5 + K9 + K12	cuties, cutie, girlies, cuter, cutest, girly, cutesy, adorable, cute, endearing, charming, loveable, lovable
C4	Whimsical	K3	frisky, playful, naughty, cheeky, whimsical, quirky, cutely, clever
C5	Adj. Physical	K4 + K10	dinky, teeny, skinny, tike, teethe, wiggly, twirly, dumpy, homely, prissy, mousey, ditzy, smiley, adorably, babyish, gawky, chubby
C6	Tactile	K6	fluffy, furry, huggable, cuddly, cuddlesome, adorableness, cuteness
C7	Sexual	K7	foxy, sexy, skanky, slutty, clingy, flirty, girlie
C8	Adj. Attitudinal	K11	winsome, spunky, perky, sassy, tomboyish, girlish
C9	Negative – General	K13 + K14 + K15	uncool, dork, geeky, nerdy, dorky, dopey, silly, annoying, amusing, hilarious, funny, kooky, goofy, freaky, creepy, weird, kitschy, tacky, cheesy, corny
C10	Negative - Bad	K16	dumb, stupid
C11	Miscellaneous	K8	cooky, cutey, she's, naggy, kewpie , snaggletooth, giggle, giggly, kissy, lovey

This final clustering highlights a number of cute-related dimensions, characteristics, and contexts. Clusters consistent with clothing (C1) and food (C2) associations emerged. Both kindchenschema (C3) and whimsical dimensions (C4) can be observed, similar to the MDS analysis. Also like the MDS, the results indicate a cluster that denotes a sexually valued cuteness (C7). The negative association of cuteness also emerged in two discrete clusters (C9 and C10), which was also the case in MDS. One of the clusters is negatively valenced and tackles themes of silliness (C9). It even contains some positive items but tends to correlate with evaluations of uncoolness or goofiness. The second negative cluster of cuteness relates to undesirable intellectual evaluations where the dominant theme is stupidity (C10).

Some unexpected associations and underlying dimensions of cuteness also emerged. An association grounded in visual descriptors that reference how a target item looks appeared (C5). This cluster hints at an association between cuteness and size. It captures elements corresponding to size (e.g., teeny), but other unexpected physical and visual descriptors are also present (e.g., twirly). An unexpected tactile dimension of cuteness can also be observed, where items are heavily leaning towards the feelings of touch and sensations of contact (e.g., cuddly; C6). Attitudinal descriptors were an unexpected finding of the cluster analysis (e.g., sassy; C8). Finally, a miscellaneous category (e.g., cooky; C11) was also present. This cluster does not conform to any previous literatures on cuteness and was composed of atypical words that may be an artifact of the original word2vec output.

To further substantiate the results, explore novel associations, and specifically investigate kindchenschema cuteness, I turned to another popular NLP technique that relies on the principles of word co-occurrences – Topic Modeling. However, here, instead of directly isolating words, the technique will extract themes that subsume a grouping of words germane to that theme.

Topic Modeling - Latent Dirichlet Allocation (LDA)

Topic modeling categorizes content in a corpus into topics by analyzing text datasets for co-occurring words (Reisenbichler & Reutter, 2019; Toubia et al., 2019). I used Latent Dirichlet Allocation (LDA; Blei et al., 2003), a popular topic modeling approach, to study the relationship between cuteness and associated concepts. LDA is an unsupervised machine learning approach (i.e., the researcher must label the outputs) applied to text data to identity word groups that co-occur in a body of text (Blei & Lafferty, 2009; Hovy et al., 2021). Consistently co-occurring words and concepts associated with cuteness should emerge as part of our topics in the LDA output using a cuteness corpus, which I generated using Reddit.

I used the sharing platform Reddit's '*r/aww*' subreddit, which has over 27 million subscribers and is dedicated to the curation, collection, and display of cute content. Cute content online is proliferated with the baby-schema (kindchenschema) variety of cuteness. Hence, a dataset specifically dedicated to this form of cuteness offers a great opportunity to delve deeper into kindchenschema cuteness' network of association. The resulting topics are expected to be more strongly correlated to kindchenschema cuteness and less with whimsical cuteness. Similarly, I expect to find associations to, and extensions of, kindchenschema cuteness from this analysis. I scraped 54,000 comments from the top 100 posts on r/aww and created a cuteness corpus with 3.76 million words. I then applied standard procedures of data cleaning and preprocessing:

- Removing stop words (e.g., the, is, for), punctuations, symbols, and numbers (Humphreys & Wang, 2018), to remove unnecessary and non-lexical features;
- Lemmatization, using WordNet, to reduce the vocabularies to their lexical roots (e.g., playing → play; Perkins, 2014);
- Tokenization and Count Vectorization to create a document term matrix (DTM) consisting of frequency counts of each word in the corpus per each comment/document (i.e., number of times each word in the corpus occurs in a comment; Baldha et al., 2021; Ullman, 2011).

I applied LDA to this corpus and set the number of topics in the model parameters to 7 and 10. Rich corpora benefit from a higher number of topics, such as 25 or more (Jacobi et al., 2016). However, since our corpus is already concentrated in cuteness content, 7 and 10 topics serve as reasonable model inputs. A minimum cut-off parameter of 4 was also specified,

meaning any word that did not appear in at least 4 documents was discarded, thus removing irrelevant words.

I applied LDA to four versions of the DTM (with 7 and 10 topics): base case with the originally cleaned text; second case containing adjectives only using WordNet (Hartung & Frank, 2011); third case of adjectives and nouns; and final case of nouns only. These cases were used to generalize the relationship between cuteness and its associations, as cuteness is often employed frequently as an adjective, but also as a noun and other forms of speech. The last three cases were (3-8, Table 3) also cleaned for further stop words (e.g., I, we, her, etc.) that emerged from the base case to arrive at more fine-tuned analyses. In each of the four cases, for both the 7 and 10 topic LDA outputs, multiple topics repeatedly emerged. Table 3 gives the summary of these common topics.

Table 3. LDA output containing topical content of cuteness

Case	Analysis	Topic Labels
1 and 2	General (Base)	Love, Size, Dog, Reddit, Cat, Family, Pet, Emotion
3 and 4	Adjectives	Adorable, Precious, Pet, Size, Dog, Positive, Funny
5 and 6	Nouns and Adj.	Time, Animals, Emotions, Dog, Reddit, Features
7 and 8	Nouns	Dog, Size, Adorable, Animals, Reddit, Relationship

Case	Topic Label	Words
General (Base)	Pet	Rabbit, animal, pet, like
General (Base)	Cat	Kitten, cat
General (Base)	Love	Hug, happy, love, adorable
General (Base)	Family	Parent, dad, kid
Adjectives	Pet	Pet, animal
Adjectives	Size	Big, large, strong, long
Adjectives	Positive	Important, perfect, super, nice
Adjectives	Precious	Perfect, precious, cutest, sweet
Nouns & Adj.	Time	Day, night, time, year
Nouns & Adj.	Dog	Dog, breed, owner, animal
Nouns & Adj.	Emotions	Heart, aww, feel, thank
Nouns & Adj.	Baby	Child, kid, toy
Nouns	Dog	Dog, doggo, vet, treat
Nouns	Size	Big, little, stretch, bird
Nouns	Animal	Lynx, animal, bobcat,
Nouns	Adorable	Young, beautiful, sweet, heart, adorable, cute

The topics that emerged often shared words. The words themselves, irrespective of the topics, show strong associations between cuteness and love, pets, dogs, cats, family, love, happiness, babies, relationships, and sweetness. When these words are viewed in their groupings, their corresponding topics (listed above in Table 3) appear repeatedly in multiple analyses and iterations. Notable themes of adorability, animals and pets, emotions and positivity, babies, family and relationships, size, and love can be observed from the LDA output.

Compared to word2vec, MDS, and clustering, the LDA confirms multiple associations supporting the earlier analyses such as love, smallness, sweetness. Simultaneously, I corroborate the kindchenschema associations with infantility and pets (especially dogs and cats). More generally, I find sweetness, love, happiness, and relationships having a strong connection to cuteness. The topic modeling analysis was limited in its ability to generate potential associations

to cuteness, in general, because of the nature of the corpus I was working with. Due to the highly kindchenschema nature of the dataset, many associations – produced from the word2vec, MDS, and clustering analyses – relating to the concept of cuteness more generally were absent from the results, such as sexually valued cuteness and negative cuteness. Most associations and themes that were extracted revolved around the kindchenschema dimension of cuteness, and thus can be used to explore and further our understanding of kindchenschema cuteness. Lastly, running the LDA with four different variations and two stipulated topic parameter conditions (7 and 10) for each variation allowed me to test the robustness and generalizability of these findings.

Summary

In this chapter, I relied on a combination of NLP approaches to conduct a linguistic examination of cuteness. Using text data and co-occurrences of words, I performed word2vec, MDS, cluster analysis, and topic modeling, to mine, discover, and develop the network of association around cuteness. Through these analyses, I was able to gather support for a number of associations that conceptually broaden the construct of cuteness or extend its kindchenschema subtype. My efforts showcase that cuteness is a rich construct with nodes that branch into a variety of associating dimensions, characteristics, and contexts that are summarized in Table 4. Dimensions can be categorized as core cuteness types tied to, yet somewhat disparate from, kindchenschema and whimsical. For example, sexualized or mature cuteness. Characteristics I derive from the text analysis primarily revolve around features of cuteness observed in the semantic associations I investigated. Examples of this include size and tactility. Lastly, contexts are prevalent domains where cuteness popped frequently enough to warrant a dedicated association. For instance, fashion and food.

Table 4. Associations obtained from the combined text analyses

Association	Relation to Cuteness
Kindchenschema	Dimension
Whimsicality	Dimension
Sexual attractiveness	Dimension
Food (sweetness)	Context
Silliness	Characteristic
Stupidity	Characteristic
Fashion	Context
Tactile features	Characteristic
Attitudinal associations	Characteristic
Visual Associations	Characteristic
Love and Relationships	Characteristic
Pets and Animals	Context
Positive affect	Characteristic

In combination, the word2vec, MDS, hierarchical cluster analysis, and topic modeling (LDA) outputs reveal strong associations in multiple directions; some established in prior literature, and others that can be used to postulate extensions to cuteness theory. Relying upon these findings, I next generate a number of propositions extending the cuteness construct; through the identification of novel dimensions, interesting contexts, and prevalent characteristics associated to cuteness broadly, and kindchenschema cuteness specifically.

Chapter 4 – Re-Exploring the Dimensions of Cuteness

I ask a fundamental question about what cuteness entails and what it relates to based on its associations found in everyday language. Using the findings from the text analyses, I do not embark to conceptually redefine cuteness from scratch, but rather build on top of the existing base of kindchenschema and whimsical cuteness, while simultaneously trying to probe deeper

into these bases. The propositions below can be viewed as dimensions, contexts, and characteristics of cuteness that emanate from the study of its linguistic associations.

Proposition 1 – Love, Reproductive Drive, and the Sexually Valued Cuteness

I propose that there is a sexually valued dimension of cuteness that corresponds to evaluations of mature attractiveness, in contrast to baby-schema. Evidence for this dimension of cuteness was present in my text analysis, where one of the clusters distinctly related to sexuality.

Attractiveness can be interpreted as a combination of physical features that arouse interest and incite appeal, leading to likability and pursuit of interpersonal relationships (Byrne, 1969; Byrne & Griffith, 1973; Berscheid & Hatfield, 1969; Berscheid & Reis, 1998; Dawes Robyn, & Smith, 1985; Ohanian, 1991). Attractiveness in marketing has been shown to positively influence persuasion (Kahle & Homer, 1985; Saad & Gill, 2000; Shavitt et al., 1994). Attractiveness denotes aesthetics of beauty that are desirable in a potential partner as they signal health and gene quality (Bekk et al., 2017). In relationship and dating terminology, terms such as ‘beautiful’, ‘sexy’, and ‘cute’, though distinct, are often used interchangeably as positive evaluations of attractiveness and intimations of interest. In fact, sexy and gorgeous – both attractive in a mature tone – were present as close associations to cute in my word2vec analysis.

I contend that there is a type of mature cuteness that is a part of the constellation of attractiveness found in potential mates, such that it should be recognizable in everyday speech and activate the drive of procreation. Thereby, I extend the concept of cuteness by proposing a dimension that relates to sexually valuable features of physical attractiveness found in mature adults targeted for romantic or sexual involvement.

Cuteness is rooted in evolutionary adaptations, working as a mechanism to enhance survival (Alley, 1983; Brosch et al., 2007; Sherman, Haidt, & Coan 2009; Trevathan &

Rosenberg, 2016). In the neurobiology of pleasure, both romantic and parental love follow similar pathways to generate sensations that cater to attachment and bonding through the reward drives, ultimately serving the same evolutionary purpose (Esch & Stefano, 2005). Love was a consistent association and component of the clusters of cuteness in my empirical findings. Cuteness strongly associates with love, as evidenced by the objects we deem and call cute – children and pets. However, the love being conjured here is the parental or caretaker form. Another area where cute terminology is commonplace is in the romantic sphere, where in addition to being a metaphor for love, it is appropriated as a measure of sexual attractiveness of a potential mate. Cuteness, following from its application to objects we love, can be a facilitator of romantic or sexual love. It may do so in two ways. Firstly, encountering kindchenschema cuteness may activate the reproductive drive as one may desire to have cute offspring of their own. Secondly, a sexually charged version of cuteness encountered in an attractive potential romantic/sexual partner may engage the desire to reproduce.

I propose that kindchenschema cuteness has a direct association with our biological need to procreate, as it is a prominent outcome of reproduction. Therefore, I propose that kindchenschema cuteness has an impact on the activation of the reproductive drive, making mate-seeking and romantic involvement more salient and accessible goals. In doing so, I enhance the kindchenschema dimension of cuteness by adding another evolutionary purpose to the construct.

I further propose that there is a sexually valued dimension of cuteness lying in the attractiveness domain corresponding to evaluations of potential mates. This sexually valued cuteness diverges from the kindchenschema and whimsical variations but is one that still serves the evolutionary purpose of procreation; this time through direct sexual evaluations of desirable

romantic partners. This instantiation of cuteness occurs when people evaluate others as ‘cute’ in the sexual marketplace or for the purposes of cultivating or strengthening relationships.

Studying a more mature, sexual cuteness may lead to the discovery of intriguing perceptual judgments and behavioural responses, for instance in the realms of persuasion and likability (Hamilton et al., 2011; Reingen and Kernan, 1993). Romantic love (Ren et al., 2015) remains an unexplored facet of cuteness and studying it may expand our understanding of cuteness and its evolutionary purpose. For instance, from an evolutionary perspective, does contact with cute stimuli activate romantic and procreative drives?

Proposition 2 – Negative Cuteness as Euphemism

I found evidence for negative associations of cuteness in the word2vec and cluster analyses, where negative evaluations emerged as characteristics of cuteness relating to intellectual limitedness (stupidity), or general evaluations of silliness and goofiness. In this way, cute may be used euphemistically, or even sarcastically, to describe stupidity, and less harshly, silliness.

I propose a semantic association of cuteness that ventures into the negative description and evaluation of behaviours. As mentioned earlier, two negative associations of kindchenschema cuteness are helplessness and vulnerability (Jia et al., 2015). I carry on this line of thinking and propose that there are other negative associations, arising from innocence and naiveté, that extend to the semantic evaluation of behaviours. In the capacity of verbal evaluators, cuteness is often recruited as a device to judge behaviours. When someone acts foolishly or naively, we often term the behaviour ‘cute’. The term is also used sarcastically or ironically to describe uncouth behaviour. Semantically, this associates with the juvenility, naiveté, and innocence that cuteness is rooted in (Berry & McArthur, 1985; Nenkov & Scott,

2014). Children are pure of heart and lack the sensibilities of prudent judgment. When children and adults, alike, act in a manner that is not worldly or wise, people often label it ‘cute’. However, this ‘cute’ specifically has a negative connotation. Hence, I propose a negative aspect of cuteness that is employed euphemistically as a semantic association to judge behaviours negatively, specifically as juvenile, naïve, or innocent. The two aspects of negative cuteness emerging in my text analyses were stupidity and silliness/goofiness.

Stupidity and goofiness that is characteristic of cuteness can be studied from a variety of angles such as morality, competence, credibility, and personality (Campbell & Winterich, 2018; Fournier & Alvarez, 2012; Tormala & Petty, 2004). For example, are moral lapses and incompetence more likely to be excused when the perpetrator is cute? Separately examining the two negative associations – stupidity versus silliness – may itself be a worthy endeavor; to tease apart how cuteness correlates with them. Research could also uncover how cuteness operates euphemistically, sarcastically, or even oxymoronically, in the realm of negative evaluations.

Proposition 3 – The Feminine Focus of Cuteness

In the word2vec analysis of the language related to cuteness, features of femininity repeatedly emerged as a strong association. Cuteness can be looked upon as a gender neutral phenomenon that benefits both sexes in infancy and adolescence (Koyama et al., 2006). However, my results reveal a tilt towards femininity being the more commonplace association. Even in the domain of referencing, words commonly applied to females (she’s, girlie, gorgeous) emerged more frequently as correlates of cuteness. Largescale multinational brands harnessing the power of cuteness, like Hello Kitty and Disney Princesses, often target the female demographic specifically. My research findings and marketplace observations lead me to propose that cuteness has a stronger presence in the feminine sphere compared to the masculine.

I propose that cuteness is contextually positioned, more often that not, in the feminine sphere. The kawaii aesthetic is predominantly feminine (Koma, 2013; Miller, 2011), and cuteness in products has a pronounced undercurrent of femininity in the marketplace (McVeigh, 2000). As such, cuteness is proposed to be characteristically feminine and can be expected to cater to the female audience in matters of design and appeal more effectively than their male contemporaries. Similarly, as a set of physical features to be possessed, cuteness can be proposed to be more desirable for females than males. As a linguistic marker, once again, cuteness may apply more appropriately and frequently to female targets than male ones.

Proposition 4 – Food and the Sweet Kind of Cute

Food is proposed to be an important product context for cuteness as a food-related cluster with words like sweet and yummy was obtained from my text analysis. Cuteness research often hints at its connection to the gustatory senses (Lee, Chang, et al., 2018) and whimsical cuteness shows one pathway to consume indulgent food (Nenkov & Scott, 2014). Other research by Stavropoulos and Alba (2018) discusses cuteness aggression often manifesting in a desire to bite or crush cute things. My findings show that food is an important contextual domain associated with cuteness. I argue that cuteness, specifically the kindchenschema type, is semantically associated with food – particularly sweet flavors. Dishes and culinary items – often sweet in taste – may be described as cute, for example strawberry ice cream or confectionary delights. This association is even more apparent when the design of food is anthropomorphized, such as sour patch kids and the Easter bunny chocolates.

The proposed semantic association between cuteness and sweetness is supported via three lines of research—neurobiological, linguistic, and evolutionary adaptations. Firstly, the neurobiology of pleasure is again invoked to support this association. Both sweetness and

cuteness activate similar neural substrates of pleasure in the brain (Berridge et al., 2010; Berridge & Kringelbach, 2008; Kringelbach & Berridge, 2009; Karkun et al., 2018), which can potentially underlie a linguistic relationship between the two. Secondly, in the lexical realm, sweetness is commonly employed metaphorically when interacting with cuteness. For example, across a number of languages, sweet terminology is applied to cute infants and pets as terms of endearment; like sweet, sweetie, honey, cupcake, sugar etc. The metaphorical use of sweetness with cuteness, interconceptually ties the two together and was a clear association found in the word2vec, cluster, and LDA analyses. Thirdly, both cuteness and sweetness are evolutionary advantageous adaptations that are especially active at the time of infancy with cute children being heavily dependent on sweet-tasting nourishment for survival (Hoyer, 1985; Nitsch & Hoyer, 1991; Ventura and Mennella, 2011). A strong preference for sweet food exhibited by babies reinforces the association between cuteness and sweetness.

Hence, I posit a novel semantic association between cuteness and food – especially sweet – that manifests in commonplace speech and is usable bidirectionally. Cuteness, and language relating to it, has a distinct gustatory connection which can be predicted to influence, and be present in, evaluations of food items, particularly sweet ones. Chapter 4 offers an experimental test of this proposition.

Proposition 5 – Cuteness of Clothing and Fashion

As per my results, language specifically catering to design elements of clothing appeared as a unique cluster when everyday speech surrounding cuteness was submitted to text analysis. This leads me to propose fashion and clothing as important marketplace contexts for cuteness.

An important area where cuteness is often prevalent is clothing design and the appraisal of fashion. One of the major media franchises that is valued at over $45 billion is Disney

Princesses, which generates huge revenue through costume sales. This type of business model is geared towards children's consumption, and utilizes strengths of both whimsical and kindchenschema cuteness. Another example of the same phenomenon is *Kawaii* cuteness, one that has received attention in marketing and entertainment research. Kawaii is the Japanese word for cute that predominantly aligns with the kindchenschema dimension of cuteness with implications for design aesthetics, fashion, and entertainment (Cheok, 2010; Nittono et al., 2012). For example, skirts, anime cosplay, and fashionable accessories are labeled kawaii or considered cute.

I propose that there is a market-oriented context of cuteness that captures the cuteness from kindchenschema, whimsical, and sexually valued cuteness types and emerges in the fashion marketplace. This is often the cuteness the Japanese culture terms kawaii as it pertains to the aesthetics of fashion. This type of cuteness is a critical input in the design of clothing, apparel, and accessories, and it has considerable commercial appeal applicable to clothing designs across all ages.

Proposition 6 – The Small Size of Cute

Associations between cuteness and characteristics of small size were present in word2vec, cluster, and LDA analyses. Cute things generally tend to be small in size. This is especially true for kindchenschema cuteness, where pets, infants, and anthropomorphized objects all follow a similar pattern of tiny size. When the original features corresponding to kindchenschema cuteness – big eyes, large heads, round bodies etc. – were identified as key elements, they were done so with the target object being small in size, both in age and physical formation (Alley, 1981; Borgi et al., 2014; Lorenz, 1943; Sherman, Haidt, & Coan, 2009). This creates the dual association that cute things are young and small. We see a clear example of

pursuing this type of cuteness in pets, where through breeding, animals are being reduced in their physical stature to accommodate our preferences for cuteness, for example, Munchkin cats and Chihuahua dogs. Hence, I add another layer to kindchenschema cuteness by proposing a semantic association between it and smallness of size and stature. My analysis reveals that language representative of cuteness holds evaluations of size leaning towards, but not limited to, the small and diminutive.

Proposition 7 – Cuteness and Its Tactile Properties

A set of tactile traits or properties were revealed through the text analysis and the examination of linguistic relationships of cuteness. From the marketplace success of cuddly teddy bears and fluffy pets and stuff toys (Allison, 2003; 2006; Horton, 2018; Yamashita et al., 2012), it stands to reason that certain tactile properties have come to be associated with cuteness, specifically kindchenschema cuteness. Cute things are soft as most kindchenschema stimuli consumers interact with – babies and pets – tend to be soft. As listed earlier, certain physical features embody the kindchenschema archetype like round heads, large eyes, small bodies etc. (Alley, 1983; Golle et al., 2013; Wang & Mukhopadhyay, 2015). These are essentially visual features characterising cuteness (Glocker et al., 2009; Kringelbach et al., 2016). However, tactile features concerning the touch and feel of cuteness remain absent from cuteness literature. Based on my findings from the text analysis and its revealed associations, I propose that cuteness is also characterized by a set of tactile properties that, when present, enhance the cuteness of the object being evaluated. These include furriness, fluffiness, and softness.

Future research can test this proposition to unveil whether the presence of these features enhances cuteness perceptions. I believe that these tactile features can be harnessed to effectively design cute merchandise. Research can also be conducted to investigate product design efficacy,

where the objective is to create a cute product profile. These tangible properties – furry, fluffy, soft – can be measured and manipulated to determine how effective they are in promoting sales of cute toys. Additional research is necessitated to establish what the priming effects of these tactile associations are. Are they partially responsible for the caretaking behaviours related to cuteness? Do these tactile traits have implications for the behavioural approach system, such that they are responsible for inviting approach that cuteness is often connected with? The proposition that cuteness is characterised by specific tactile features opens doors to many possible research questions that can further our understanding of behaviours and outcomes related to cuteness.

Proposition 8 – Cuteness, Kindness and Morality

Cuteness has an association with purity and innocence (Bryce, 2006; Jia et al., 2015; Kovarovic, 2011) and Wang et al. (2017) discuss how it can influence prosocial attitudes through activating empathy. I propose that innocence and empathy have a more generalized association with cuteness in language – kindness. Because of the humanizing effect of cuteness through higher mentalization (Sherman & Haidt, 2009), that is greater attribution of mental content, cuteness should perceivably increase accessibility to positive norms of behaviour like kindness and ethical conduct.

I propose that cuteness is associated with moralistic language and kind behaviours, such that further examination of language around cuteness may: 1) reveal patterns tending towards moral speech; and 2) be diagnostic of kind attitudes. This may occur in the form of people who are considered cute being also perceived to be kind or moral, or in a priming effect positively influencing the evaluator's personal morality and kindness when they interact with cuteness.

In terms of future research, we know that cuteness can engender prosocial behaviours (Wang et al., 2017), but how might it translate to general kindness. Does cuteness prime kind

behaviour? If so, researching this association may further contributions to the literatures on interpersonal harmony and relationships (Lee, Andrade, et al., 2013). In marketing, the service and retail contexts are ripe for research on how perceptions of an agent's cuteness and their impact on kindness effect subsequent evaluations of service delivery, quality, and satisfaction (Brady & Cronin, 2001; Cronin & Taylor, 1992; Westbrook, 1980). Service failure is a particularly interesting area to study how kindness resulting from cuteness effects recovery and post-recovery relationships when the firm representative is cute or the retail environment has cute stimuli as part of the atmospherics (Hoffman & Turley, 2002; Maxham III & Netemeyer, 2002; Weun et al., 2004).

Chapter 5 – Negative Binomial Regression and Amazon Review Data

In addition to generating propositions, I investigate the practical relevance of the text analysis findings in a marketing context. The most refined associations for cuteness resulted from the cluster analysis and my subsequent collapsing of the clusters into 11 theoretically informed cuteness associations. Working with real world data and testing how these associations/clusters influence consumers establishes the ecological validity of my findings. These finalized 11 clusters will hold greater generalizability if these dimensions, characteristics, and contexts of cuteness exert demonstrable and significant influence on consumer perceptions. An advantage of working with these clusters, is that I already have the words comprising each cluster and can study how their presence contributes to the cluster's impact on consumer behaviour.

I used the Amazon review dataset available online (He & McAuley, 2016) and conducted a regression analysis to demonstrate how effective and relevant each of the final 11 clusters are for a range of product domains. This dataset consisted of 82.8 million reviews for twenty-four

product categories; with each record containing the review text, ratings (up to five stars), summaries, helpful and total votes, and date of posting. I decided to work with a sampling of product domains that had data entries between the range 50,000 and 300,000, and that I hypothesized were directly linked to cuteness, or that were purposefully unrelated. I arrived at the 50,000 to 300,000 cutoff based on computational constraints and the implication that such large datasets and variety of categories cater to a reasonable degree of external validity. Based on my selection criteria for product categories, I ended up with a total of nine; seven being related and two unrelated to cuteness: 'baby' (related), 'beauty' (related), 'cellphone and accessories' (related), 'clothing, shoes, and jewelry' (related), 'grocery and gourmet food' (related), 'office products' (unrelated), 'pet supplies' (related), 'tools and home improvement' (unrelated), and 'toys and games' (related).

Independent Variables

The clusters from the finalized hierarchical clustering output served as the independent variables. For each of the nine product categories, I coded for the presence of each of the eleven clusters. If any word from a given cluster appeared in the review text, a score of one was assigned to that cluster. This meant that each cluster for every review could be coded as either 1 (indicating presence) or 0 (indicating absence). Alternatively, I could use coding schemes that assign scores for the number of times each word occurs in a cluster or the number of times a cluster appears in the review text. This alternate scheme is better suited to investigate boundary conditions or complex interactions of the word choice frequency. However, I am primarily interested in demonstrating the preliminary main effect of the clusters on the product classes. Hence, I used the binary coding scheme with the presence versus absence of the cluster in the review text as the primary independent variable. I also carried out a regression analysis with the

alternate coding scheme (number of times each word in a cluster appeared in the review text), and briefly report the findings if they diverge from the main analysis.

Dependent Variable

Based on prior research, I set the dependent variable as the ratio of helpful votes to the total number of votes (Lafreniere et al., 2022). This results in a proportion that can range from 0 to 100.

Control Variables

Lafreniere, et al. (2022) identify word count, star ratings, and time elapsed since the date of posting and a cutoff date as potential features of the data that may influence review helpfulness. The word count was measured for each of the reviews using the length function in Python. The star ratings were readily available as part of the original data. I measured the days elapsed from the posting date to a cutoff point (August 15, 2014), that was set to exceed the date of posting for the latest review in all of the product categories.

Analysis & Discussion

Frequency

Table 5. Frequency of cluster presence per product category

	Frequency								
Category	Baby	Beauty	Cellphones	Clothing	Grocery	Office	Pet	Tools	Toys
Fashion	0.13%	0.47%	0.17%	0.65%	0.22%	0.23%	0.16%	0.11%	0.23%
Food	0.89%	2.96%	0.59%	2.04%	13.62%	0.84%	1.12%	0.41%	1.37%
Kindchenschema	8.21%	1.61%	2.87%	7.81%	0.37%	1.33%	2.18%	0.20%	10.66%
Whimsical	0.20%	0.17%	0.16%	0.10%	0.11%	0.57%	0.46%	0.23%	0.52%
Adj. Physical	0.75%	0.21%	0.17%	0.99%	0.22%	0.25%	0.34%	0.14%	0.36%
Tactile	0.37%	0.25%	0.04%	0.18%	0.35%	0.02%	0.74%	0.02%	0.71%
Sexual	0.04%	0.40%	0.15%	1.44%	0.01%	0.07%	0.02%	0.03%	0.06%
Adj. Attitudinal	0.16%	0.03%	0.01%	0.07%	0.02%	0.02%	0.05%	0.00%	0.04%
Negative - Bad	0.24%	0.15%	0.32%	0.12%	0.09%	0.26%	0.22%	0.39%	0.29%
Negative - General	2.90%	2.02%	2.38%	1.66%	2.20%	2.74%	1.88%	1.89%	4.18%
Misc.	0.13%	0.01%	0.00%	0.01%	0.01%	0.01%	0.03%	0.00%	0.15%

I first examined the prevalence of each cuteness cluster by product category. Each cluster appeared in each product category to some degree. But to calculate averages for the number of clusters present per product category, I set a minimum cutoff point of 0.1%, that is if a cluster appeared in at least 0.1% of the reviews of a product category it would be coded as present in that category. However, if the presence was less than 0.1%, then I would treat it as not present. On average, 8.5 clusters were found to be present in each of the related product categories (Range: 7-10), while 7 clusters were found to be present in the unrelated categories (Range: 7-7).

Looking at the frequency with which each cluster appeared in the product categories, the kindchenschema cluster emerged to be the most prominently featured cluster, appearing across all of the 7 cuteness-related product categories and both the unrelated categories. The strongest

presence of kindchenschema was unsurprisingly observed in the toys ($M_{kind\_toys\_proportion}$ = 10.66%), baby products ($M_{kind\_baby\_proportion}$ = 8.21%), and clothing ($M_{kind\_clothing\_proportion}$ = 7.81%) categories. This was expected as baby and toy product categories are the most natural markets where cuteness is valued. The pervasive presence of kindchenschema in the general clothing and apparel category means that cuteness exerts influence in the fashion domain beyond infancy, into adolescence and adulthood. Kindchenschema also appeared in the cellphones ($M_{kind\_cellphones\_proportion}$ = 2.87%), pet ($M_{kind\_pet\_proportion}$ = 2.81%), beauty ($M_{kind\_beauty\_proportion}$ = 1.61%), office ($M_{kind\_office\_proportion}$ = 1.33%), and tools ($M_{kind\_tools\_proportion}$ = 0.20%) categories. Cellphones and pets are domains where accessories and products often highlight cute designs. The office category was intended to serve as one of the unrelated product domains; however, the presence of kindchenschema here could potentially indicate the use of cute terminology in a whimsical sense because Nenkov and Scott (2014) discuss how stationary products often benefiting from whimsical designs.

The food dimension also prominently appeared across a number of categories such as grocery ($M_{food\_grocery\_proportion}$ = 13.62%), beauty ($M_{food\_beauty\_proportion}$ = 2.96%), clothing ($M_{food\_clothing\_proportion}$ = 2.04%), toys ($M_{food\_toys\_proportion}$ = 1.37%), and pet ($M_{food\_pet\_proportion}$ = 1.12%). The presence of the food cluster in the grocery category was expected because of the food related terms comprising the cluster. However, its pervasive presence in other categories indicates that it is a valuable association of cuteness. The sexual cluster of cuteness appeared frequently in the clothing category ($M_{sexual\_clothing\_proportion}$ = 1.44%). The sexual cluster comprises of descriptor terms relating to attractiveness, and hence clothing seems like a natural candidate for it to appear in. In contrast, the fashion cluster only appeared nominally in the clothing

product reviews ($M_{fashion\_clothing\_proportion}$ = 0.65%). This may be attributed to the nature of these words being highly specialized (poofy, sparkly, frilly, etc.).

The negative-general (silliness/goofiness) cluster's presence was felt prominently in each of the categories. This may correspond to the negatively valenced reviews in each category. However the negative-bad (stupidity) cluster appeared infrequently across all categories. Negative reviews are commonplace and the words in the negative-general cluster appearing more frequently indicates that the nature of these reviews tends towards less harsh evaluations. The least observed cluster across the product categories was the miscellaneous. Table 5 provides a summary of the frequency with which each cluster appeared in the nine Amazon product categories.

Predicted Helpfulness

I then examined whether the cuteness clusters predicted helpfulness. I ran separate regressions within each product category, using the control variables and the cuteness clusters to predict the proportion of helpfulness ratings. I ran negative binomial regressions (NBR) for the analyses because the dependent variable was a count measure with over-dispersion – the variance exceeded the mean – for each product category ($M_{baby\_help\ ratio}$ = 25.23%, SD = 40.37%; $M_{beauty\_help\ ratio}$ = 30.41%, SD = 42.17%; $M_{cellphone\_help\ ratio}$ = 19.31%, SD = 37.25%; $M_{clothing\_help\ ratio}$ = 24.36%, SD = 41.02%; $M_{grocery\_help\ ratio}$ = 30.28%, SD = 42.69%; $M_{office\_help\ ratio}$ = 29.21%, SD = 42.74%; $M_{pet\_help\ ratio}$ = 26.52%, SD = 42.39%; $M_{tools\_help\ ratio}$ = 36.55%, SD = 45.16%; $M_{toys\_help\ ratio}$ = 27.51%, SD = 41.89%). The results from the regressions are displayed below (Table 6). I next discuss each of the cuteness related categories alphabetically, going over which clusters significantly impacted review helpfulness. Afterwards, I also comment on the unrelated categories and how the clusters impacted them.

Table 6. NBR with 9 product categories from the Amazon review dataset

Variable	Baby		Beauty		Cellphones		Clothing		Grocery	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
Fashion	-0.09	0.740	0.088	0.417	0.135	0.591	-0.178	0.065^	-0.124	0.498
Food	-0.08	0.455	-0.007	0.870	-0.137	0.319	-0.218	0.000***	0.143	0.000***
Kindchenschema	0.04	0.258	0.197	0.001***	0.162	0.01**	-0.072	0.013**	0.000	0.999
Whimsical	0.15	0.494	-0.081	0.656	-0.069	0.791	0.072	0.766	0.001	0.997
Adj. Physical	-0.03	0.814	0.047	0.769	0.105	0.686	-0.118	0.134	0.338	0.070^
Tactile	-0.08	0.628	-0.096	0.514	0.037	0.945	-0.073	0.692	-0.137	0.348
Sexual	0.08	0.868	-0.050	0.670	0.016	0.954	-0.274	0.000***	0.268	0.774
Adj. Attitudinal	-0.10	0.675	-0.109	0.802	0.582	0.522	0.026	0.929	-0.160	0.775
Negative - Bad	0.01	0.957	-0.015	0.937	0.061	0.743	0.181	0.414	-0.298	0.299
Negative - General	0.01	0.882	0.037	0.481	0.003	0.964	0.026	0.670	-0.031	0.603
Misc.	0.08	0.749	-0.340	0.671	0.201	0.896	0.316	0.700	-0.441	0.636
Time	0.00	0.000***	0.001	0.000***	0.001	0.000***	0.001	0.000***	0.000	0.000***
WC	0.00	0.000***	0.003	0.000***	0.004	0.000***	0.004	0.000***	0.002	0.000***
Rating	-0.09	0.000***	-0.002	0.803	0.008	0.360	-0.074	0.000***	0.034	0.000***

Variable	Office		Pet		Tools		Toys	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
Fashion	-0.271	0.403	-0.186	0.452	-0.177	0.460	-0.256	0.163
Food	-0.091	0.588	-0.144	0.122	-0.086	0.497	-0.151	0.050*
Kindchenschema	0.109	0.415	0.086	0.201	0.222	0.219	-0.031	0.280
Whimsical	0.187	0.359	-0.038	0.792	-0.073	0.666	-0.038	0.756
Adj. Physical	-0.317	0.303	-0.100	0.552	-0.014	0.948	-0.168	0.260
Tactile	0.248	0.809	-0.116	0.310	0.031	0.957	-0.080	0.449
Sexual	0.077	0.894	-0.078	0.914	-0.262	0.571	0.125	0.722
Adj. Attitudinal	0.516	0.662	-0.194	0.661	-0.133	0.912	-0.046	0.918
Negative - Bad	-0.020	0.947	-0.090	0.663	0.110	0.400	0.167	0.307
Negative - General	0.035	0.712	0.149	0.039*	-0.025	0.677	0.029	0.516
Misc.	0.308	0.880	-0.050	0.928	0.345	0.775	0.055	0.807
Time	0.000	0.000***	0.001	0.000***	0.001	0.000***	0.001	0.000***
WC	0.002	0.000***	0.003	0.000***	0.002	0.000***	0.003	0.000***
Rating	-0.072	0.000***	-0.066	0.000***	-0.068	0.000***	-0.090	0.000***

^ $p \leq 0.1$
* $p \leq 0.05$
** $p \leq 0.01$
***$p \leq 0.001$

Beginning with the baby product category, none of the clusters exerted any significant influence. This was surprising because this category can be predicted to be most commonly associated with cuteness, especially kindchenschema cuteness. The lack of influence of my cuteness clusters could be seen as a threshold effect. Such that, cuteness terminology is so common or anticipated in the category, that it fails to materialize meaningful effects. Instead, it is treated as simply a given for the product class and does not impact review performance. A similar effect may be exerted by the expectations regarding the baby category; that all items are expectantly cute, hence cute terminology does not incrementally contribute to the review's usefulness.

For the beauty products, only the kindchenschema cluster significantly predicted review helpfulness ($B_{kind\_beauty} = 0.197$, $p < 0.001$). This means, kindchenschema terminology positively influences the helpfulness of reviews for beauty products. Beauty products commonly target female demographics and this result provides evidence for cuteness having a strong feminine focus (proposition 3). None of the other clusters significantly predicted review helpfulness.

The cellphone product class contains mobile phones and their accessories; the latter of which can be expected to benefit from cuteness perceptions. Cases and covers are commonly used to customize and personalize mobile phones and the kindchenschema cluster was found to significantly predict review helpfulness ($B_{kind\_cellphone} = 0.162$, $p < 0.01$). Future research using metadata can be conducted to determine whether kindchenschema cuteness' influence is more

beneficial for accessories or mobile phones, themselves. None of the other clusters emerged to significantly impact review helpfulness in this category.

Proposition 5 identified clothing and fashion as a popular context for cuteness. Therefore, I predicted the cuteness clusters to have a significant impact on helpfulness in the clothing product category. The kindchenschema and sexual cuteness clusters, in particular, are likely candidates to influence this category. Kindchenschema, because it is popular design aesthetic and the most pervasive form of cuteness; and sexualized cuteness because attractiveness is highly desirable in fashion choice. The fashion cluster can also be expected to influence this category. Indeed, four of the clusters emerged as significant predictors of review helpfulness. The kindchenschema, sexually valued, and food clusters produced significant effects ($B_{kind\_clothing}$ = -0.072, p = 0.013; $B_{sexual\_clothing}$= -0.274, $p < 0.001$; $B_{food\_clothing}$ = -0.218, $p < 0.001$), while the fashion cluster had a marginally significant effect ($B_{fashion\_clothing}$ = -0.178, p = 0.065). These effects provide support for proposition 5; that fashion is an especially relevant domain for cuteness.

I found the presence of an association between cuteness and food in my text analysis, and subsequently proposed food as an important product context for cuteness (proposition 4). Hence for the grocery product category, the kindchenschema and food clusters were predicted to exert significant influence on review helpfulness. The results revealed that the food cluster was significantly impactful ($B_{food\_grocery}$ = 0.143, $p < 0.001$), while the visual (physical adjectives) cluster also had a marginal effect ($B_{adj.physical\_grocery}$ = 0.338, p = 0.07). The latter cluster can relate to the visual appearance of foods and use of its terminology in describing grocery products emerged as marginally significant. However the direction of the effects of both the clusters was

reversed, meaning there was a significant influence of these clusters but they decreased review helpfulness. Further probing for enhanced clarity is necessitated in future research.

The pet product class is also one that can be assumed to be especially relevant for cuteness. Pets like cats and dogs were especially strong associations from my topic modeling analysis. However, the results revealed that only the negative-general cluster had a significant impact ($B_{negative\text{-}general\_pet} = 0.149$, $p = 0.039$) on review helpfulness. This was surprising, and the same threshold effect – as in the case of baby products – might be responsible for the lack of influence of the cuteness clusters.

From the real world sale of toys, we already know that cuteness is an effective design input in their sales. Hence, I predicted kindchenschema cuteness to drive review helpfulness in the toys product category. However, only the food cluster had a significant effect ($B_{food\_toys} = -0.151$, $p < 0.05$). This finding is consistent with real world observations, where toys are often paired or associated with food when marketed to children; kids' happy meals and special occasions like birthdays and Halloween. Future research into toy subcategories can be conducted to ascertain the validity of this assertion.

Expectantly, none of the clusters emerged significant for the unrelated product classes – office supplies and tools. These two categories served their intended purpose as control product classes that have limited to remote association with cuteness.

NBR with Alternative Coding of Clusters

I also ran all the NBR analyses with an alternative coding scheme, accounting for the number of times each cluster appeared in the review text. The effects did not significantly differ from the primary analysis reported above. The only changes observed were slight increases and decreases in significance levels. In the clothing product category, the fashion cluster went from

marginally significant ($B_{fashion\_clothing}$ = -0.178, p = 0.065) to significant ($B_{fashion\_clothing}$ = 0.174, p < 0.05). Similarly, in the grocery product, the visual (adjectives-physical) cluster went from marginally significant $B_{adj.physical\_grocery}$ = 0.338, p = 0.07) to significant ($B_{adj.physical\_grocery}$ = -0.219, p = 0.048). The reverse pattern was observed in the pet and toys categories. For pet products, the negative-general cluster went from significant ($B_{negative\text{-}general\_pet}$ = 0.149, p = 0.039) to marginally significant ($B_{negative\text{-}general\_pet}$ = -0.119, p = 0.062). While for toys, the food cluster also transformed from significant (B_{food_toys} = -0.151, p < 0.05) to marginally significant (B_{food_toys} = 0.116, p = 0.075). The direction of effects remained the same as the previous regressions (sign change for the coefficients were an artifact of the new coding scheme). Compared to the prior NBR analyses, for each product category, none of the clusters that were insignificant attained significance, and none of the clusters exerting significant influence turned insignificant.

Summary

In conclusion, the 11 cuteness clusters were observed to appear in varying degrees in the nine product categories selected from the Amazon review dataset. The presence and influence of kindchenschema, food, sexual, clothing, and negative-general clusters in the Amazon data indicate that these clusters, and their associations to cuteness, are practical and relevant for market-oriented communications across a range of product domains. Particularly, food and fashion are areas where cuteness can be predicted to significantly impact consumer perceptions. Finally, the NBR analyses using Amazon review data provided an opportunity to test and substantiate the ecological validity of my findings. Results from this analysis illustrate the external validity of the 11 clusters and lend support for the subsequently generated propositions derived from these clusters.

Chapter 6 - Cute & Sweet: An Experimental Test of Proposition 4

Proposition 4, derived from the text analysis reported above, argues that kindchenschema cuteness often appears in the context of food and taste and is semantically associated with specifically sweetness. Here I present research that theoretically explores and experimentally tests this proposition. In this chapter, I theorize about the potential bases for such an association, arguing that it may originate in the neurobiology of pleasure, and be reinforced through language and evolution. Finally, using experiments, I test the implications of this association for consumer behaviour in the context of food choices. Ultimately, I predict—and find—that kindchenschema cuteness semantically activates mental representations of sweetness, which promotes consumption of sweeter food options.

Conceptual Development

The proposed semantic association between cuteness and sweetness is supported via three lines of research—neurobiological, linguistic, and evolutionary adaptations.

First, these constructs are neurologically linked via pleasure. Neuroimaging has shown that sweetness activates pleasure centers in the brain (Berridge et al., 2010; Booth et al., 2010; Kringelbach & Berridge, 2009). Kindchenschema cuteness and babies also activate pleasure centers in the brain (Berridge & Kringelbach, 2008; Karkun et al., 2018; Kringelbach et al., 2016). The similarity of the neural responses (Berridge et al., 2010) to both constructs may underlie the semantic association and beget a linguistic relationship between the two.

Second, cuteness and sweetness are linguistically linked: speech directed towards infants is full of linguistic terms connoting sweetness as a metaphor for love, such as sweetie, honey, and sugar (Aksan & Kantar, 2008; Kövecses, 1988, 2003). This pattern is observed in multiple languages (see Appendix B). The repeated use of such terms directly connects kindchenschema

cuteness and sweetness, resulting in a sematic association. It can further be argued that sweetness is employed metaphorically; as a lexical association commonly used with cuteness, conceptually mapping the two constructs together semantically (Landau et al., 2018; Zhang & Li, 2011).

Third, cuteness and sweetness are evolutionarily linked. Infants have an innate preference for sweet food (Ventura and Mennella 2011) that persists into childhood (Beauchamp & Moran, 1984; Olson & Gemmill, 1981; Liem & De Graaf, 2004). Further, simple sugars (glucose, fructose, and sucrose) are essential nutrients for infants (Hoyer, 1985; Nitsch & Hoyer, 1991). Sweet solutions are a source of pain relief (Abad et al., 1996; Harrison et al., 2010), and prompt adult-infant bonding (Blass & Camp, 2001; Mennella & Beauchamp, 1996; 1997). In short, infants prefer—and require—sweet foods (Beauchamp & Moran, 1984; Elliot, 2010; Koh, 1996). This link also contributes to the formation of a semantic association between cuteness and sweetness.

Taking these arguments together, I predict that a semantic association between kindchenschema cuteness and sweetness exists. If this is the case, then exposure to kindchenschema cuteness should lead to the semantic activation of sweetness (Carr et al., 1982; Greenwald et al., 1996; Srull & Wyer, 1979, 1980), increasing its accessibility and making it top of mind for consumers.

H1: There is a semantic association between kindchenschema cuteness and sweetness, where exposure to kindchenschema cuteness increases the accessibility of the construct of sweetness.

Further, semantically activated concepts can have nonconscious behavioural consequences (Aggarwal & McGill, 2011; Campbell & Mohr, 2011; Fitzsimons et al., 2008; Goff et al., 2008). For example, priming healthy brands semantically activates the goal to

promote healthy behaviour (Aggarwal & McGill, 2011). If exposure to kindchenschema cuteness activates sweetness, its increased accessibility may result in related behaviours like sweet consumption (Weingarten et al., 2016). Thus, I predict that exposure to kindchenschema cuteness should increase consumers' preferences for sweet over non-sweet food options.

H2: The increased accessibility of sweetness resulting from kindchenschema cuteness leads to increased sweet food preference.

Finally, although I propose that the semantic association between kindchenschema cuteness and sweetness underlies the predicted effect, I consider two potential alternative explanations.

First, I explore whether exposure to whimsical cuteness can explain these findings. I argue that any increase in preference for sweet food is specific to kindchenschema cuteness. While whimsical cuteness is fun and playful (Nenkov & Scott, 2014), it does not have the same neurological or evolutionary links to sweetness as kindchenschema cuteness. Further, linguistic terms of sweetness are not applied to whimsical cuteness: they are concerned with the infant-like features and adorableness found in kindchenschema cuteness. Ultimately, because whimsical cuteness can activate reward-seeking and increase indulgence (Nenkov & Scott, 2014), it may increase overall preferences for indulgent (vs. non-indulgent) options, regardless of their taste profile (e.g., sweet vs. salty).

Second, I explore whether positive affect as a result of exposure to kindchenschema cuteness can explain the predicted effects. Positive affect has been shown to be an outcome of sweet food consumption (Blass, 1987), rather than a predictor (in fact, negative affect is a stronger predictor of sweet food consumption; Dubé et al., 2005; Pilska & Nesterowicz, 2016). However, I manipulate positive affect to ensure it does not account for my findings.

Next, I present five experiments that show how kindchenschema cuteness activates sweetness and leads to increased sweet food preference.

Overview of Studies

Five experiments provide a causal test of the semantic association between kindchenschema cuteness and sweetness, and explore the behavioural consequences of this association. Study 1 tests whether exposure to kindchenschema cute stimuli increases the accessibility of sweetness (H1). Studies 2A and 2B reveal increased sweet food preference upon exposure to cuteness (H2), and study 3 shows that the same is not true for whimsical cuteness. Finally, study 4 rules out affect as an alternative explanation driving the results.

Study 1 - Semantic Activation of Sweetness

Study 1 was designed to test H1, whether exposure to kindchenschema cuteness semantically activates the concept of sweetness. If kindchenschema cuteness and sweetness are semantically linked, as the text analysis suggests, then viewing cute images should activate the related concept of sweetness, making it more accessible.

Pretests

I tested 4 sets of images, each comprised of 5 pictures, to be used as stimuli for the experiments. Two of these sets corresponded to the kindchenschema cuteness conditions. They were designed based on the definitions and instructions in Glocker et al. (2009), with one set using kitten images and the other using baby images. A third set corresponded to the whimsical cuteness conditions. This set was adapted from, and based on, the whimsical features outlined in Nenkov and Scott (2014), and used images of whimsically cute stationery. A fourth

corresponded to the control conditions. This set was generated using neutral images, procured from the bank of standardized stimuli (BOSS; Brodeur et al., 2014).

To pre-test the image sets, participants (N = 221, M_{age} = 36.1, M_{female} = 56.1%) on Amazon's Mechanical Turk (MTurk) were randomly assigned to one of four conditions (images: kitten vs baby vs whimsical vs control). They viewed the five pictures in sequence, and then rated the set on cuteness ("How cute were the pictures you viewed?" 1 = not at all, 7 = very cute). None of the participants in the pre-test or the rest of the studies were excluded from the final analysis.

An ANOVA using image set to predict cuteness ratings was significant ($F(3, 220) = 58.76$, $p < 0.001$). Post hoc contrasts revealed that the kitten and baby images did not differ significantly on cuteness (M_{kitten} = 6.30 vs M_{baby} = 5.83; $t(217) = 1.63$, $p = 0.11$). The baby cute images were significantly cuter than the whimsically cute images (M_{baby} = 5.83 vs M_{whim} = 5.19; $t(217) = 2.25$, $p < 0.05$), as were the kitten images (M_{kitten} = 6.30 vs M_{whim} = 5.19; $t(217) = 3.93$, $p < 0.01$). All three of the cute conditions were significantly cuter than the neutral/control images ($p < 0.001$). These image sets serve as manipulations in study 1, study 3, and study 4.

Method

Participants (N = 116; M_{age} = 35.2, M_{female} = 60.6%) recruited from MTurk were randomly assigned to one of two treatment conditions (images: kindchenschema vs. control) in a between-subjects design. Following the pretest, in the kindchenschema condition, participants saw 5 images of kittens. In the control condition they viewed 5 neutral images.

After viewing the images, participants proceeded to a word completion task, which served as the dependent variable. Instructions were provided on how to correctly complete the word tasks, with a total of 6 words that the participants had to complete (Laran et al., 2016). Out

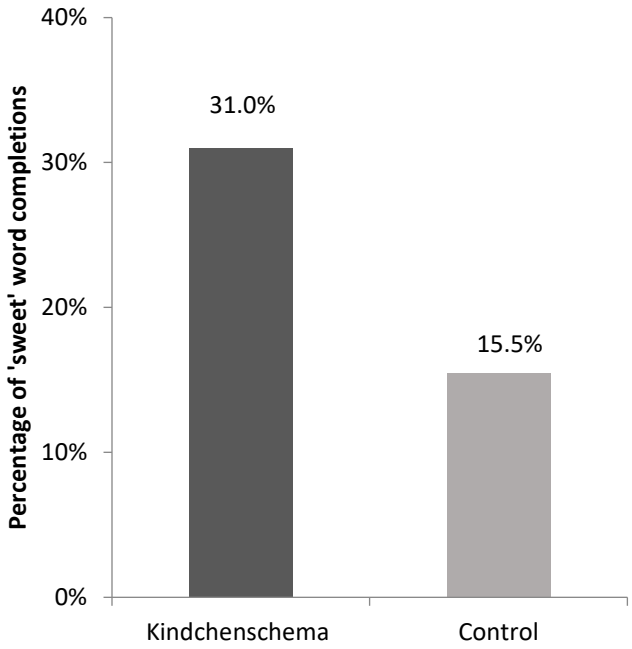
of these 6, the target term ‘sweet’ was presented first to the participants, which was displayed as ‘sw_ _ _’. They could complete the word with any appropriate word, for example, sweet, sweat, or sweep. I predicted an increased completion rate of the target word with the term sweet in the kindchenschema condition. The rest of the word completions related to items that associate with sweetness (e.g., candy, sugar, honey). Given that semantic activation fades quickly (Förster et al., 2007) and that these words are indirectly associated with cuteness, I did not expect to find significant differences across conditions beyond the target word (sweet).

Results

I submitted the responses to a Chi-square test with completions of the target term as sweet being coded as 1, and all other completions being coded as 0. The result (Figure 2) revealed a significant main effect, such that participants in the kindchenschema condition were more likely to write ‘sweet’ when completing the target word, compared to those in the control condition ($M_{kindchenschema}$ = 31.0%, $M_{control}$ = 15.5%; $\chi^2(1, N = 116) = 3.91$, $p = 0.048$). Similar tests were run on the other word completions but none of them attained significance.

Figure 2. Word completions of sweet across conditions

Study 1 – Sweet Activation



Discussion

This study provides causal evidence in support of H1. Exposure to kindchenschema cute (vs. control) stimuli doubled participants' probability of completing a word using 'sweet', indicating an increased accessibility of the concept of sweetness. This increased accessibility is likely to influence downstream behaviour, in terms of choice preference for food (Weingarten et al., 2016). Hence, the next two studies examine choice shares for sweet and non-sweet food options after being exposed to either kindchenschema or neutral stimuli.

Studies 2A and 2B - Choice Shares for Sweet Foods

Studies 2A and 2B examined H2, that cute stimuli should increase preference for sweet food options. Participants were exposed to either cute or control images, as in study 1, and were then presented with a choice between potato chips and chocolate. Chocolate and potato chips were pretested to establish their choice equivalence.

Pretests

I pretested the choice equivalence of chocolate and potato chips. Seventy-four undergraduates (M_{age} = 19.8, M_{female} = 64.3%) were given a binary choice to select either a portion of small pieces of chocolate or potato chips. The results showed that the choice shares were statistically indistinguishable, with the participants choosing chocolate and potato chips roughly equally ($M_{chocolate}$ = 52.7% vs. M_{chips} = 47.3%, $p > 0.645$).

Method (2A and 2B)

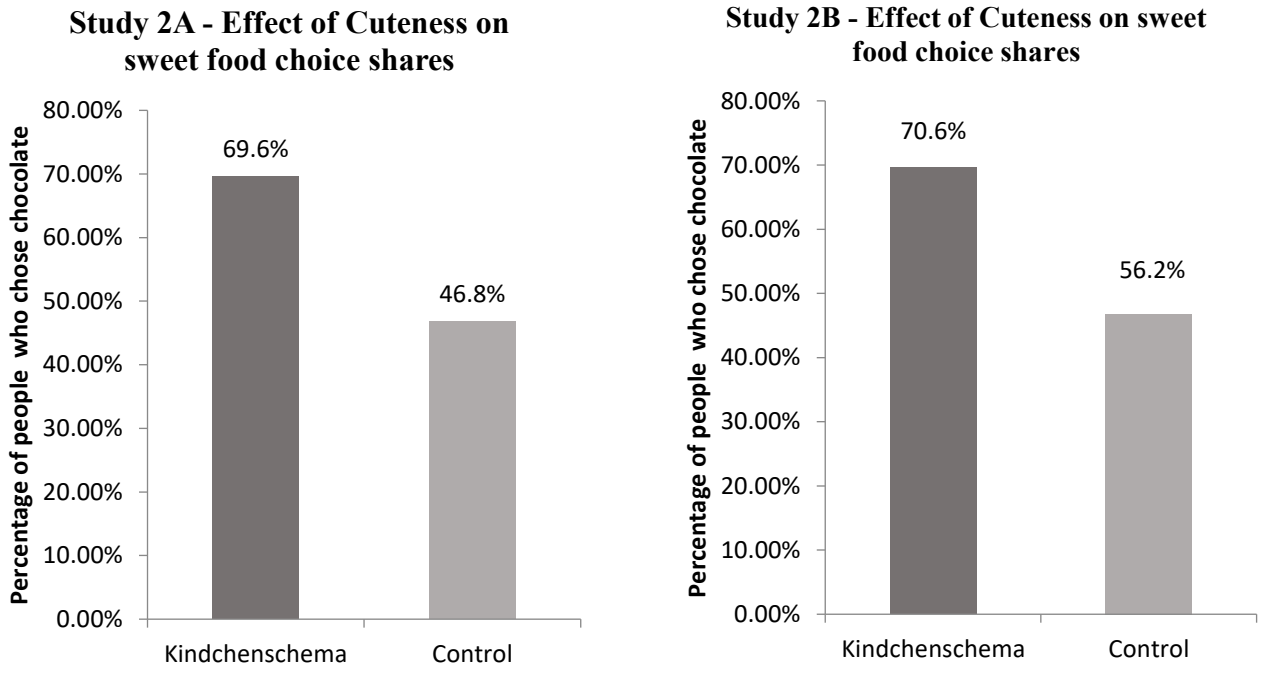
One-hundred and fifty-eight undergraduates (M_{age} = 19.7, M_{female} = 51.0%) and one-hundred and seventy-eight undergraduates (M_{age} = 19.8, M_{female} = 54.5%) were recruited from a North American university for study 2A and 2B, respectively. Participants in both studies were randomly assigned to one of two treatment conditions (video: kindchenschema vs. control). Two videos were used as manipulations in 2A and 2B. The kindchenschema video had two babies sitting together but not engaging in any activity. The control video was a short clip of a woman interacting with random strangers by appearing to them in two different attires. Both the videos were 1 minute in duration. After viewing the video, participants moved on to a choice task, which served as the dependent variable. The task was a binary choice between chocolates or potato chips. In 2A, the choice was a hypothetical task, while in 2B, the task was consequential: students received the option they picked at the end of the study. Participants in study 2B were informed that the choice was consequential and that their choices would be realized at the end of the study.

Results

The results revealed a significant difference in choice share between the cute and control conditions. As predicted, participants in the kindchenschema cute condition were more likely to

choose the sweet (chocolate) option than those in the control condition, in both Study 2A ($M_{kindenschema}$ = 69.6% vs. $M_{control}$ = 46.8%; $\chi^2(1, N = 158) = 8.431$, $p = 0.004$; Figure 3) and Study 2B ($M_{kindchenschema}$ = 70.6% vs. $M_{control}$ = 56.2%; $\chi^2(1, N = 178) = 4.096$, $p = 0.043$; Figure 3). Further, in both studies, preference for the sweet (chocolate) option exceeded 50% (2A: 69.6%; 2B 70.6%).

Figure 3. Kindchenschema cuteness increases sweet food choice share



Discussion

Studies 2A and 2B provide converging evidence in support of H2. These studies demonstrate that kindchenschema cuteness can affect food preferences. By semantically activating the concept of sweetness, the cute conditions increased the choice share of sweet options, relative to the control conditions, where no such activation occurred.

A question that may arise relates to whether kindchenschema cuteness is unique in its ability to inform food preferences. Whimsical cuteness activates reward seeking and thus higher indulgent consumption (Nenkov & Scott 2014). Therefore, study 3 compares kindchenschema cuteness to whimsical cuteness to test whether both enhance sweet food preference in a similar fashion.

Study 3 – Cuteness: Kindchenschema vs Whimsical

Study 3 investigated how the type of cuteness affects sweet food preference. Whimsical cuteness activates the reward-seeking drive which results in indulgent consumption (Nenkov & Scott, 2014). My studies use chocolate and potato chips, both of which are indulgent (Van Kleef et al., 2014). Whimsical cuteness should increase preference for indulgence, but not for a specific taste profile (e.g., sweet, salty). Accordingly, it should not yield higher preference for the sweeter option, as is proposed for kindchenschema cuteness.

Method

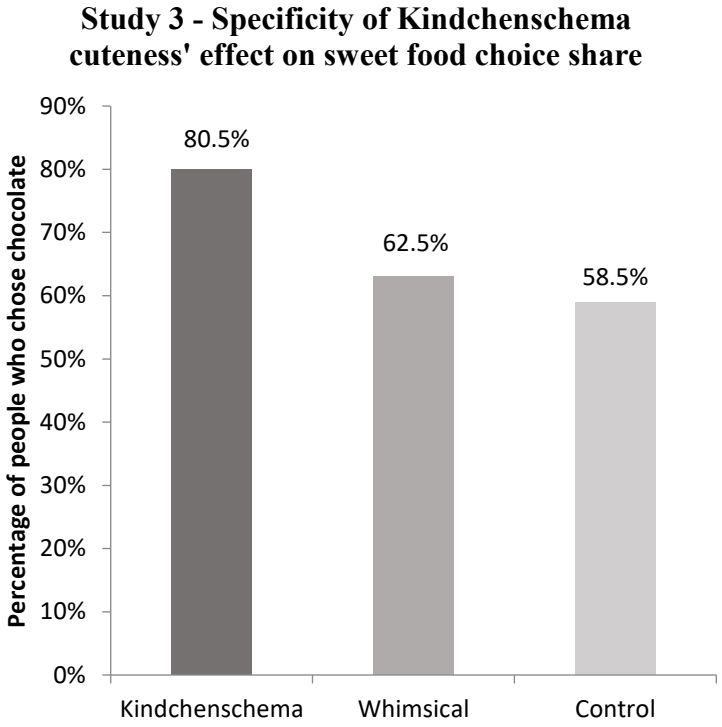
One-hundred and twenty-two undergraduate students (M_{age} = 20.3, M_{female} = 40.2%) were recruited from a North American university to participate in this study. This study was a single factor three level (image: kindchenschema vs. whimsical vs. control) between-subjects design, using the image stimuli from the previously reported pre-test in study 1. It can be noted that the strength of cuteness for whimsical stimuli was weaker than the kindchenschema stimuli, which Nenkov and Scott (2014) discuss as a general difference between the two types of cuteness. Participants were randomly assigned to one of the three conditions. In the kindchenschema cute condition, participants viewed 5 images of cute babies. In the whimsical cute condition, participants viewed 5 images of whimsically cute stationary items. In the control condition, participants did not view any images, and simply moved to the next part of the study.

Participants were then presented with the same hypothetical binary choice task as in study 2A (i.e., between chocolate and potato chips).

Results

The choice shares were submitted to a binary logistic regression with image condition as the independent variable and choice share of the sweet options as the dependent variable. The regression revealed a marginally significant effect on food choice ($\chi^2(2, N = 122) = 4.883$, $p = 0.087$). Further comparisons using Chi-square tests revealed a statistically significant difference between the kindchenschema and control conditions, such that choice of the sweet option was higher in the kindchenschema condition ($M_{kindchenschema} = 80.5\%$ vs. $M_{control} = 58.5\%$; $\chi^2(1, N = 82) = 4.661$, $p = 0.031$). The difference attained only marginal significance between the kindchenschema and whimsical conditions ($M_{whimsical} = 62.5\%$; $\chi^2(1, N = 81) = 3.222$, $p = 0.073$). The difference in choice shares between the whimsical and control conditions did not reach statistical significance ($p > 0.715$; Figure 4).

Figure 4. Only kindchenschema cuteness increases sweet food preference



Discussion

This study replicates Studies 2A and 2B by showing that kindchenschema cute stimuli increased preference for sweet food options over control stimuli. This study found that whimsical cuteness did not differ significantly from the control in its ability to inform choice shares in favor of the sweet option. Comparing the whimsical cute condition with the kindchenschema cute condition also provided insightful information. The difference between kindchenschema and whimsical conditions was not as strong as the comparison between kindchenschema with control; nonetheless, the difference did attain marginal significance.

The main takeaway from study 3 is the confirmation of H2, that kindchenschema cuteness leads to a semantic activation of the concept of sweetness, which has behavioural consequences in the domain of food choice, specifically sweet consumption. In contrast,

whimsical cuteness primes mental representations of fun, and it generally increases preference for indulgent options (Nenkov & Scott, 2014), but not necessarily sweeter food options. An alternate explanation may be that it is the strength of the cuteness manipulation itself that is responsible for the increased preference for sweet options, however I am unable to address that point in the current paper. I next examine the alternative explanation that affect is driving the increased preference for sweet foods for kindchenschema cuteness.

Study 4 – Ruling Out Affect

Positive affect is generally an outcome of sweet food consumption (Meier, Noll, et al., 2017), however, affect varies in predicting food choice – both negative and positive affect have been shown to increase sweet food preference (Dubé et al., 2005). Cuteness evokes positive affect (Jia et al., 2015) and is associated with positive emotions and attributes (Borgi et al., 2014; Chang, et al., 2018). It may be argued that this positive affect evoked by kindchenschema cuteness is driving the effects in previous studies. Hence, an alternative explanation may be posited that affect is responsible for the observed effects instead of semantic activations. Study 4 is designed to address affect as an alternative explanation for the observed effects.

Method

Two-hundred and eighty-one undergraduate students (M_{age} = 20.0, M_{female} = 44.8%) were recruited from a North-American university for this study. Participants were randomly assigned to one of three treatment conditions (images: kindchenschema vs. control vs. positive affect) in a between-subject design. The images for the kindchenschema condition included pictures of babies used in study 1. The control images were the same as study 1. The third condition corresponded to positive affect. The stimuli for the positive affect condition were adapted from the OASIS image library (Kurdi et al., 2017). I selected five landscape images of scenic beauty

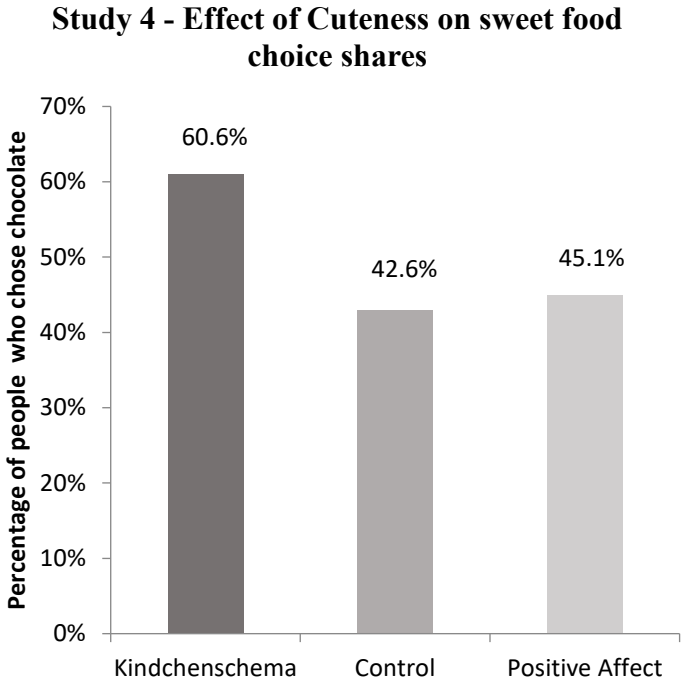
with beaches and lakes. The OASIS library contained valence and arousal scores for the images on 7-point Likert scales. These 5 images had an average valence of 6.28, which relates to high positive affect. The average arousal rating of the pictures was 4.11.

In the study, participants viewed the images corresponding to their treatment condition and then proceeded to the hypothetical binary choice task from study 2A and 3, which served as the dependent variable.

Results

I conducted a binary logistic regression with image condition as the independent variable and choice shares as the dependent variable. The results revealed a significant effect ($\chi^2(2, N = 281) = 7.087$, $p = .029$). Further comparisons using Chi-square tests revealed a significant increase in sweet food preference in the kindchenschema condition ($M_{kindchenschema} = 60.6\%$) compared to both the control ($M_{control} = 42.6\%$; $\chi^2(1, N = 188) = 6.155$, $p = 0.013$) and positive affect conditions ($M_{pos\_affect} = 45.1\%$; $\chi^2(1, N = 187) = 4.495$, $p = 0.034$). The difference between the positive affect and control conditions did not attain statistical significance ($p > 0.719$, figure 5).

Figure 5. Positive affect does not increase sweet food preference



Discussion

Results from study 4 replicate my prior findings and rule out affect as an alternative explanation: participants in the kindchenschema cuteness condition are more likely to choose sweet food options, relative to both a control and a positive affect condition. These results, in combination with my prior findings, suggest that it is the increased accessibility of sweetness which drives choice shares in favor of sweet options, rather than affect or mood.

General Discussion

In five experiments, I offer a causal test of a proposition derived from the text analysis: that there is a semantic association between kindchenschema cuteness and sweetness. Further, I examine the behavioural implications of this association. Using a word completion task, study 1 showed that exposure to kindchenschema cuteness activated sweetness. Using a word completion task, study 1 showed that exposure to kindchenschema cuteness activated sweetness. Using

hypothetical and consequential choices, study 2A and 2B revealed the behavioural impact of this association: participants in the kindchenschema cute conditions were more likely to choose sweet food options compared to those in the control condition. Study 3 compared different types of cuteness, showing that exposure to kindchenschema cute images resulted in a stronger preference for sweet food compared to whimsically cute or neutral images. Finally, study 4 ruled out positive affect as an alternative explanation for the observed effects.

The semantic association between kindchenschema cuteness and sweetness is presented as a demonstration of exploring the propositions I generated to extend cuteness theory. By developing the theoretical link between cuteness and sweetness, I show how my propositions offer theoretically rich research leads that can be probed to further the understanding of cuteness. Experiments were then conducted to test my hypotheses and revealed the presence of the proposed semantic associations and its implications for food consumption. In doing so, I theoretically contribute to the literature on cuteness, semantic associations, and food consumption.

The current investigation of cuteness and sweetness offers two primary contributions to consumer behaviour. First, I broaden the field's understanding of the construct of cuteness. I do so by applying a linguistic lens, focusing on semantic associations and language. This approach sheds light on previously unexamined aspects of kindchenschema cuteness. Specifically, I identify a semantic association between cuteness and sweetness. Second, I identify a novel behavioural outcome of the cuteness-sweetness association—increased choice of sweet food options—moving beyond the traditional outcomes of protectiveness and caretaking. This behavioural outcome offers practical implications for marketers and consumers regarding sweet food consumption and health.

The cuteness-sweetness association also offers numerous potential uses to marketers. The major takeaway for marketers from this research is the use of kindchenschema cute designs in association with sweet foods (e.g., sweet snacks, candy, and chocolate). Cute features can be applied to adults, animals, and inanimate objects as well as babies (Epley et al., 2007), enabling managers to use kindchenschema cuteness in a variety of way to promote sweet products. The chocolate industry, alone, is valued at over $98.3 billion (van Wensem, 2015). Companies in the sweet industry can benefit by crafting strategies and advertisements that make use of kindchenschema cuteness. Marketers should also be aware of the growing consumption of cuteness on the internet, and should target consumer segments online.

Chapter 7 – Summary, Theoretical Contributions, and Managerial Implications

Research Summary

In the present research, I set out to explore, identify, and extend our understanding of cuteness. In chapter 2, I laid out the state of current cuteness research, where kindchenschema and whimsical cuteness are the two existing dimensions of the construct. I argued that language is a rich resource that can be investigated to examine and uncover the network of associations related to cuteness. The purpose of finding these associations was to corroborate existing research, and offer new insights that can potentially enhance, and contribute to, cuteness theory.

In chapter 3, applying a linguistic approach to a popular marketing construct like cuteness allowed me to search for previously ignored or undiscovered dimensions, characteristics, and contexts related to it. I used a combination of NLP and text analysis techniques to extract, map, and classify the semantic relationships of cuteness. First, I applied word2vec, relying on word co-occurrences, using the Google News corpus to calculate the distances of 78,000 words to the

target term ‘cute’. I shortlisted the top 100 closest words, calculated a distance matrix, and visually mapped their interrelationships using MDS. The interpretation of the MDS output revealed the presence of distinct thematic groups that associate with cuteness. The presence of the kindchenschema and whimsical dimensions, as suggested in previous literature, was confirmed. Other novel associations with fashion, attractiveness, and negativity were also observed.

To formally sort and classify these associations, I turned to hierarchical agglomerative clustering. This technique allowed me to extract 16 cuteness clusters using the top 100 closest words to ‘cute’. However, some of these clusters overlapped and were theoretically corresponding to the same underlying dimensions or features of cuteness. Hence, I collapsed the clusters based on similarity of content to arrive at 11 distinct final clusters. These clusters supported the results of MDS and further revealed the presence of promising dimensions, characteristics, and context of cuteness that could be used to extend our understanding of the concept. The associations included food, fashion, sexuality, size, tactility, and negativity.

Since kindchenschema is the most prominent and common dimension of cuteness, I generated a Reddit corpus to study kindchenschema cuteness and its associations in greater depth. I used topic modeling (LDA) to extract cuteness related topics from my corpus. I used LDA to analyze the data in four variations; the base case, adjectives, nouns, and adjectives and nouns, as those are the common ways cuteness is deployed in everyday language. The LDA outputs confirmed the presence of topics that substantiate existing marketing theory on cuteness. Prominent topics identified included family, babies, love, pets, and positive emotions.

Using data-driven insights from these text analyses, I set out to theoretically expand the concept of cuteness in chapter 4. I generated eight propositions that highlight novel dimensions,

relevant characteristics, and important contextual domains associated with cuteness. I also presented possible research directions and viable leads to dig deeper into each proposition. Proposition 1 identifies a sexually valuable dimension of cuteness and further argues the implication of kindchenschema and sexually valued cuteness for evolution and relationships. Proposition 2 explores and details the negative associations of cuteness. Proposition 3 discusses how cuteness is often more feminine in nature. Proposition 4 presents food as an important context for cuteness and establishes a semantic association between cuteness and sweetness. Proposition 5 details the importance of fashion and its close relationship to cuteness. Proposition 6 and 7 extend characteristic features of cuteness. Proposition 6 posits smallness of size as a pivotal physical feature of cuteness. Similarly, proposition 7 captures the importance of certain tactile properties – fluffy, furry, soft – associated with cuteness. Lastly, proposition 8 theorizes the link between cuteness and kindness and its implications for interpersonal harmony.

In chapter 5, I worked with real world Amazon data to test and validate how the 11 clusters of cuteness extracted from the hierarchical analysis influence consumer perceptions. I specifically measured the impact of these clusters on review helpfulness across 9 product categories using NBR. My findings revealed that the cuteness clusters were frequently present and significantly influenced – in varying degrees – the helpfulness of reviews in these product categories. The regressions revealed significant influences of the kindchenschema, food, sexual, clothing, and negative-general clusters on review helpfulness. These results illustrate the external validity of my findings, specifically how cuteness and its extracted associations can impact consumer perceptions in review contexts.

In chapter 6, I conceptually developed and experimentally tested the semantic association between cuteness and sweetness (proposition 4), and its implications on food preference. The

presence of this association repeatedly emerged in the text analysis I had carried out in chapter 3. Using neurobiological, linguistic, and evolutionary arguments, I theorized the presence of a semantic association between cuteness and sweetness and how it can impact sweet preference. Then, I carried out 5 experiments to test my hypotheses. Study 1 examined how exposure to kindchenschema cuteness activates the concept of sweetness. Study 2A and 2B, showed how this activation increases sweet food preference. Study 3 demonstrated how whimsical cuteness does not increase sweet food preference. While study 4 ruled out affect as an alternative explanation for the proposed effects. Finally, contributions to the consumer behaviour literature on cuteness and managerial implications were also addressed.

Theoretical Contributions

The current work primarily contributes to the cuteness literature. It adds a layer of semantic richness to the concept of cuteness, investigating how the concept (cuteness) is stored in memory along with inter-conceptually connected representations (Anderson & Pirolli, 1984; Dagenbach et al., 1990; Nelson et al., 2013). By probing and revealing various associations, I broaden the field's understanding of cuteness beyond the kindchenschema and whimsical dimensions, and their commonly studied impacts on caretaking, indulgence, and protectiveness (Glocker et al., 2009; Nenkov & Scott, 2014; Steinnes et al., 2019). The inter-conceptual mapping of the identified associations and our biologically hardcoded responses to cuteness means that various activations and facets of cuteness become salient upon encountering cute stimuli. Depending on the context, the spread of activation may differ for each of these associations; the most relevant and obvious ones becoming more accessible, thereby driving different directions of priming and consequent behavioural responses (Aggarwal & Mcgill, 2013).

I extend cuteness theory by providing eight propositions that broaden the construct's understanding through data-driven associations concerning dimensions, characteristics, and contexts related to cuteness. I contribute to cuteness theory by highlighting a sexually valued dimension of cuteness and its, and kindchenschema's, implications for evolution, reproduction, and relationships. My research further contributes to cuteness literature by showing how cuteness is more heavily associated with femininity compared to masculinity. Another interesting contribution is the uncovering of negative associations of cuteness and how perceptions of silliness and stupidity are often accompanying negative consequences.

I identify two consumer-relevant research contexts –food and fashion – that appear to be critically important product domains for cuteness. Food research is a growing and popular area of consumer behaviour (Crolic & Janiszewski, 2016; Dubois et al., 2012; Rishika et al., 2021). I contribute to cuteness and food literatures by predicting, developing and testing a semantic association between cuteness and sweetness, and showing its behavioural impact on sweet food preference.

This research also contributes to the features constituting cuteness: I identify visual and physical attributes in the form of size and tactility. Specifically, my insights reveal that cute things are small and fluffy, furry, and soft. These are proposed to be core characteristic features of cuteness and can potentially serve as manipulatable variables that enhance cuteness perceptions. By doing so, I add to the litany of features (Alley, 1983; Kringelbach et al., 2016) used to test and manipulate cuteness in research. I further contribute to cuteness literature by theorizing an association with kindness, aside from prosociality (Wang et al., 2017), and its implications for morality and interpersonal harmony. All these propositions expand the

conceptualization of cuteness and offer numerous research directions for researchers to further develop and test phenomena related to cuteness.

I also contribute to consumer behaviour from a methodological standpoint. Text analysis has become a staple of consumer research in recent times (Berger, Humphreys, et al., 2020; Humphreys & Wang, 2018). I illustrate how the study of semantic relationships using word2vec can be applied to a popular marketing construct like cuteness to examine its network of associations. The combining of word2vec with MDS and cluster analysis further allows researchers to investigate, refine, identify, visually interpret, and extract clusters of relationships related to a target construct. Incrementally, topic modeling can be used to corroborate these relationships, as well as to discover other thematic and topical associations that are interconceptually relevant to the focal construct. The resulting output is a semantically enriched decomposition of a concept and its relational features.

I believe that other marketing concepts may also benefit form the treatment of these techniques to elucidate their dimensionality and connections, as evident from everyday consumer language. My methodology focuses on a data-driven approach where language generated by consumers serves as the primary input which can be probed to illuminate our theoretical understanding of the constructs of interest. These include popular constructs like happiness and wellbeing (Nicolao et al., 2009), consumer satisfaction (Giese & Cote, 2000), warmth and competence (Aaker et al., 2012; Fiske et al., 2007), brand communities, personalities, and relationships (Aaker, 1997; Fournier, 1998; Muniz & O'guinn, 2001), and coolness (Warren & Campbell, 2014). I showcase how text data required to probe these concepts can be accessed through existing databases like the Google News corpus or through the curation and generation of new text datasets readily available from textually-rich platforms like Reddit. This allows for

an approach that examines the focal construct using both broad (Google) and narrow (Reddit) datasets to explore various aspects related to them.

Language is replete with content that interrelates and conceptually maps constructs together (Mason, 2004; Shutova, 2010; Shutova et al., 2013). My methodology can be used to substantiate existing theory by confirming that consumer language mirrors the perceptions that marketing theories predict and detail. Similarly, my methodology can generate novel associations that are absent in existing marketing theory; thereby providing marketing scholars interesting and new directions to target their research in order to further our understanding of specific marketing phenomena.

Managerial Implications

Using Amazon review data and NBR, I highlighted the impact of various proposed and existing dimensions and associations of cuteness on a number of product categories. Cuteness is clearly a relevant linguistic marker for many product domains. Words can have clear and direct impact on word of mouth and persuasion (Berger, Packard, et al., 2022; Moore, 2012, 2015; Moore & Lafreniere, 2020). Hence, managers may utilize the lexical power of the identified associations of cuteness to enhance persuasion, and possibly sales. Food, clothing, and beauty products appear to be clear targets, where marketers can frame messaging in cute language and hope to yield positive results.

An implication from my experimental investigation into the semantic association between cuteness and sweetness is that marketers should incorporate cute designs and leverage the power of cuteness when promoting and selling sweet products. Similarly, online environments, where loads of consumption of cute content takes place, offer a great opportunity for marketers to advertise sweet products.

With the growth of the digital consumption of cuteness and our innate hardcoded attentiveness towards it (Esposito et al., 2014; Kringelbach et al., 2016), marketers have a clear direction they can pursue to make advertising more eye-catching, and their online content viral. The success and prominent presence of cuteness in the design elements of popular characters across media franchises (Dale et al., 2016) means that marketers in media can harness the power of cuteness to make their characters more appealing. Especially relevant for design purposes are the dimension of kindchenschema and sexually valued cuteness; the contexts of fashion and food; and the characteristics of size and tactility (furry, fluffy, soft) associated to cuteness.

In my theorizing and empirical findings, I show a distinct sexually valued dimension of cuteness and how cuteness also relates to fashion and femininity. The fashion and dating marketplaces emerge as key areas where marketers should be designing their products, features, and tactics to harness the power of cuteness. Cuteness can feature as an appealing design input for clothes that cater to both the baby market with kindchenschema, and mature audiences with the sexually valued dimension. The latter can further be expected to be more effective when targeted to the feminine demographic.

Consumers want to look good and appear sexually attractive to potential partners or significant others (Barelds et al., 2011; Gallup Jr & Fredrick, 2010; Langolis et al., 2000; Swami & Furnham, 2007; Swami et al., 2009). Combining the sexually valued cuteness with the cute-centric design aesthetics of fashion can lead to the creation or packaging of products that can facilitate those goals; especially for consumers who value cuteness as a part of their look and/or identity. Similarly, both the proposed size-based and tactile characteristics of cuteness present further opportunities in fashion design to drive sales of cute products.

Conclusion

This research attempted to broaden our understanding of cuteness by adopting a linguistic perspective, relying on NLP and text analysis to deconstruct the network of association of cuteness. Using a combination of text analysis techniques, I explored, identified, and established multiple associations that confirm, and more importantly extend, cuteness beyond the commonly researched kindchenschema and whimsical dimensions. These associations are categorized into dimensions, characteristics, and contexts of cuteness and are subsequently used to generate 8 propositions that conceptually advance cuteness and offer multiple possible directions for future research. The methodology employed in current research also has relevance for studying other rich consumer-relevant marketing constructs.

Essay 2: Foreign Invasion: How and Why Consuming Foreign Language Content Signals Expertise

Introduction

The top grossing movie and the best picture Oscar winner for the past forty years in Hollywood have been English language feature films – except for 2020. In 2020, the Korean film *parasite* became the first ever feature film to win best picture at the annual Academy Awards (Lulkowska, 2020). Similarly, the highest grossing film of 2020 was a Japanese title, *Demon Slayer: Mugen Train*. *Squid Game*, a Korean television series, recently became the most watched show on Netflix (Spangled, 2021; Spencer, 2021). In music, the success and global reach of the Korean pop boy band *BTS* has made them a household name and regular toppers on musical charts. These events mark a historic turn in the established status quo of entertainment consumption. Such content, despite being foreign language content (FLC)—that is, non-English content—dominated the box office and critical spheres in a predominantly English-speaking market. In short, media – film, TV, and music (Sung & De Gregorio, 2008) – has seen a recent surge in the production of FLC marketed towards English-speaking audiences (Riniolo & Capuana, 2020).

Further, this trend is continuing due to ongoing globalization and technological change. In 2022, twenty-five percent of the top sixteen highest grossing films are in a language other than English (boxofficemojo.com, 2022). With increased globalization and interactions between diverse cultures (Fokin, 2016), the global consumption of FLC is increasing (Moore, 2021; Solsman, 2021). Two-thirds of viewers in the UK and US report consuming FLC, and streaming services are investing heavily in foreign titles like Korean series and Japanese Anime (Hedges, 2022).

With the advent new media technologies – streaming platforms like Netflix and Spotify (Marshall, 2015; Snyman & Gillard, 2019), access to FLC has become easier than ever compared to traditional broadcast networks. Additionally, streaming affords greater autonomy in the choice

for consumption (Andersson Shwarz, 2017; Richardson, 2014). Therefore, consumers have greater freedom in browsing and selecting FLC titles. Just six years after acquiring its first international title (Cook, 2022; Flynn, 2019), forty-five percent of content on Netflix is in foreign languages (Moore, 2020). Similarly, Amazon Prime, a major competitor in the streaming-wars, is directing resources towards global expansion and garnering audiences overseas through more international content (Obolenskya, 2022).

Consumers already have a huge variety of selection to choose from when deciding what to watch, listen, or stream for entertainment. With the addition of foreign language content, this selection considerably expands. Thus, consumers making entertainment decisions are even more burdened by choice overload, making recommendations and word-of-mouth (WOM) incredibly important and relied upon for decision making (Berger, 2014; Moore & Lafreniere, 2020). Furthermore, consumers value expert opinions when seeking recommendations and information (Berger, 2014; DeBono & Harnish, 1988; Tormala & Petty, 2004). FLC consumption is uniquely positioned at the intersection of expertise signaling and recommendation seeking. In this paper, I aim to explore how the growth in FLC consumption affects other consumers. Specifically, what signals of expertise does FLC convey to others? How does it inform their downstream behaviours like recommendation seeking from those who consume FLC? I argue that FLC consumption signals a motivation to search for excellent or high quality content which subsequently informs expertise perceptions. I further argue that these motivational signals differ from the cognition and knowledge-based signals generally considered to underlie expertise in extant literature (D'Angelo & Valsesia, 2022; Sela et al., 2019).

When someone consumes FLC, I predict that it can be interpreted as desire to seek out quality entertainment. I propose that such a motivation informs expertise perceptions and hence

FLC consumption signals expertise, such that consumers who evaluate others' FLC consumption are likely to rate them higher on expertise. With FLC consumption generating enhanced expertise perceptions, it is also likely to increase the evaluator's propensity of recommendation seeking from FLC consumers (Barnett White, 2005; Berger, 2014; DeBono & Harnish, 1988; Erdem & Swaitt, 2004; Tormala & Petty, 2004). I further posit that this expertise signaling is driven by a novel construct I label '*search for excellence*'. I conceptualize search for excellence as a motivational drive to seek out superior and high-quality content, naturally reflected in the consumption of FLC.

This research contributes to consumer behaviour by expanding our understanding of expertise signaling and its impact on recommendation seeking (Lovett et al., 2013; Liu, 2006; Weiss et al., 2008). Language in word of mouth (WOM) has also been studied in relation to expertise (Packard & Berger, 2015, 2017). Expertise signals in consumer behaviour have been researched from a cognitive perspective; demonstrating how perceptions of knowledge – breadth and depth – inform expertise ratings (D'Angelo & Valsesia, 2022; Sela et al., 2019). I show how expertise signaling is affected context of foreign language consumption via the motivational route of search for excellence This research offers a novel exploration of observers' perceptions of motivation and how they engender higher expertise. Specifically, how the motivation to seek out quality and superior content, signaled by FLC consumption, enhances perceptions of expertise. Similarly, I contribute to the literature on WOM, and show how FLC consumption informs recommendation seeking.

In the next section, I review expertise research and proceed to develop a theoretical framework regarding FLC, search for excellence, and expertise signaling. I then report six

experiments that test this framework. Finally, theoretical contributions, practical implications, and future directions for research are discussed.

Conceptual Development

In this section, I begin with discussing the current state of research on FLC consumption. This is followed by a literature review on expertise – dimensions of consumer expertise, motivations for acquiring expertise, and signaling of expertise. Then, I present my *search for excellence* framework, where I build on existing expertise research to propose that FLC consumption signals expertise through motivational perceptions apparent in search for excellence.

FLC Consumption and Expertise

Research on FLC has looked at its influence on language acquisition and consumer enjoyment and comprehension. FLC consumption has been studied in relation to language acquisition (d'Ydewall & Pavakanun, 1997; Danan, 2004; Winke et al., 2013), where it can facilitate the learning of a new language. Prior work has looked at the effects of subtitling and dubbing on enjoyment and comprehension of FLC. For example, subtitling has a more positive effect on enjoyment than dubbing (Hayati & Mohmedi, 2011; Koolstra et al., 2002; Riniolo & Capuana, 2020; Wissmath et al., 2009). Subtitling leads to similar comprehension outcomes compared to dubbing (Matamala et al., 2017; Perego, Missier, & Botiroli, 2015), but requires greater cognitive effort for processing audiovisual material when FLC is complex (Perego, Missier, & Stragà, 2018).

However, FLC's impact on consumer perceptions, specifically signaling expertise and informing recommendation seeking remains absent from consumer behaviour research. I will

next review and draw insights from the expertise literature to subsequently build arguments for the role of search for excellence in producing expertise signals.

Expertise – A Background

Expertise is commonly understood as the ability to perform at a higher level than others due to the accumulation of knowledge – information, skills, and experience (LaTour & Deighton, 2019). The performance can be in any field, such as sports, science, business, reviews, etc. Expertise is, thus, domain specific and attaining knowledge and skills in a specific domain is instrumental to expert performance (Ericsson et al.,1993).

Much work has contributed to our understanding of the development of expertise. Ultimately, well developed knowledge structures lie at the root of expertise (Alba & Hutchinson, 1987; Mehta et al., 2011). These knowledge structures can be acquired by accumulating knowledge and experiences in the domain of interest (Shafto & Coley, 2003). The implication is that expertise can be learned, for example, examination of chess players and musicians reveals that deliberate practice is a critical determinant of skill development and expertise acquisition (Gaschler et al., 2014; Gobet & Ereku, 2014; Hambrick et al., 2014; Platz et al., 2014). Hence, it is the cultivation and possession of knowledge – cognitive structures – that distinguishes experts from novices.

For instance, a savvy consumer of tech is expected to possess knowledge about the various alternatives in a product class – breadth of knowledge, while simultaneously, knowing about their attributes and benefits – depth of knowledge (D'Angelo & Valsesia, 2022). Through having broader and deeper knowledge, the expert can engage in multiple product comparisons and arrive at a superior decision compared to a novice (Alba & Hutchinson, 1987). A novice, on

the other hand, might be reliant on the expert's judgement as a decision aid when making decisions (Karmarkar & Tormala, 2010).

Dimensions of Consumer Expertise

A comprehensive analysis of consumer expertise can be found in Alba and Hutchinson (1987). They identify five dimensions of consumer expertise: cognitive effort, cognitive structures, analysis, elaboration, and memory. Experts expend less effort – lower resources – when making decisions or performing tasks, thereby having greater efficiency (Cowley, 2005; Cowley & Mitchell, 2003). They possess broader and deeper structures (Glaser, 2013; Roehm & Sternthal, 2001), which can be recruited to facilitate task performance. Similarly, they engage in more extensive, fine-tuned, and granular analysis (Spence & Brucks, 1997), such as product comparisons; elaborate and probe more deeply; and retain greater information (Furley & Wood, 2016; Guida et al., 2012; Voss et al., 1980).

In short, expertise is generally understood through a cognitive lens as the acquisition, consolidation, and application of knowledge that is stored and organized in knowledge structures, recruited upon for domain-specific task performance (Brucks, 1985; Crowley & Mitchell, 2003; Mitchell & Dacin, 1996; Moreau et al., 2001).

Motivations for Becoming Expert

A major motivation to becoming an expert is superior task performance, for example, becoming proficient at chess, piano, or product-related decision making (Ericsson, Prietula, et al., 2007; Grabner et al., 2006; Feltovich et al., 2006; Hambrick et al., 2014; Swanson, 2007). Music, sports, medicine, are all domains where people cultivate expertise due to an intrinsic affinity for the activity or due to the promise of material rewards as a result of mastery (Amabile,

1997; Burgess, 2013; Duckworth et al., 2007; Gobet & Charness, 2018; Gonçalves et al., 2012; Hardwig, 1994; Shea & Paull, 2014; Starkes & Ericsson, 2003).

Consumers become experts for a variety of reasons. They acquire expertise to enhance appreciation of hedonic consumption (Latour & Deighton, 2019). With greater information about a product class, clearer organizing of relevant knowledge, and extensive experience, consumers are in a better position to attend to the accompanying sensory experience of consumption (Clarkson et al., 2013). Expertise is also sought for its ability to signal knowledge to others; serving as a tool for self-enhancement, especially in the context of word-of-mouth (Packard & Wooten, 2013). Expertise allows one to become an opinion leader, gain social clout, and present oneself in a favorable light (Baumeister, 1982; Jacoby & Hoyer, 1981). The motivation to engage in word of mouth is often tied to the maintenance of a self-concept centered on expertness (Feick & Price, 1987; Wojnicki & Godes, 2008).

Benefits of Expertise

Research in consumer behaviour has uncovered a variety of benefits of consumer expertise, which may contribute to a desire to acquire and signal expertise. A fundamental benefit of higher consumer expertise is persuasiveness (Packard & Berger, 2015; Wilson & Sherrell, 1993). Expertise enhances the credibility of a message and positively impacts word-of-mouth's (WOM) effects on the receiver (Lis, 2013; Moore & Lafreniere, 2020; Packard & Berger, 2017). Expertise is relevant in WOM as a criterion of how useful, relevant, and sound the information on a given product is (Bristor, 1990; Filieri et al., 2018). Expertise is also a prominent factor affecting the trust consumers place in communications (Barnett White, 2005; Bart et al., 2005; Erdem & Swaitt, 2004; Moorman et al., 1993), and positively impacts WOM, persuasion, and recommendation seeking (Berger, 2014; DeBono & Harnish, 1988; Tormala &

Petty, 2004). Because of these benefits and self-enhancement motives (De Angelis et al., 2012; Lovett Peres & Shachar, 2013; Packard & Wooten, 2013), consumers are interested in signaling expertise.

Signaling Expertise

Prior literature shows that consumers rely on a variety of cues like appearance, choices, confidence, language use, and consistency between sources to arrive at expertise perceptions (Belleza et al., 2014; D'Angelo & Valsesia, 2022; Palmeira, 2020; Sela et al., 2019). Variety seeking (in the case of novices) and recommending combinations of product (to enhance overall utility) signal breadth and depth of knowledge, respectively, and can thus inform expertise (D'Angelo & Valsesia, 2022; Sela et al., 2019). Knowledge can affect choice of language in recommendations, which can subsequently inform WOM recipient's expertise perceptions (Packard & Berger, 2015, 2017). In prior research, when consumers evaluate the expertise of a target, the primary insights they draw to determine expertise relate to cognitive features, that is the signaling of knowledge by the expert. Extant research has not commented upon or looked into the observer's processing of the motivations of the experts being gauged and how they inform expertise perceptions.

Based on the above theoretical review, expertise, and its signaling, have been topics of interest to consumer researchers because of their positive effects on persuasion and decision-making, among other things.

Search for Excellence & Expertise Signaling

As established in the preceding section, expertise involves learning, accumulating experience, the curation of a breadth and depth of knowledge, and the subsequent encoding of this information in relational knowledge structures. These constituent features are classified as

cognitive resources (Alba & Hutchinson, 1987; Brucks, 1985; Glaser, 1994; Shafto & Coley, 2003), and are the primary features evaluated when ascertaining someone's expertise. However, it can be postulated that there is a dimension of motivation that remains unexamined that conveys information diagnostic of a consumer's expertise levels. Of particular interest to me is the signaling of expertise through FLC consumption and the notable motivations that consumers infer from the display of such consumption behaviours.

Past research has studied motivation to acquire and signal expertise, but I approach motivation from a different direction. Specifically, I explore what motivations are attributed by the perceiver when a target is engaged in FLC consumption, and how does this tie in with expertise perceptions. I explore how motivational cues apparent in the behaviours related to foreign language content inform the onlookers' expectations and perceptions regarding the consumer, specifically expertise. For instance, imagine a consumer sees some else consuming FLC, what inferences will they make about such behaviours? I argue that they will make assumptions and inferences about the search required to find the piece of FLC being consumed, along with the effort and commitment involved in the act of consuming the FLC. I hypothesize, that specifically assumptions and inferences about the motivation to consume FLC will inform expertise perceptions imparted to the target.

I propose FLC consumption enhances expertise perceptions through inferences that collectivize into a composite variable I call '*search for excellence*'. I define search for excellence as a motivational drive to seek out high quality or superior content in a consumption domain. For example, when a film enthusiast consumes high quality content in a foreign catalogue, they signal search for excellence, aimed at satisfying the palette of a hungry cinephile. Consumers

evaluate this search for excellence on display as a signal of expertise and thus attribute higher degrees of expertise to the cinephile.

I adopt an approach where search for excellence is conceptualized as a composite, multi-dimensional measure that relies on motivational cues of expertise to effectuate enhanced perceptions. Below, I explore and build a set of variables composing the focal construct using arguments from existing theory, and later test them experimentally in the empirical section.

I propose four variables that comprise the search for excellence construct; reflecting perceptions about expertise being signaled through FLC consumption. Firstly, there is an implication of exhaustive experience or high breadth of knowledge within the focal domain signaling high familiarity with the product class. Secondly, there is the motivation to seek out content that is superior or high quality in a domain of interest. Thirdly, there is a display of openness to new experience to discover the novel. Finally, there is an expenditure of effort undertaken to engage in the related consumption – effort being required both in the search to find the FLC, and in the actual consumption of that FLC. The four constituent items proposed to comprise search for excellence correspond to unique, independent variables that I contend come together to cover the domain of its effect on expertise.

Breadth of Knowledge

When FLC consumption is on display, observing consumers are likely to make inferences about the extent of consumption of the foreign language consumer. When one turns to foreign language content, a possible signal is the exhaustion of available domestic media resources. For example, if a Canadian consumer is watching Japanese Westerns, one might infer this consumer has already consumed most Westerns in their native language, and is now turning to incremental sources for entertainment. This situates the consumer in a class of users that have high product

experience and familiarity with the product category (Coupey et al., 1998; Johnson & Russo, 1984; Moreau et al., 2001). Thus, foreign language consumers are perceived to be in possession of cognitive resources and structures aligning with expertise. I incorporate a high baseline level of knowledge corroborating with expertise into search for excellence, on top of which the motivational inferences are then derived. Hence, I predict that evaluations of knowledge are subsumed in the search for excellence variable, and ultimately contribute to perceptions of expertise in tandem with the motivational forces listed below.

Motivation to Seek Superior Content

I contend that FLC consumption is interpreted as a motivation to seek out superior or high quality content in a domain of interest, and this in turn, informs perceptions of expertise. Consuming FLC involves both search and consumption as part of the decision process (Bettman & Park, 1980). Consumers' engagement in information search (Brucks, 1985; Rao & Sieben, 1992) and consumption can be evaluated as motivational drives (Bloch et al., 1986; Celsi et al., 1993; Holbrook et al., 1984; O'Guinn & Faber, 1989; Wood & Lynch, 2002; Zhang & Markman, 2001), which is proposed to be the case in FLC consumption. I further argue that FLC consumption imparts perceptions of high interest, involvement, and familiarity in the field of chosen consumption (Celsi & Olson, 1988; Moreau et al., 2001; Petty et al., 1983). That is, evaluators infer that a person who turns to movies in a foreign language, must really love films and already have consumed lots of high quality titles in their native language. Thus, consumers seeking out and consuming FLC are perceived to be intrinsically motivated (Cheng et al., 2020) to do so.

Specifically, I hypothesize that FLC consumption leads to the impression that the consumer turned to FLC because they have already exhausted high quality content available in

their native language. This subsequently, informs perceptions about their motivations of seeking high quality or superior offerings in other language sources. When consumers consume media in foreign languages, I predict that such consumption is evaluated as a motivation to find high quality content by sifting through foreign media libraries to uncover artistic gems or great works of art. Therefore, engagement in the search and consumption of FLC conveys a desire to consume high quality content that other languages have to offer, which is predicted to underscore a vital ingredient in our search for excellence framework and enhance expertise perceptions.

Openness to New Experience

Another association with FLC consumption is that of openness to new experiences (Angle et al., 2017; McAlister & Pessemier, 1982; Oyserman & Schwarz, 2017). Consumer research has formulated connections between variety-seeking and expertise (Clarkson et al., 2013; Sela et al., 2019); novices seek out broader consumption to acquire and signal expertise, while experts focus on narrow consumption to achieve the same. Variety here pertains to familiarity with the breadth of assortment available, which is why experts do not engage in variety-seeking as they already possess a wealth of experience in the product class (Moreau et al., 2001). Alternatively, I contend that variety-seeking in the context of FLC, is interpreted as an openness to new experience in order to further pursue mastery and discover new value; and thus, positively impacts signals of expertise. Specifically, I predict that consuming FLC implies the extension of the consideration set through the addition of a new subclass of media (foreign); meaning all value from FLC is novel, as it has not been consumed before.

For example, an English-speaking expert on films is not generally expected to be an expert on Japanese films. But if this expert consumes media in Japanese language, it incrementally contributes to expertise perceptions about him/her. In this way, FLC unlocks value

through inclusion of new media, such as new stories, into the available consumption options. An English-speaking consumer will thus find a variety of new stories and melodies to appreciate when they introduce Korean movies or Indian songs into their consumption profile, and this will subsequently affect how others perceive his or her expertise. The enhanced expertise perceptions flowing from openness to new experience are due to the reasoning by the perceiver that the target must have already consumed loads of material in their native language but is still open to discovering more value in foreign language media sources, thereby illustrating a motivation to further pursue mastery in the consumption domain.

I hypothesize that in the case of FLC, consumption is perceived to be a desire to procure novel experiences beyond the scope of the current consideration set afforded by domestic media. Openness to try these foreign language media enables interaction with newer forms of value – new songs, stories, archetypes – that are lacking in domestic media. Therefore, consumption of such materials signals an openness to new experience acquire greater and new entertainment utility that was previously unavailable. This evaluation feeds into search for excellence and is predicted to positively inform expertise perceptions.

Effort Expenditure

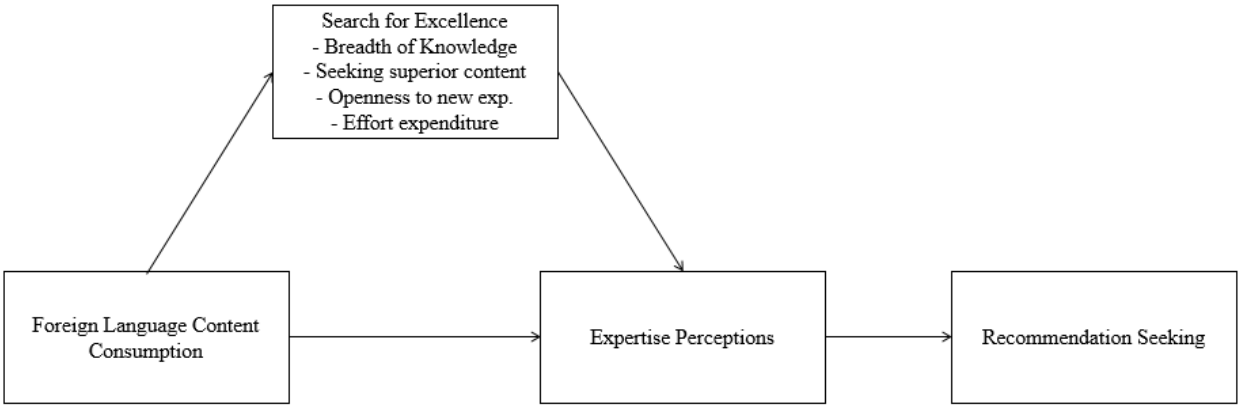
Effort has a strong link to motivation as it is the means to goal pursuit, regulating behaviour, and goal completion (Boekaerts, 2006; Zhang et al., 2011; Shen et al., 2015). Effort can be diagnostic of motivation to achieve mastery and can be seen as an input necessary to acquiring expertise (Dörnyei & Ushioda, 2013; Duckworth et al., 2007; Kruger, Wirtz, et al., 2004; Touré-Tillery & Fishbach, 2011; Wiebenga & Fennis, 2014; Shea & Paull, 2014), for example, deliberate practice (Ericsson, 2008; Ericsson, Krampe, et al., 1993). The effort heuristic is the idea that greater effort is judged as higher quality, and that effort is valued positively (Cho

& Schwarz, 2008; Kruger, Wirtz, et al., 2004; Inzlicht et al., 2018). Hence, I argue that when observers evaluate an actor, they impute greater motivation to develop expertise when there is higher effort. In the case of foreign language, there is a dual investment of effort (Bechwati & Xia, 2003; Otto et al., 2021) connected to the consumption activity. Firstly, searching for foreign content implies a certain level of search effort and task difficulty (Beatty & Smith, 1987; Thomas & Tsai, 2012). Then, there is the additional effort required to interact with a foreign–language–based communication context (Kruger, Hefer, et al., 2013). Most people who do not speak the foreign language may opt to consume the object with some form of audiovisual translation – subtitles. Reading subtitles adds a cognitive process to the consumption activity, thereby requiring a higher exertion of effort (Baranowska, 2020; Garbarino & Edell, 1997). I estimate that the dual investiture of effort serves as an input into perceptions of search for excellence, thereby also enhancing expertise perceptions.

In summary, when evaluating FLC consumption, my search for excellence framework establishes cognitive resources as the foundation of expertise through the assessment of existing breadth of knowledge (Alba & Hutchinson, 1987). Subsequently, I build on top of this cognitive structure and argue that consumers perceive the seeking out of high quality and openness to new experience as directly motivational in nature. I believe that when these are exhibited during FLC consumption, evaluators are more likely to impart higher expertise perceptions to the target consumer. Lastly, even though experts expend lesser effort in task performance (Alba & Hutchinson, 1987), deliberate practice is the key mechanism to developing expertise (Hambrick et al., 2014) and the effort required for consuming FLC is predicted to be perceived as the pursuit of mastery, thereby being diagnostic of expertise. Due to the aforementioned benefits of expertise on WOM, the enhanced expertise evaluations are subsequently predicted to increase

recommendation seeking from the FLC consumer. A diagrammatic representation of the search for excellence model is provided in figure 6.

Figure 6. Conceptual model – search for excellence



Moderators, Boundary Conditions, & Alternative Explanations

I consider four variables that can influence the perceptions imparted by search for excellence in the context of foreign language consumption – locus of control; critical or box office success; subbing versus dubbing; and foreign language expertise.

Locus of Control (Moderator). Locus of control is predicted to moderate the search for excellence perceptions pertaining to the consumption of FLC. Locus of control (LOC) is an intensively studied personality construct where attributions of causality and control are divided into internal or external factors (Lefcourt, 1981; Rotter, 1966). High internal locus implies greater control on variables impacting a choice or outcome (Hoffman et al., 2003; Lachman & Leff, 1989). Conversely, external control describes instances where factors informing a choice or outcome are beyond the control of an individual (Smith et al., 1997). Additional variables

included in the locus of control metric are the influence of others and chance (Levenson, 1974). If these are high, control is tilted towards the external direction.

LOC is expected to moderate the perceptions of seeking out high quality, openness to new experience, and the effort involved in FLC consumption. LOC interacts with the motivational cues of search for excellence as internal locus entails that the consumption of FLC will be perceived as ordained by the consumer; they went and found the superior content, were open to consuming it, and invested the requisite effort. In this instance, the consumer is expected to reap the benefits of higher expertise. However, in an external locus the consumer is demonstrably not responsible for deciding on the consumption or is not engaged in the search for superior alternatives in a foreign language. This should consequently dampen perceptions of higher search for excellence, resulting in lowered expertise perceptions. For example, when someone else like a friend makes a target consume FLC, the target will be attributed external locus and is unlikely to signal expertise effectively.

Critical/Box Office Performance (Moderator). High critical scores and commercial success lead to popularity which has implications for the excellence proposed in my framework. In other words, when a piece of art is substantially high in critical acclaim or has stellar box office performance, excellence/quality is a natural association. Hence, the difference in expertise perceptions rendered by search for excellence, in the case of foreign content that is commercially/critically successful, is attenuated when the comparative condition also boasts high critical or commercial success. This is because the comparison condition also signals excellence, and its consumption, therefore would signal expertise.

I further posit that FLC's association with critical or commercial success will attenuate expertise ratings due to its effects on the effort and novelty components of my search for

excellence framework. In this regard, when a piece of foreign content is successful, whether commercially or critically, it will have less effort of discovery associated with it due to high popularity. Further, it may not have the same luster of novelty as consumers are predicted to already be familiar and cognizant of its high quality – leading to higher rates of consumption. As perceptions of search for excellence diminish, the accompanying signals of expertise are predicted to weaken, thereby reducing the effect of FLC on expertise perceptions.

Dubbing/Subbing (Boundary Condition). Riniolo and Capuana (2020) empirically show that subbing leads to greater enjoyment. Subbing may be associated with higher levels of effort compared to dubbing (Perego, Missier, & Stragà, 2018). I hypothesize that due to the lower investment of effort involved in consuming FLC in dubbed format, the search for excellence associated with consumption diminishes, resulting in lower expertise evaluations. Due to these reasons, I anticipate and hypothesize that subbed pieces of foreign art will outperform dubbed variants in signaling expertise because of the higher search for excellence associated with the former through higher exertion of effort. Conversely, due to the lower effort involved, consuming FLC in dubbed format is predicted to be a boundary condition for FLC's impact on expertise.

Foreign Language Expertise (Alternative Explanation). Multilingualism has been associated with cognitive advantages and competence (Poarch & Krott, 2019; Prior & MacWhinney, 2010; Ware et al., 2020). Multilingualism concerns expertise or mastery over additional languages, a form of skill acquisition. As such, multilinguals are seen to possess greater knowledge in the area of language. However, in current research I aim to account for the contaminating influence of language expertise on the focal expertise tied to the consumption domain of interest. Foreign language expertise can be proposed as an alternative explanation to

the account of search for excellence, in rendering higher expertise evaluations. Alba and Hutchinson (1987) argue that experts exert lower cognitive effort, which would be the case for foreign language experts. As such, it is possible that consumers of FLC are evaluated higher on media related expertise due to inferences about foreign language expertise and lesser effort required for consumption.

I aim to disentangle language expertise from domain expertise and demonstrate that search for excellence is responsible for higher expertise perceptions, not skills in a foreign language. Additionally, language expertise run counter to the fourth proposed tenet of search for excellence, that is, effort expenditure. This leads me to argue that foreign language proficiency may have a flat or even a negative impact on expertise perceptions due to the diminishing of effort expenditure involved in consumption of foreign language artifacts – meaning a decline in perceptions of search for excellence. I will formally test language expertise to rule it out as an alternative driver of expertise perceptions.

Overview of Studies

I rely on a series of experiments to test the proposed effect of FLC consumption on expertise perceptions and recommendation seeking; and the role of search for excellence in mediating these effects. Study 1 illustrates the main effect in a film context, where FLC consumption translates to higher expertise and recommendation seeking. Study 2A tests openness to new experience, while study 2B tests motivation to seek out high quality content, as mediators for the proposed effects. Study 3 tests the full search for excellence model and examines its role as mediator on expertise perceptions. Study 4 attempts to rule out language expertise as an alternative explanation of these effects. Study 5 examines dubbing as a boundary

condition for the effect of FLC on expertise ratings. Lastly, study 6 investigates how LOC moderates the effect of FLC on signaling expertise.

Empirical Investigation

Study 1

Study 1 aims to establish the main effect of foreign language content (FLC) consumption on expertise perceptions, using the context of films. I predict that consumption of films in a foreign (vs.. native) language will lead to higher expertise ratings and more favorable downstream consequences.

Method

One-hundred and eight undergraduate participants (M_{age} = 20.9, M_{female} = 50.9%) from a North American university participated a single factor (film language: foreign vs. native) between-subjects design. Participants were randomly assigned to a condition. They were told that they would be evaluating and rating the consumption practices of an individual named Jamie. Participants were told that Jamie chose to watch a drama film that was either in an unspecified foreign language (treatment) or Jamie's native language (control). They were told that Jamie consumed the FLC using subtitles. They were then asked to rate Jamie's expertise in films on a 7-point Likert scale ("How would you rate Jamie's expertise regarding movies?", 1 = Extremely Low, 7 = Extremely High). After this, they also answered single-item measures regarding downstream behaviours such as likelihood of seeking Jamie's recommendations; and persuasiveness and trustworthiness of those recommendations. All items were measured on 7-point Likert scales (1 = Extremely Low, 7 = Extremely High).

Results

ANOVAs were run on the dependent variables to determine the significance of the results. The ANOVA on expertise revealed a significant main effect of film language ($F(1, 106) = 11.79$, $p < 0.001$). The foreign language condition ($M_{foreign} = 4.43$ vs. $M_{native} = 3.85$) significantly outperformed the native (control) condition on expertise ratings. Recommendation seeking also revealed a significant main effect of language. Participants in the foreign language condition were more likely to seek recommendations from the target consumer compared to the native condition ($M_{foreign} = 4.30$ vs. $M_{native} = 3.54$; $F(1, 106) = 11.25$, $p = 0.001$). Persuasiveness ($M_{foreign} = 4.24$ vs. $M_{native} = 3.80$; $F(1, 106) = 5.30$, $p = 0.023$) and trust ($M_{foreign} = 4.37$ vs. $M_{native} = 3.70$; $F(1, 106) = 15.54$, $p < 0.001$) had similar main effects with the foreign language condition significantly outperforming the native condition. Persuasiveness and trust followed similar patterns as recommendation seeking, hence, in the rest of the studies I measured them but do not report their significance levels. A factor analysis revealed that all four dependent measures loaded on to the same factor, (eigenvalue = 2.81, 70.42 percent of the variance explained; Table 7), and each item's loading was above 0.70.

Table 7. Correlation matrix from factor analysis

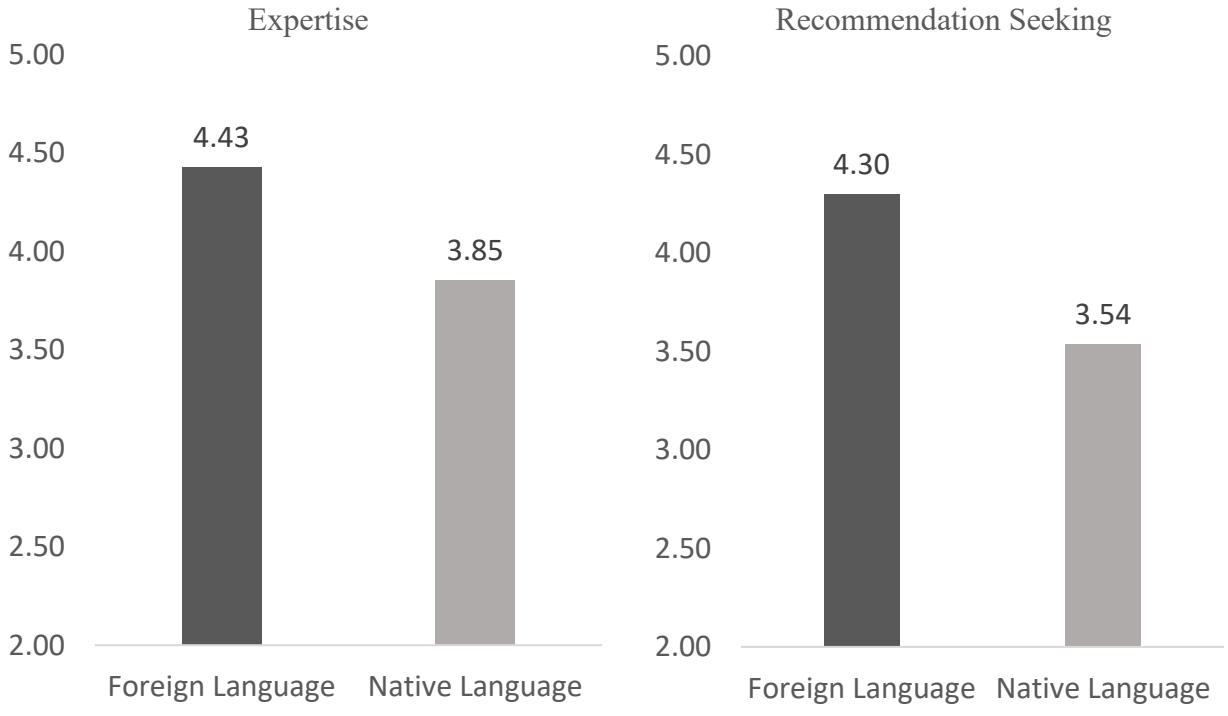
Correlation

	Expertise	Rec Seeking	Persuasion	Trust
Expertise	1.000	0.493	0.478	0.541
Rec Seeking	0.493	1.000	0.751	0.643
Persuasion	0.478	0.751	1.000	0.702
Trust	0.541	0.643	0.702	1.000

Significance Levels

Expertise		0.000	0.000	0.000
Rec Seeking	0.000		0.000	0.000
Persuasion	0.000	0.000		0.000
Trust	0.000	0.000	0.000	

Figure 7. Results from study 1



Discussion

In study 1, my findings revealed significant main effects of FLC consumption on key dependent variables in the domain of films. These results support my hypothesis that consumption of foreign content signals expertise. In turn, such consumers are more likely to be sought out for recommendations. Similarly, these results illustrate how consumers find recommendations from an individual who consumes foreign language to be more persuasive, while simultaneously placing more trust in their recommendations.

Based on the above findings, I can state that study 1 offers preliminary support for the effect of FLC consumption on expertise perceptions, and that these have further downstream consequences. A person may enhance their perceived expertise and credibility (Ismagilova et al., 2020) through the consumption of FLC. Doing so, increases the social clout of such a consumer in the realm of recommendation seeking and effective WOM.

Study 2A and 2B

In addition to replicating the effects of study 1, study 2A and 2B were designed to separately test components of search for excellence for mediation. Both studies investigated distinct elements of the search for excellence framework to ascertain whether they mediate the effects of FLC consumption on expertise. Later, in study 3 I bring together all the elements of 'search for excellence' to test it as the underlying mechanism.

Method

I recruited one-hundred and thirty-five participants (N = 135, M_{age} = 34.0, M_{female} = 43.4%) from Prolific and one-hundred and sixteen participants (N = 116, M_{age} = 19.6, M_{female} = 47.9%) from a North American university for study 2A and 2B, respectively. The Prolific

subjects participated in the study for monetary compensation, while the participants from the university were students completing the studies in exchange for course credit.

The study design and procedure for 2A and 2B was identical to study: a single factor (film language: foreign vs. native) between-subjects design. After being randomly assigned to one of the two conditions and completing the dependent variable measures (expertise and recommendation seeking), participants also provided responses to mediational items. In study 2A I measured the target consumer's openness to new experience (Rate your perception of how open Jamie is to new experiences. 1 = Extremely Low, 7 = Extremely High), and in 2B I measured the target's motivation to seek out superior or high-quality content (How motivated you perceive Jamie to be in seeking out superior, or high quality, content in films? 1 = Extremely Low, 7 = Extremely High). Each of these variables was measured using a single-item question corresponding to the variable. If my theorizing is correct, each of these items should have a mediational link to expertise perceptions.

Results

Dependent Variables. I ran ANOVAs on the dependent variables with film language as the independent variable. In study 2A, language produced a statistically significant effect on expertise ($M_{foreign}$ = 4.71 vs. M_{native} = 4.25; $F(1, 134) = 13.36$, $p < 0.001$) and recommendation seeking ($M_{foreign}$ = 4.63 vs. M_{native} = 4.29; $F(1, 134) = 4.49$, $p = 0.036$); where the foreign language condition led to higher ratings compared to the native (control). Hence, my findings from study 1 were replicated in study 2A.

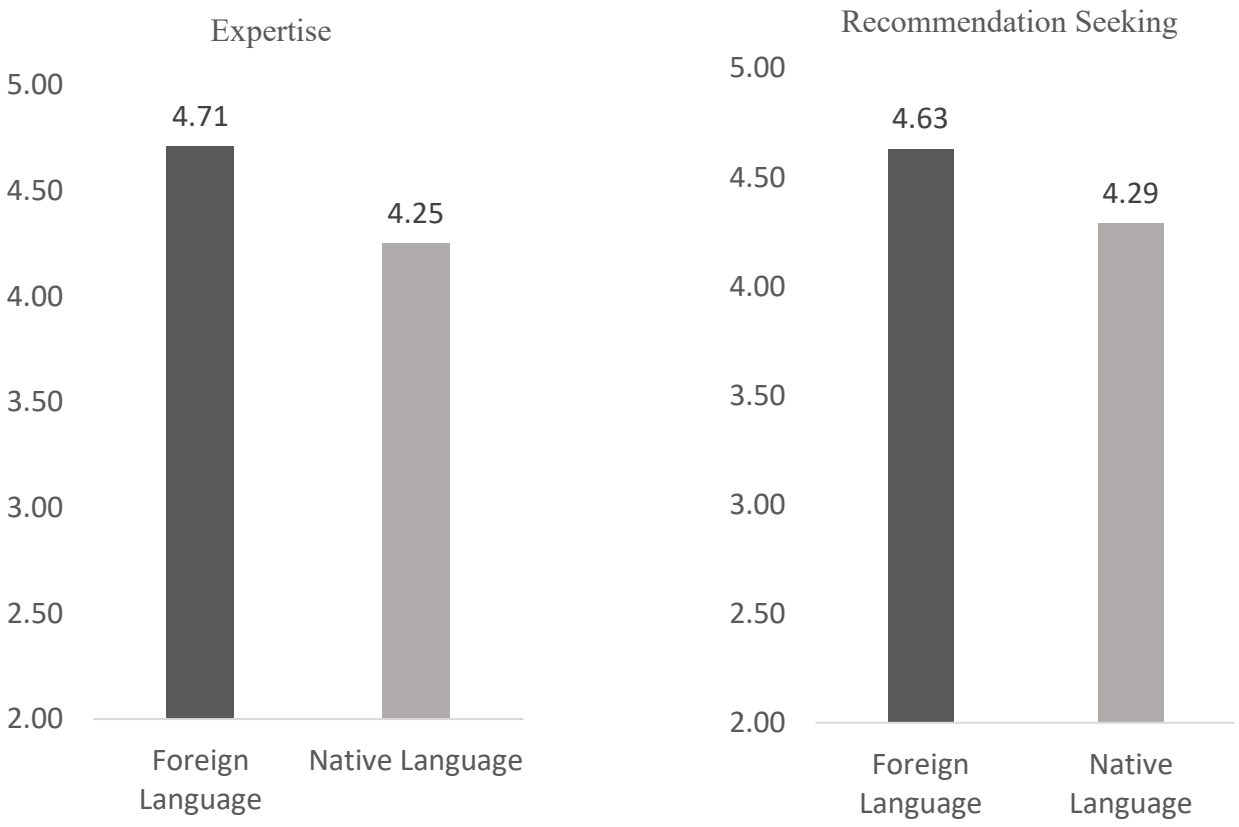
In study 2B, film language revealed a statistically significant effect on expertise ($M_{foreign}$ = 4.19 vs. M_{native} = 3.76; $F(1, 114) = 3.79$, $p = 0.054$). The effect on recommendation seeking attained marginal significance ($M_{foreign}$ = 3.93 vs. M_{native} = 3.41; $F(1, 114) = 3.51$, $p = 0.064$).

Study 2B further replicated the effects of study 1 and 2A, providing support for my theorizing of the positive effects of FLC consumption on expertise perceptions and relating downstream benefits.

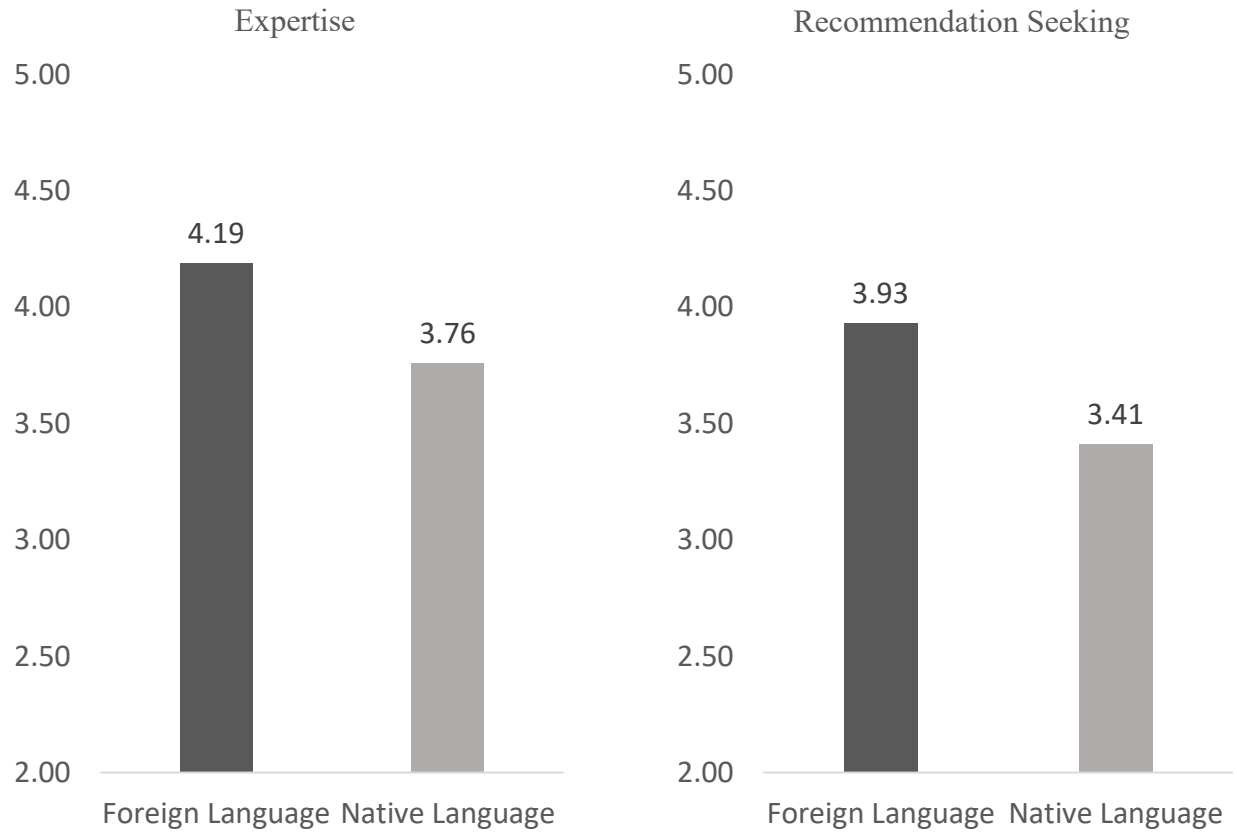
Mediation. The main effect of film language on openness to new experience ($M_{foreign}$ = 5.47 vs. M_{native} = 4.19; $F(1, 134) = 68.13$, $p < 0.001$) and seeking high-quality content ($M_{foreign}$ = 5.05 vs. M_{native} = 3.73; $F(1, 114) = 33.19$, $p < 0.001$) attained statistical significance, with foreign condition eliciting higher scores on the mediational items compared to the control. I ran a mediation model (PROCESS Model 4; Hayes, 2017) with openness to new experience as the mediator driving the effect of film language on expertise perceptions in study 2A. The treatment condition was coded as 1 and control as 2, hence negative coefficients in the mediation confirm a positive direction of effect exerted by the FLC condition. The results confirmed a mediation model with openness to new experience (indirect effect = -0.48, 95% CI = [-0.68, -0.30]) driving the effect of FLC consumption on expertise. In Study 2B, I ran a mediational analysis (PROCESS Model 4) with motivation to seek out superior content as the mediator of the effect of film language on expertise. The analysis confirmed that the motivational component of seeking out superior content was responsible for the effects of foreign language consumption on higher expertise ratings (indirect effect = -0.61, 95% CI = [-0.97, -0.32]). Taken together, 2A and 2B locate openness to new experience and motivation to seek superior content as drivers of the observed effects on expertise. The pair of studies offers insight into the underlying mechanism proposed to be responsible for this effect – search for excellence.

Figure 8. Results from studies 2A and 2B

2A


Expertise
5.00
4.50
4.00
3.50
3.00
2.50
2.00
4.71
4.25
Foreign Language
Native Language
Recommendation Seeking
5.00
4.50
4.00
3.50
3.00
2.50
2.00
4.63
4.29
Foreign Language
Native Language

2B



Discussion

Together, studies 2A and 2B replicate the effects of study 1 and indicate how two elements proposed to constitute search for excellence – openness to new experience and motivation to seek out superior content – mediate the effect of FLC consumption on expertise. The two studies provide converging evidence, by replicating the main effects of study 1, that FLC consumption enhances expertise perceptions and results in favorable downstream consequences and attitudes. Importantly, expertise ratings in both studies were submitted for mediational analyses and the proposed mediations emerged significant, thereby providing support for the hypothesis about search for excellence driving higher expertise perceptions. In

the next study I aim to replicate the effects from study 1 and bring together the different elements of search for excellence in a combined mediation model.

Study 3

The goal of study 3 was to test the mediational model with search for excellence as the underlying driver of the effect of FLC consumption on expertise. Hence, this study sought to measure each of the components of search for excellence, and combine them to arrive at the single measure proposed to underlie the observed effects. To do so, I need to both conduct a factor analysis, to reveal that the proposed components of search for excellence load on to the same factor, and then provide an internal consistency rating to show that they can be used as part of a single scale designed to measure search for excellence (MacInnis & Park, 1991; Steenkamp & Baumgartner, 1998).

Method

I recruited one-hundred and seventy-one participants (N = 171, M_{age} = 21.7, M_{female} = 40.4%) from a North American university who completed the study in exchange for course credit. This study was a single factor (film language profile: foreign vs. native) between-subjects design. In this study, I manipulated FLC consumption using viewing profiles; a number of movies watched by the target. Using a number of movies in different languages also allowed me to control for the expertise in foreign languages as it was explicitly mentioned that the target does not speak any of the languages consumed. Participants were randomly assigned to the viewing profile of a target consumer named Alex. In the foreign condition, they were shown eight titles of films that were in various foreign (plus native) languages (English, French, Spanish, Korean, and Japanese). The participants were explicitly told that Alex does not speak any of these languages. In the control condition, the names of the films remained the same but

the language for each film was English, which was specified as Alex's native tongue. After reviewing the viewing profiles, the participants went on to complete the expertise and recommendation seeking measures, same as study 1 and 2A and 2B. After that, they responded to a four item scale targeted to measure search for excellence. The items composing the scale corresponded to ratings on breadth of knowledge (how broad Alex's knowledge is regarding movies?), seeking out superior content (how motivated you perceive Alex to be in seeking out high quality movies?), openness to new experiences (how open Alex is to new experiences), and effort expenditure (how much effort was exerted to decide and consume the movies?). After completing these items, participants were thanked and the study concluded.

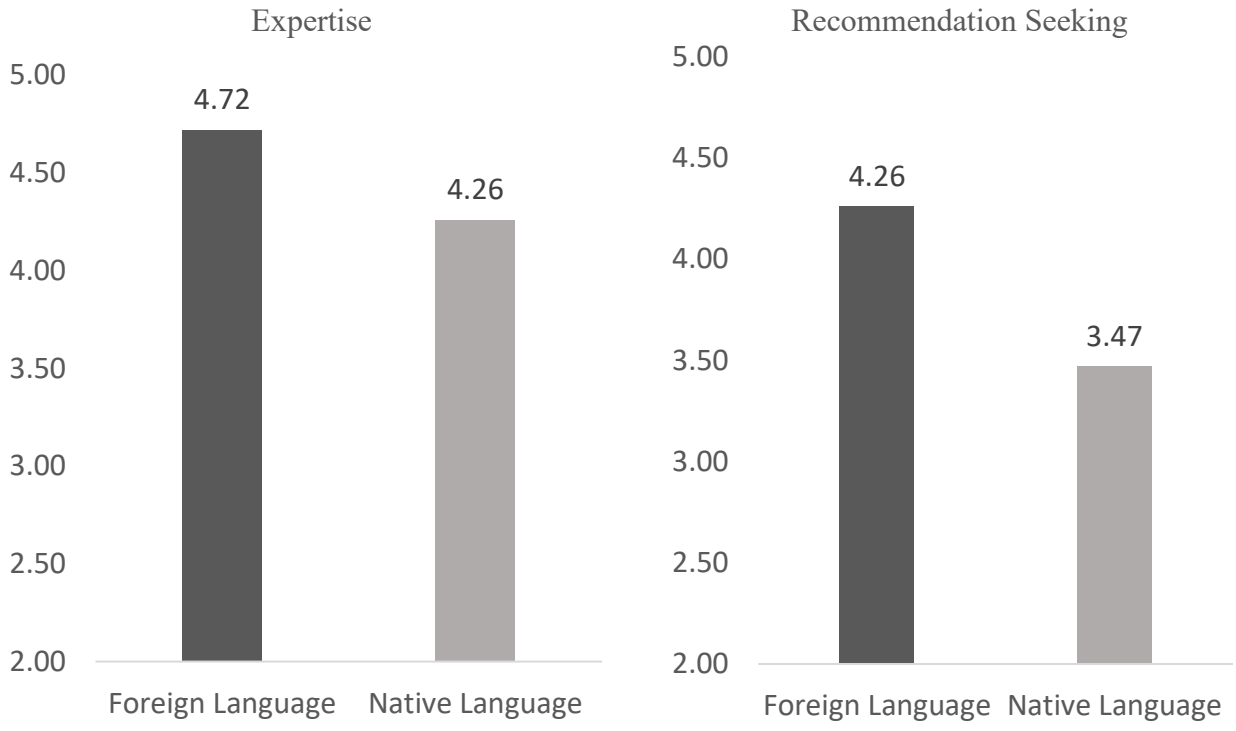
Results

Dependent Variables. I submitted each of the dependent variables to ANOVAs and found the effect of condition to be statistically significant for both expertise and recommendation seeking. The foreign language movie profiles led to statistically significant increases in ratings of expertise ($M_{foreign}$ = 4.72 vs. M_{native} = 4.26; $F(1, 169) = 8.78$, $p = 0.003$), and recommendation seeking ($M_{foreign}$ = 4.26 vs. M_{native} = 3.47; $F(1, 169) = 11.16$, $p = 0.001$). Hence, study 3 successfully reproduced all of the effects from the prior studies.

Mediation. Before running the mediational analysis, I performed a factor analysis on the four items used to measure search for excellence. The items loaded on to the same factor (eigenvalue = 2.51, 62.81 percent of the variance explained), and each loading was above 0.70. The items also had strong internal consistency (Cronbach's $\alpha = 0.80$), so I collapsed the items to construct my search for excellence measure. The main effect of condition on this search for excellence measures revealed a statistically significant effect with foreign language profiles eliciting higher values of the measure compared to the native control ($M_{foreign}$ = 5.17 vs. M_{native} =

4.11; $F(1, 169) = 45.94$, $p < 0.001$). Running a mediation model (PROCESS Model 4) with search for excellence as the mediator, language profiles condition as the independent variable, and expertise as the dependent variable, revealed a statistically significant effect of the proposed mediator (indirect effect = -0.50, 95% CI = [-0.71, -0.31]). Thus, search for excellence was responsible for driving the effects of FLC on expertise. Alternatively, I also ran a parallel mediation model with all four items as separate mediational paths from FLC to expertise. In this model, only breadth of knowledge (indirect effect = -0.30, 95% CI = [-0.52, -0.13]) and motivation to seek out superior or high quality content (indirect effect = -0.17, 95% CI = [-0.31, -0.06]) emerged as significant predictors of the effect.

Figure 9. Results from study 3



Discussion

The key takeaways from study 3 are the confirmation of the hypotheses that FLC consumption leads to enhanced expertise perceptions and recommendation seeking, and that search for excellence is responsible for the increase in expertise perceptions. Study 3 establishes the proposed causal link between search for excellence and expertise signaling. Consumers who consume media in foreign language appear more expert to the lay consumer, and a strong motivational component is imparted upon FLC consumers as they are perceived to be possessing a wide breadth of knowledge in the focal domain of consumption; driven to seeking out superior content; open to trying out new things; and willing to expend the effort required to consume FLC. These factors combine to create a perception that the consumer is engaged in the search for excellence, thereby increasing ratings of expertise conferred upon the foreign language consumer.

The alternative parallel mediation model also opens up possibilities to further examine the importance of each of the proposed elements of search for excellence. In this model, only the first two items were responsible for mediation, meaning they drive the bulk of the perceptions relating to search for excellence, in engendering expertise perceptions. It is possible that the measurement of openness to new experience and effort expenditure was flawed and failed to capture their effect on the mediator. Alternatively, it is possible that the bulk of motivational inference predicted to enhance expertise is captured by the response to the item measuring motivation to seeking out superior content. Future studies, outside the scope of this essay, are planned to further test and demonstrate how these items contribute to the search for excellence construct. If future studies also exhibit similar patterns of result as study 3, then the search for excellence framework will need to be revised to account for the motivational inferences solely being driven through perceptions about the motivation to seek superior content.

Study 4

In this study, I set out to disentangle the source of expertise observed in earlier experiments. One alternate explanation that arises is that the consumer of foreign language content is perceived to possess fluency in the foreign language being consumed. As mentioned earlier, linguistic skills may link to higher expertise perceptions based on skill acquisition (Johnson & Proctor, 2016). The higher ratings of expertise garnered by FLC consumers may in part be due to the perception that they speak the foreign language they are interacting with in the foreign content. I attempted to address this through viewing profiles in study 3, but to formally rule out the effect of language expertise I ran study 4. If there are no main effects of language expertise or interactions with the language of the consumed content then language expertise is not driving the enhanced expertise ratings imparted to FLC consumers.

Method

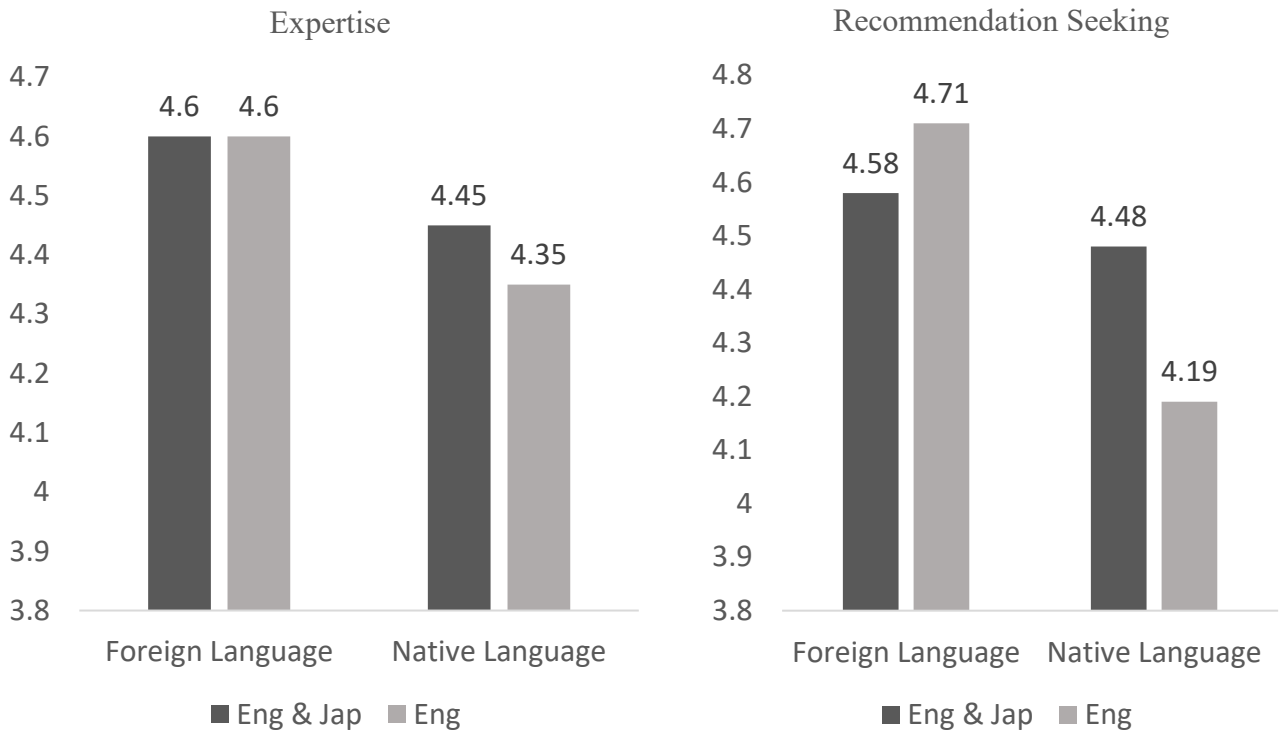
I recruited two-hundred and thirty-six participants (N = 236, M_{age} = 42.39, M_{female} = 56.3%) from Prolific for this study. The study was a 2 (film language: Japanese vs. native) x 2 (language expertise: dual vs. native) between-subjects design. The participants were first randomly assigned to one of the two language expertise conditions. In both the conditions the target consumer, Jamie, was a born US citizen whose native language was English. In the dual condition, Jamie was also reported to fluently speak Japanese, while in the native condition it was stated that English was the only language Jamie spoke. After this, the participants were randomly assigned to the second factor which was designed similar to study 1, where Jamie was consuming a drama film either in Japanese or English (native). The Japanese language condition served as the manipulation while English was the control. After being randomly assigned to

these four total conditions, participants provided ratings for the expertise and recommendation seeking; the same measures as earlier studies (1, 2A, 2B, and 3).

Results

Conducting a full-factorial two-way ANOVA on the dependent variables with film language and language expertise as independent factors revealed a significant main effect of film language on recommendation seeking, where participants in the foreign language condition were significantly more likely to yield higher ratings ($M_{foreign}$ = 4.64 vs. M_{native} = 4.33; $F(1, 232)$ = 4.28, p = 0.040), compared to those in the native control. The main effect for expertise only attained marginal significance in the proposed direction ($M_{foreign}$ = 4.60 vs. M_{native} = 4.40; $F(1, 232)$ = 3.41, p = 0.066). The main effect of language expertise and the interaction between the two independent factors failed to attain statistical significance ($F < 1$, $p > 0.1$). Meaning, the only effect exerted on the dependent variables was on account of the language of the film being consumed.

Figure 10. Results of study 4



Discussion

Study 4 only produced the main effects of the film language factor. Conversely, the main effects of language expertise and the interaction between my two factors failed to materialize any significant findings. This rules out the possibility that fluency in multiple languages is driving the observed effects. Rather it is simply the choice to consume content in a foreign language that renders higher expertise perceptions and recommendation seeking. Even without any fluency in the foreign language being consumed, the consumer reaps the benefit of the consumption of foreign language entertainment in the form of higher signals of expertise. In fact, one's mastery of the foreign language being consumed has little impact on these signals of expertise. This is good news for consumers, as they do not need to acquire linguistic proficiency in foreign

languages in order to take advantage of the signaling of expertise generated from FLC consumption.

Study 5

The purpose of this study was to examine a possible boundary condition of search for excellence via the mode of consumption – dubbing. One of the items composing my mediator is the effort expended in the consumption of FLC. I utilize the context of how a film is consumed in order to manipulate the effort dimension of search for excellence. Foreign language films and TV series are often consumed in their original form with the aid of subtitles. All of the previous studies used subbing as the means to consuming FLC. However, another option available for viewing ease is the dubbing of the original content in one's native language. As such, series like Squid game can be consumed in subbed or dubbed formats; these require different levels of effort being exerted, or perceptions thereof (Perego, Missier, & Stragà, 2018). I hypothesize that the subbing mode of consumption should lead to higher levels of expertise; while due to the dubbed consumption entailing lower effort, dubbing should not yield the same expertise perceptions and act as a boundary condition for the effect.

Method

I recruited one-hundred and sixty-one participants (N = 161, M_{age} = 33.55, M_{female} = 47.8%) from Prolific, who completed the study in exchange for monetary compensation. The study was a single factor three-level (consumption format: sub vs. dub vs. native) between-subjects design. Participants were randomly assigned to one of three conditions. In the sub condition, the target consumer viewed a drama film in a foreign language with subtitles. In the dubbing condition, the film was in a foreign language but consumed with dubbing. And in the native condition, serving as the control, the target viewed a drama film in English. The

participants then proceeded to respond to our dependent variables, same as the previous experiments.

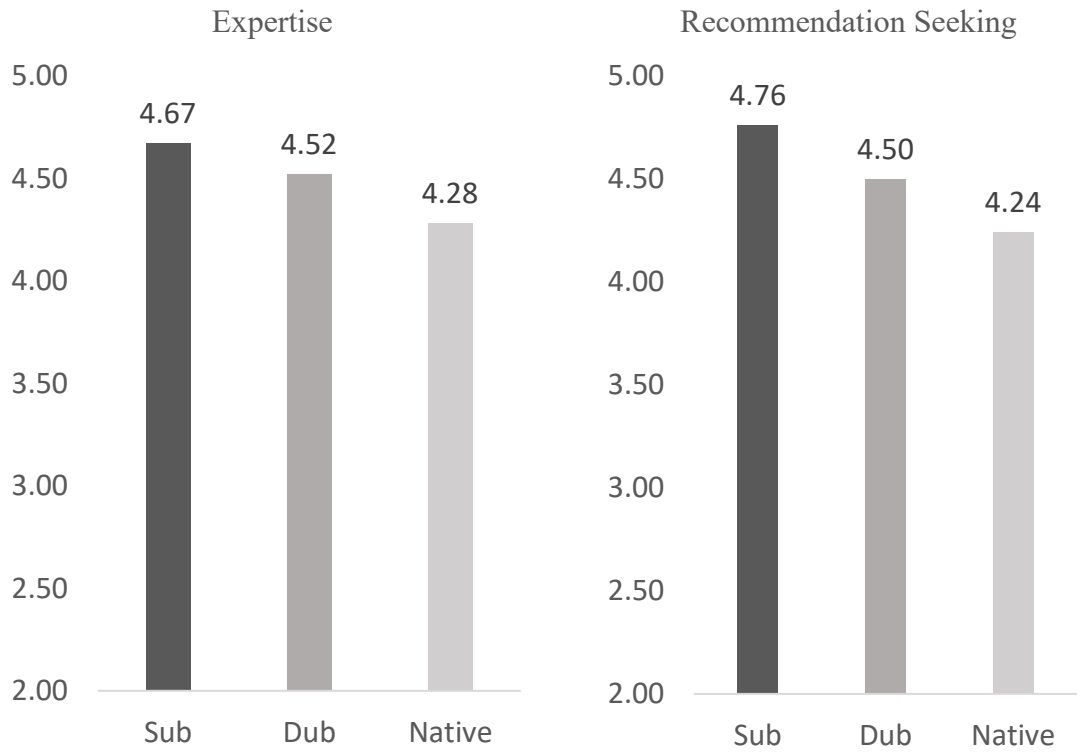
Results

A one-way ANOVA on the dependent variables revealed a significant effect of consumption format on expertise ($F(1, 158) = 3.02$, $p = 0.051$). The omnibus effect of film consumption on recommendation seeking only attained marginal significance ($F(1, 158) = 2.62$, $p = 0.076$).

Running pre-planned contrast showed that the overall effect for most of my dependent variables was primarily driven by the statistically significant difference between the sub and native (control) conditions. This contrast was significant for expertise ($M_{sub} = 4.67$ vs. $M_{native} = 4.28$; $t(158) = 2.43$, $p = 0.016$) and recommendation seeking ($M_{sub} = 4.76$ vs. $M_{native} = 4.24$; $t(158) = 2.29$, $p = 0.023$).

The contrast between the dub and native conditions failed to attain significance for both dependent measures ($t < 1$, $p > 0.1$). Finally, the contrasts between the dub and sub conditions also failed to attain statistical significance for both dependent measures. This meant that the participants in the dub and sub conditions were not perceived to be different.

Figure 11. Results of study 5



Discussion

Although the difference between dubbing and subbing was directionally consistent with my predictions, contrary to my theorizing, dubbing did not significantly differ from the subbing condition in this study. Interestingly, dubbing also did not differ from the native (control) condition for both dependent variables. This hints at the need to further refine and recalibrate the study to uncover the effect of dubbing and how it differs from subbed and native language consumption. In theory, dubbing should be associated with lower levels of effort expenditure during the act of consumption and thus, yield lower scores compared to the subbing condition, which is more effort intensive. I did not measure effort expenditure in this study, and it is therefore possible that the study did not effectively manipulate it.

On the other hand, the contrasts between the sub and native (control) conditions were significant for expertise and recommendation seeking; and were the primary drivers of the

overall significance levels of the omnibus tests. This corresponds to the main effects of study 1, and effectively replicates them. As such, subbed consumption of FLC clearly leads to more favorable outcomes for the target consumer when compared to native language consumption. Further investigations are required to clearly demonstrate how dubbing differentiates from these two modes of consumption.

Study 6

Study 6 looked at the role of locus of control (LOC) as a potential moderator of the effect of FLC on expertise. LOC can be predicted to impact multiple components of the search for excellence construct. When the person viewing the foreign consumption piece is not responsible for the selection of the piece, or is being subjected to the consumption without actually making a choice, the seeking out of superior content, openness to new experience, and effort expenditure involved in search, are all impaired. This should translate to reduced expertise and recommendation seeking ratings in my experimental paradigm.

Method

I recruited two-hundred and forty-seven participants (N = 247, M_{age} = 33.67, M_{female} = 28.3%) form Prolific to complete this study in exchange for monetary compensation. The study was a 2 (film language profile: foreign vs. native) x 2 (locus of control: internal vs. external) between-subjects design. In this study, the first factor – film language profiles – followed the same manipulation as study 3, where participants were randomly assigned to a viewing profile of a target consumer named Alex. In the foreign condition, Alex watched movies in a variety of foreign languages, plus English. In the native (control) condition, all films Alex watched were in English. Participants were then randomly assigned to one of two conditions of the second factor. In the internal condition, they were told that Alex searched for, and chose to watch, these movies

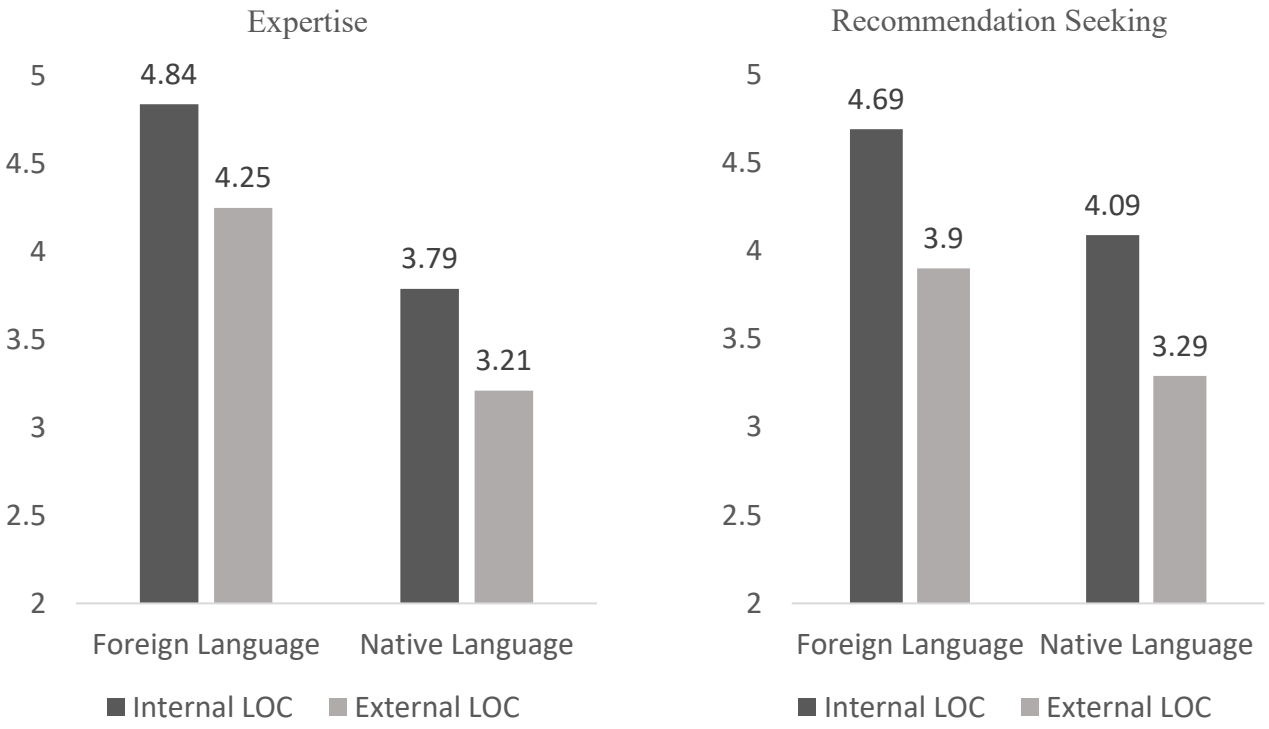
independently on Netflix. In the external condition, it was revealed that Alex watched all of these films with friends who decided which movies to watch for him; he did not pick any of the films he viewed. After being assigned to one of these four conditions, participants went on to complete measures on expertise and recommendation seeking.

Results

Two-way ANOVAs with language profiles and locus of control as independent variables revealed significant main effects for both on both dependent variables. Participants in the foreign language profile condition were significantly more likely be rated higher on expertise ($M_{foreign}$ = 4.26 vs. M_{native} = 3.78; $F(1, 243) = 17.01$, $p < 0.001$) and recommendation seeking ($M_{foreign}$ = 4.36 vs. M_{native} = 3.62; $F(1, 243) = 19.59$, $p < 0.001$), compared to those in the native control. Similarly when Alex was perceived to be selecting the films for viewing (internal LOC), higher rating emerged for expertise ($M_{internal}$ = 4.51 vs. $M_{external}$ = 3.53; $F(1, 243) = 54.01$, $p < 0.001$) and recommendation seeking ($M_{internal}$ = 4.25 vs. $M_{external}$ = 3.73; $F(1, 243) = 11.33$, $p < 0.001$), than when Alex's friends were responsible for the films being watched (external LOC).

The two-way interaction, however, failed to attain significance for any of the dependent variables ($p > 0.1$).

Figure 12. Results from study 6



Discussion

Study 6 intended to probe the mechanism through moderation but failed to produce an interaction effect. On the other hand, the main effects of both the independent variables emerged significant. Film language profiles that had FLC replicated the effects from the previous studies. LOC also produced the predicted main effect, as conceivably higher attributions of expertise can be expected when the LOC is internal. This study was however, unable to moderate the effect of FLC consumption on expertise through LOC.

LOC may not tap into the elements of the search for excellence construct, leading to a need to revise the list of moderators that could potentially alter how search for excellence interacts with expertise perceptions and other downstream measures. It is possible that the actual act of FLC consumption, in the case of external LOC, compensates for the loss in motivation and effort undertaken to seek quality content. Similarly, it is possible that the external LOC does not

have implications for openness to new experience, as was initially proposed; again due to the possibility that the consumer who ends up engaged in the consumption of FLC, still exhibits some degree of openness to new experience. Post-tests may need to be run to determine how and where LOC impacts the search for excellence paradigm. The other proposed moderator – critical and commercial success has yet to be tested in future studies to examine how it moderates FLC consumption's impact on expertise.

General Discussion

The consumption of entertainment in foreign languages in increasing rapidly. In the age of digital streaming, our tastes in music, movies, and media have also evolved to consume and appreciate a globalized pop culture. How are consumers whose consumption profiles include foreign content perceived differently to those who solely, or primarily, consume domestic or native language content? Up till now, academic insight into the phenomenon of consuming FLC and its implications for expertise remained scant. The current research attempts to bridge this gap by demonstrating what is signaled through the consumption of FLC, and identify a theoretically rich construct responsible for enhancing expertise perceptions.

The series of studies (Studies 1-6) in my research paradigm show that consuming FLC positively impacts the perceiver's evaluations of expertise. The consumption of FLC is linked to higher expertise, which consequently informs recommendation seeking. Not only are FLC consumers more sought after for recommendations, their recommendations are also perceived to be more persuasive and trustworthy (Study 1). Hence, consumers are likely to have a more desirable social standing and influence in the context of media and entertainment when their consumption profiles include FLC.

I show that the positive relationship between FLC and expertise is mediated by a novel construct I call '*search for excellence'*. Studies 2A, 2B, and 3 provide converging evidence of how high perceptions of breadth of knowledge, seeking out superior content, openness to new experience, and effort expenditure drive evaluations of expertise. I further investigate the underlying mechanism through ruling out language expertise as an alternative explanation (study 4), and testing dubbing as a boundary condition (study 5) and LOC as a moderator (study 6).

My studies primarily revolved around the consumption of films. The studies were either instantiated through the consumption of a single film, or through viewing profiles (multiple films). The most common instances of foreign language consumption seen in the world tend to be situated in the musical, and the film and TV series contexts. Hence for the purpose of external validity, I also plan to conduct future studies in the TV series, video gaming, and musical product domains. Currently, my studies generalize to the consumption of foreign films.

Theoretical Contributions

This research primarily contributes to the literature on consumer expertise and its signaling. Expertise is commonly understood in consumer behaviour and psychology as a cognitive construct (Alba & Hutchinson, 1987; Czellar & Luna, 2010; Feldon, 2007; Hoffman, 2014). Skill acquisition, experience, memory, and complex analyses have been shown to be connected to expertise through knowledge acquisition and organization (Alba & Hutchinson, 1987; Cowley & Mitchell, 2003; Mithcell & Dacin, 1996) – both processes grounded in cognition. Expertise researchers emphasize knowledge and knowledge structures as the drivers of expertise perceptions.

Recent expertise research has looked at decision making, service quality, variety of consumption, loyalty, human-technology interaction, recommending combinations, and

satisfaction (D'Angelo & Valsesia, 2022; Jamal & Anastasiadou, 2009; Nguyen et al., 2021; Reinders et al.,, 2015; Rocklage et al., 2021; Sela et al., 2019). Most of this research focuses on the consequences of possessing or signaling high expertise via knowledge. Scant research explores alternative dimensions – divergent from knowledge acquisition – that signal and engender higher evaluations of expertise. My research builds on the factors responsible for driving higher expertise perceptions through the display of search for excellence in a conspicuous consumption context.

I move the conversation on signaling expertise away from the cognitive engine, and towards a system of motivation. Thereby, introducing a motivational component to expertise perceptions in the form of search for excellence. This novel construct has implications for both the development of expertise and its perceptions. I focus on the latter in the current paper and specifically investigate it in the context of foreign language consumption of media content.

I propose search for excellence as a novel construct, and identify its constituent elements, that taps into the motivational psychology behind expertise perceptions. I identify breadth of knowledge in the product class, the seeking out of superior or high quality content, openness to new experience, and effort expenditure, as the constitutional elements of search for excellence. Seeking out superior content and openness to new experience are directly related to the motivation a consumer has around finding the best content, and willingness to try the novel. Effort expenditure also ties in to the motivational drive as the willingness to execute intensive search and consumption necessitates high levels of motivation. Breadth of knowledge directly links to cognition, and serves as a qualifying feature of search for excellence. The notion being that a person engaged in search for excellence has already reaped the benefits of the traditional expertise drivers like knowledge and is building on top of this cognitive base. Through this novel

construction of search for excellence, I add to expertise research, specifically how expertise is signaled and perceived through the assessment of the motivations of a target consumer.

My findings have implications for another area of research on expertise – variety-seeking. Variety-seeking's impact on expertise perceptions has been shown to be moderated by the evaluator's own expertise levels (Clarkson et al., 2013; Sela et al, 2019). Experts evaluate variety-seeking negatively while novices evaluate it positively. However, I argue that variety-seeking – looking for diverse content (McAlister, 1982) - when paired with the novel (Min & Schwarz, 2021) has positive consequences for expertise perceptions. Specifically, given one is perceived to already possess high breadth of knowledge, openness to new experience feeds into search for excellence and engenders higher perceptions of expertise.

I also contribute to WOM research. Expertise is a crucial asset that is highly valued in WOM (Lis, 2013; Moore & Lafreniere, 2020; Packard & Berger, 2017; Reichelt et al., 2014). Recommendations are sought out and valued more when the expertise of the source is higher. I add to the expertise signaling research in WOM and show how consuming foreign language media enhances others' willingness to seek recommendations. Consuming FLC positively impacts expertise perceptions and makes the consumer a more desirable, persuasive, and trustworthy source of information. I also contribute to streams of WOM research that argue expertise improves trust and persuasiveness (Study 1), both variables highly impactful for effective WOM and recommendations (Barnett White, 2005; Karmarkar & Tormala, 2010).

Managerial Implications

As far as I know, this is the first research that investigates the phenomenon of FLC consumption in consumer behaviour. I show that there are positive benefits of consuming foreign language media. The takeaway for large media firms like Netflix and other streaming services is

clear; pushing content from a variety of languages promotes FLC consumption which results in positive outcomes for the consumer in the form of expertise signaling, ultimately leading to higher loyalty and subscriber retention for the platform. Consumers who reap the benefits of higher expertise and social clout are likely to turn to entertainment platforms that possess vast catalogues of foreign content. Hence streaming giants should work to expand the collection of quality FLC and promote it to their subscribers and customers. A more internationally eclectic library of content gives the consumers access to a more globalized appreciation of art and entertainment, thereby giving them a stronger footing in signaling expertise, appearing more credible, and becoming more influential.

On the consumer front, it is highly desirable for the consumers to signal expertise as that makes them more persuasive, trustworthy and valuable as a source of information (Berger, 2014; Barnett White, 2005; DeBono & Harnish, 1988; Erdem & Swaitt, 2004; Tormala & Petty, 2004). Higher expertise means higher social currency in the WOM and recommendation spheres (Berger, Humphreys, et al., 2020; De Angelis et al., 2012; Lovett et al., 2013). The takeaway of this research for consumer is that they can easily turn to FLC as a means to signal expertise.

Directions for Future Research

This research can be extended into two major directions. The first area relates to examining how foreign language consumption impacts consumer judgments and attitudes. The second pertains to further investigation of search for excellence in other consumer relevant contexts. Within both these streams of research, numerous possibilities exist to explore from a variety of angles the phenomenon studied in present research.

Foreign Language Consumption

There are various lines of inquiry that can be pursued, where foreign language consumption in concerned. Within the domain of entertainment and media, future research may investigate how FLC consumption impacts other consumer related outcomes such as overall enjoyment, platform loyalty, country of origin effects, and inclusivity perceptions. Research could also examine how FLC consumption informs expertise perceptions in other media domains like music and video games.

One possible way the current research can be extended is by measuring enjoyment and satisfaction levels of individuals who consume foreign language content versus those who do not. Immediate enjoyment and long-term satisfaction are extremely important consumer behaviour metrics (Barasch et al., 2018; Westbrook & Oliver, 1991; Wu et al., 2017). It can be predicted that the diversity, novelty, and creativity that consumers become exposed to when interacting with FLC is greater than when it is absent from their consumption profiles. This is plausible because with FLC one is coming into contact with a greater pool of creativity and a larger selection of production which ultimately provides access to, and increases chances of, finding higher quality artistic material. Hence, FLC consumption may inform both momentary enjoyment and lasting overall satisfaction.

As mentioned in the managerial section, it is highly likely that if consumers walk away with greater expertise and consequently influence in WOM due to FLC consumption, they are more likely to gravitate towards and stick with entertainment providers whose libraries contain large portions and varieties of FLC. However, formal empirical investigations are needed to probe how loyalty and retention are impacted because of FLC (Kivetz et al., 2006; Thomas, 2001; Yim et al., 2008). Researchers may also be interested in figuring out how satisfaction with the provider/firm is affected (Chandrashekaran et al., 2007) when FLC is available on the

platform. Similarly, it is also important from the firm's perspective to determine what is the optimal strategy to promote foreign content? As there may be boundary conditions to how much of such content is being pushed.

Another area of research relevant to the conversation around FLC consumption is country of origin (COO) affects (Johansson et al., 1985). Certain countries may have monopolies or associations in the realm of content production, thereby resulting in COO halo effects (Han, 1989). It is possible that COO affects interact with the consumption of FLC and act as a potential moderator. This may be argued in the case of popular media being exported out of specific nations. For instance, Korean music (BTS), film (Parasite), and TV series (Squid Game) have strongly penetrated the entertainment zeitgeist. The effect of FLC on expertise may be enhanced or attenuated due these popularity and COO affects. Similarly, if certain countries are strongly associated with high quality content, then the mechanism of influencing expertise perceptions may be a parallel mediational model with COO and search for excellence as the drivers.

Similarly, another stream of research that is underexplored in relation to FLC is that of diversity and inclusion, that is how does FLC consumption inform inclusivity perceptions. These relate to the perception about a person with respect to how accepting they are of other cultures and populations. Based on the consumption of content, it can be argued that consumers who are more accepting of art foreign to their native language demonstrate higher cultural pluralism, and are therefore likely to be evaluated higher on scales of diversity, inclusivity and acceptance (Grier, 2020; Kipnis et al., 2021). I propose that the consumption of foreign artistic pieces has the power to unite us further across cultural boundaries and become more accepting of others.

The findings of current research may potentially hold true for other domains of entertainment such as music and video-games. Music in particular is a consumption context

where globally diversified tastes are appreciated. For instance, music from South Korea and Latin America is highly popular among native English speakers of North America. Research in the future could examine whether consumers who consume and appreciate foreign music and art also benefit from higher signals of search for excellence, consequently expertise, and ultimately influence.

Search for Excellence

With search for excellence, the streams of research that can be potentially studied include its applicability to other consumption contexts e.g., hedonic vs. utilitarian products; connection to expertise development e.g., sports psychology and the psychology of performance; and implications for expert emotionality.

I studied how search for excellence impacts expertise perceptions in the realm of FLC consumption. However, this construct can be generalizable to a variety of other consumption contexts. FLC is hedonic or experiential in nature, hence it is a natural extension of the current work to study how search for excellence underlies expertise perceptions in other hedonic domains like food consumption (e.g., food, wine; McFerran et al., 2010; LaTour et al., 2011). I predict that consumers who partake in foreign cuisines are more likely to be evaluated higher on expertise, and sought more for recommendations, due to higher perceived search for excellence. The impact of search for excellence may also not be limited to hedonic categories, and may well extend into utilitarian product classes like technological products such as smartphones, laptops etc. Alternatively, the hedonic/utilitarian divide (Kivetz & Zheng, 2017) may serve to be a potential moderator for search for excellence. Lots of possible research, especially around moderators, remains open to explore the phenomenon of search for excellence in greater depth.

For example, its interplay with cognition and affect offers myriad possibilities for future research directions.

The current research primarily focused on the signaling of expertise and its relationship with search for excellence. However, the flipside of this would be an investigation into how search for excellence contributes to expertise development and acquisition (Ericsson & Towne, 2010; Hutterman et al., 2014; Sloboda, 2014). Athletes, musicians, and other domain experts are often constantly striving to improve technique and performance (Ford et al., 2009; Lehman et al., 2018). In that vein, it is possible that search for excellence allows for a motivational edge to the performer resulting in higher or faster expertise development. This line of research is rich for future exploration, for example, studying how athletes who search and adopt superior and/or novel techniques end up reaping benefits in the form of improved technique, mastery, and performance. Another consequence of search for excellence may be how it can produce higher confidence in the performer. Hence, motivational advantages from search for excellence may end up translating into favorable cognitive and affective outcomes.

Recent work by Rocklage et al. (2021) demonstrates how higher levels of expertise correspond to higher emotional numbness. I believe that search for excellence may interact with affect, and hence, it could diverge from or further supplement the outcomes of that research. Search for excellence entails a motivational drive to pursue and discover quality. Upon discovering such high quality items, it may be predicted that experts with higher search for excellence experience a stronger emotional response compared to novices and other experts disengaged from search for excellence. This can occur because with existing exhaustive consumption as a qualifying criterion, these experts – high in search for excellence – are still looking for that hidden gem or quality content and upon finding it may appreciate or value it

more. Even in the case of not finding superior content, the search for quality may be rewarding in and of itself; hence experts engaged in search for excellence may still fare better off emotionally than those who are not.

Conclusion

In this essay, I examined the phenomenon of FLC consumption and how it informs expertise perceptions. Existing research on expertise and its signaling primarily focuses on cognition. In this research, I introduce a motivational component to the signaling of expertise by proposing a novel construct – search for excellence – that encapsulates the motivational inferences perceivers make when evaluating someone else's consumption of FLC. Specifically, I theorize and experimentally test and illustrate that FLC consumption conveys motivational signals to the perceiver via search for excellence, and this enhances their evaluations of expertise and recommendation seeking.

References

Aaker, J. L. (1997). Dimensions of brand personality. *Journal of marketing research*, *34*(3), 347-356.

Aaker, J. L., Garbinsky, E. N., & Vohs, K. D. (2012). Cultivating admiration in brands: Warmth, competence, and landing in the "golden quadrant". *Journal of Consumer Psychology*, *22*(2), 191-194.

Abad, F., Diaz, N. M., Domenech, E., Robayna, M., & Rico, J. (1996). Oral sweet solution reduces pain-related behaviour in preterm infants. *Acta Paediatrica*, *85*(7), 854-858.

Aggarwal, P., & McGill, A. L. (2011). When brands seem human, do humans act like brands? Automatic behavioural priming effects of brand anthropomorphism. *Journal of Consumer Research*, *39*(2), 307-323.

Aksan, Y., & Kantar, D. (2008). No wellness feels better than this sickness: Love metaphors from a cross-cultural perspective. *Metaphor and Symbol*, *23*(4), 262-291.

Alba, J. W., & Hutchinson, J. W. (2000). Knowledge calibration: What consumers know and what they think they know. *Journal of consumer research*, *27*(2), 123-156.

Albert, N., & Thomson, M. (2018). A Synthesis of the Consumer-Brand Relationship Domain: Using Text Mining to Track Research Streams, Describe Their Emotional Associations, and Identify Future Research Priorities. *Journal of the Association for Consumer Research*, *3*(2), 130-146.

Alley, T. R. (1981). Head shape and the perception of cuteness. *Developmental Psychology*, *17*(5), 650.

Alley, T. R. (1983). Age-related changes in body proportions, body size, and perceived cuteness. *Perceptual and Motor Skills*, *56*(2), 615-622.

Allison, A. (2003). Portable monsters and commodity cuteness: Poke´ mon as Japan's new global power. *Postcolonial Studies*, *6*(3), 381-395.

Allison, A. (2006). *Millennial monsters: Japanese toys and the global imagination* (Vol. 13). Univ of California Press.

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California management review*, *40*(1), 39-58.

Amado, A., Cortez, P., Rita, P., & Moro, S. (2018). Research trends on Big Data in Marketing: A text mining and topic modeling based literature analysis. *European Research on Management and Business Economics*, *24*(1), 1-7.

Anderson, J. R., & Pirolli, P. L. (1984). Spread of activation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *10*(4), 791.

Andersson Schwarz, J. (2017). Platform logic: An interdisciplinary approach to the platform-based economy. *Policy & Internet*, *9*(4), 374-394.

Angle, J. W., Dagogo-Jack, S. W., Forehand, M. R., & Perkins, A. W. (2017). Activating stereotypes with brand imagery: The role of viewer political identity. *Journal of Consumer Psychology*, *27*(1), 84-90.

Arnold, J. B. (1971). A multidimensional scaling study of semantic distance. *Journal of Experimental Psychology*, *90*(2), 349.

Babić Rosario, A., Sotgiu, F., De Valck, K., & Bijmolt, T. H. (2016). The effect of electronic word of mouth on sales: A meta-analytic review of platform, product, and metric factors. *Journal of Marketing Research*, *53*(3), 297-318.

Babić Rosario, A., De Valck, K., & Sotgiu, F. (2020). Conceptualizing the electronic word-of-mouth process: What we know and need to know about eWOM creation, exposure, and evaluation. *Journal of the Academy of Marketing Science*, *48*(3), 422-448.

Baer, D. (2022). The 31 Biggest Subreddits. https://blog.oneupapp.io/biggest-subreddits/

Baldha, T., Mungalpara, M., Goradia, P., & Bharti, S. (2021). Covid-19 Vaccine Tweets Sentiment Analysis and Topic Modelling for Public Opinion Mining. In *2021 International Conference on Artificial Intelligence and Machine Vision (AIMV)* (pp. 1-6). IEEE.

Baranowska, K. (2020). Learning most with least effort: subtitles and cognitive load. *ELT Journal*, *74*(2), 105-115.

Barasch, A., Zauberman, G., & Diehl, K. (2018). How the intention to share can undermine enjoyment: Photo-taking goals and evaluation of experiences. *Journal of Consumer Research*, *44*(6), 1220-1237.

Barelds, D. P., Dijkstra, P., Koudenburg, N., & Swami, V. (2011). An assessment of positive illusions of the physical attractiveness of romantic partners. *Journal of Social and Personal Relationships*, *28*(5), 706-719.

Barnett White, T. (2005). Consumer trust and advice acceptance: The moderating roles of benevolence, expertise, and negative emotions. *Journal of Consumer Psychology*, *15*(2), 141-148.

Barsalou, L. W. (2008). Grounded cognition. *Annual review of psychology*, *59*(1), 617-645.

Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of marketing*, *69*(4), 133-152.

Baumeister, R. F. (1982). A self-presentational view of social phenomena. *Psychological bulletin*, *91*(1), 3.

Beatty, S. E., & Smith, S. M. (1987). External search effort: An investigation across several product categories. *Journal of consumer research*, *14*(1), 83-95.

Beauchamp, G. K., & Moran, M. (1984). Acceptance of sweet and salty tastes in 2-year-old children. *Appetite*, *5*(4), 291-305.

Bechwati, N. N., & Xia, L. (2003). Do computers sweat? The impact of perceived effort of online decision aids on consumers' satisfaction with the decision process. *Journal of Consumer Psychology*, *13*(1-2), 139-148.

Bekk, M., Spörrle, M., Völckner, F., Spieß, E., & Woschée, R. (2017). What is not beautiful should match: How attractiveness similarity affects consumer responses to advertising. *Marketing Letters*, *28*(4), 509-522.

Bellezza, S., Gino, F., & Keinan, A. (2014). The red sneakers effect: Inferring status and competence from signals of nonconformity. *Journal of consumer research*, *41*(1), 35-54.

Berger, J. (2014). Word of mouth and interpersonal communication: A review and directions for future research. *Journal of consumer psychology*, *24*(4), 586-607.

Berger, J., Humphreys, A., Ludwig, S., Moe, W. W., Netzer, O., & Schweidel, D. A. (2020). Uniting the tribes: Using text for marketing insight. *Journal of Marketing*, *84*(1), 1-25.

Berger, J., Packard, G., Boghrati, R., Hsu, M., Humphreys, A., Luangrath, A., Moore, S., Nave, G., Olivola, C. and Rocklage, M. (2022). Wisdom from words: marketing insights from text. *Marketing Letters*, pp.1-13.

Berridge, K. C., Ho, C. Y., Richard, J. M., & DiFeliceantonio, A. G. (2010). The tempted brain eats: pleasure and desire circuits in obesity and eating disorders. *Brain research*, *1350*, 43-64.

Berridge, K., & Kringelbach, M. (2008). Affective neuroscience of pleasure: Reward in humans and animals. *Psychopharmacology, 199*(3), 457-480.

Berry, D. S., & McArthur, L. Z. (1985). Some components and consequences of a babyface. *Journal of personality and social psychology*, *48*(2), 312.

Berscheid, E., & Hatfield, E. (1969). *Interpersonal attraction* (Vol. 69, pp. 113-114). Reading, MA: Addison-Wesley.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships.

Bettman, J. R., & Park, C. W. (1980). Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: A protocol analysis. *Journal of consumer research*, *7*(3), 234-248.

Blass, E. M. (1987). Opioids, sweets and a mechanism for positive affect: Broad motivational implications. In *Sweetness* (pp. 115-126). Springer, London.

Blass, E. M., & Camp, C. A. (2001). The ontogeny of face recognition: Eye contact and sweet taste induce face preference in 9-and 12-week-old human infants. *Developmental Psychology*, *37*(6), 762.

Blei, D. M., & Lafferty, J. D. (2009). Topic models. In *Text mining* (pp. 101-124). Chapman and Hall/CRC.

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent dirichlet allocation. *the Journal of machine Learning research*, *3*, 993-1022.

Bloch, P. H., Sherrell, D. L., & Ridgway, N. M. (1986). Consumer search: An extended framework. *Journal of consumer research*, *13*(1), 119-126.

Boekaerts, M. (2006). Self-Regulation and Effort Investment. In K. A. Renninger, I. E. Sigel, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Child psychology in practice* (pp. 345–377). John Wiley & Sons Inc.

Booth, D. A., Higgs, S., Schneider, J., & Klinkenberg, I. (2010). Learned liking versus inborn delight: can sweetness give sensual pleasure or is it just motivating?. *Psychological Science*, *21*(11), 1656-1663.

Borg, I., & Groenen, P. J. (2005). *Modern multidimensional scaling: Theory and applications*. Springer Science & Business Media.

Borgi, M., Cogliati-Dezza, I., Brelsford, V., Meints, K., & Cirulli, F. (2014). Baby schema in human and animal faces induces cuteness perception and gaze allocation in children. *Frontiers in psychology*, *5*, 411.

Brady, M. K., & Cronin Jr, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of marketing*, *65*(3), 34-49.

Bristor, J. (1990). Exhanced explanations of word of mouth communications; the power of relations. *Research in consumer behaviour*, *4*, 51-83.

Brodeur, M. B., Guérard, K., & Bouras, M. (2014). Bank of standardized stimuli (BOSS) phase II: 930 new normative photos. *PLoS One*, *9*(9), e106953.

Brosch, A. (2016). When the child is born into the Internet: Sharenting as a growing trend among parents on Facebook.

Brosch, T., Sander, D., & Scherer, K. R. (2007). That baby caught my eye... attention capture by infant faces. *Emotion, 7*(3), 685-689.

Brucks, M. (1985). The effects of product class knowledge on information search behaviour. *Journal of consumer research*, *12*(1), 1-16.

Bryce, M. (2006). Cuteness needed: the new language/communication device in a global society.

Buckley, R. C. (2016). Aww: The emotion of perceiving cuteness. *Frontiers in psychology*, *7*, 1740.

Burgess, R. J. (2013). *The art of music production: The theory and practice*. Oxford University Press.

Byrne, D. (1969). Attitudes and attraction. In *Advances in experimental social psychology* (Vol. 4, pp. 35-89). Academic Press.

Byrne, D., & Griffith, W. (1973). Interpersonal attraction. *Annual review of psychology*.

Campbell, M. C., & Mohr, G. S. (2011). Seeing is eating: How and when activation of a negative stereotype increases stereotype-conducive behaviour. *Journal of Consumer Research*, *38*(3), 431-444.

Campbell, M. C., & Winterich, K. P. (2018). A Framework for the Consumer Psychology of Morality in the Marketplace. *Journal of Consumer Psychology*, *28*(2), 167-179.

Carr, T. H., & Dagenbach, D. (1990). Semantic priming and repetition priming from masked words: Evidence for a center-surround attentional mechanism in perceptual recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *16*(2), 341.

Carr, T. H., McCauley, C., Sperber, R. D., & Parmelee, C. M. (1982). Words, pictures, and priming: on semantic activation, conscious identification, and the automaticity of information processing. *Journal of Experimental Psychology: Human Perception and Performance*, *8*(6), 757.

Carroll, J. D., & Arabie, P. (1998). Multidimensional scaling. *Measurement, judgment and decision making*, 179-250.

Carver, C. S., & White, T. L. (1994). Behavioural inhibition, behavioural activation, and affective responses to impending reward and punishment: the BIS/BAS scales. *Journal of personality and social psychology*, *67*(2), 319.

Cavanaugh, L. A., MacInnis, D. J., & Weiss, A. M. (2016). Perceptual dimensions differentiate emotions. *Cognition and Emotion*, *30*(8), 1430-1445.

Celsi, R. L., & Olson, J. C. (1988). The role of involvement in attention and comprehension processes. *Journal of consumer research*, *15*(2), 210-224.

Celsi, R. L., Rose, R. L., & Leigh, T. W. (1993). An exploration of high-risk leisure consumption through skydiving. *Journal of consumer research*, *20*(1), 1-23.

Chandrashekaran, M., Rotte, K., Tax, S. S., & Grewal, R. (2007). Satisfaction strength and customer loyalty. *Journal of marketing research*, *44*(1), 153-163.

Chang, C. T., Huang, G. H., & He, M. L. (2018). Cuteness Makes the Sale? How Consumer Responses are Affected by Message Framing and Crowding. In *Academy of Marketing Science Annual Conference* (pp. 363-373).

Cheng, Y., Mukhopadhyay, A., & Williams, P. (2020). Smiling signals intrinsic motivation. *Journal of Consumer Research*, *46*(5), 915-935.

Cheok, A. D. (2010). Kawaii/cute interactive media. In *Art and technology of entertainment computing and communication* (pp. 223-254). Springer, London.

Cho, H., & Schwarz, N. (2008). Of great art and untalented artists: Effort information and the flexible construction of judgmental heuristics. *Journal of Consumer Psychology*, *18*(3), 205-211.

Clarkson, J. J., Janiszewski, C., & Cinelli, M. D. (2013). The desire for consumption knowledge. *Journal of Consumer Research*, *39*(6), 1313-1329.

Clement, J. (2022). Annual revenue generated by Pokémon GO worldwide from 2016 to 2021. https://www.statista.com/statistics/882474/pokemon-go-all-time-player-spending-countries/#:~:text=In%202020%2C%20Pok%C3%A9mon%20Go%20was,billion%20U.S.%20dollars%20in%20revenue.

Coccaro, N., & Jurafsky, D. (1998). Towards better integration of semantic predictors in statistical language modeling. In *Fifth International Conference on Spoken Language Processing*.

Cook, S. (2022). *50+ Netflix statistics & facts that define the company's dominance in 2022.* https://www.comparitech.com/blog/vpn-privacy/netflix-statistics-facts-figures/

Coupey, E., Irwin, J. R., & Payne, J. W. (1998). Product category familiarity and preference construction. *Journal of Consumer Research*, *24*(4), 459-468.

Cowley, E. (2005). What do novice consumers remember?. *ACR North American Advances*.

Cowley, E., & Mitchell, A. A. (2003). The moderating effect of product knowledge on the learning and organization of product information. *Journal of consumer research*, *30*(3), 443-454.

Cox, M. A., & Cox, T. F. (2008). Multidimensional scaling. In *Handbook of data visualization* (pp. 315-347). Springer, Berlin, Heidelberg.

Crolic, C., & Janiszewski, C. (2016). Hedonic escalation: When food just tastes better and better. *Journal of Consumer Research*, *43*(3), 388-406.

Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of marketing*, *56*(3), 55-68.

Czellar, S., & Luna, D. (2010). The effect of expertise on the relation between implicit and explicit attitude measures: An information availability/accessibility perspective. *Journal of Consumer Psychology*, *20*(3), 259-273.

d'Ydewalle, G., & Pavakanun, U. (1997). Could enjoying a movie lead to language acquisition?. In *New horizons in media psychology* (pp. 145-155). VS Verlag für Sozialwissenschaften, Wiesbaden.

Dagenbach, D., Horst, S., & Carr, T. H. (1990). Adding new information to semantic memory: How much learning is enough to produce automatic priming?. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *16*(4), 581.

Dale, J. P., Goggin, J., Leyda, J., McIntyre, A. P., & Negra, D. (Eds.). (2016). *The aesthetics and affects of cuteness*. Routledge.

Danan, M. (2004). Captioning and subtitling: Undervalued language learning strategies. *Meta: Journal des traducteurs/Meta: Translators' Journal*, *49*(1), 67-77.

D'Angelo, J. K., & Valsesia, F. (2022). EXPRESS: You Should Try These Together: Combinatory Recommendations Signal Expertise and Improve Product Attitudes. *Journal of Marketing Research*, 00222437221111344.

Dawes Robyn, M., & Smith, T. L. (1985). Attitude and Opinion Measurement. *Gardner Lindzey e Elliot Aronson (a c. di), The Handbook of Social Psychology*, *1*.

De Angelis, M., Bonezzi, A., Peluso, A. M., Rucker, D. D., & Costabile, M. (2012). On braggarts and gossips: A self-enhancement account of word-of-mouth generation and transmission. *Journal of Marketing Research*, *49*(4), 551-563.

DeBono, K. G., & Harnish, R. J. (1988). Source expertise, source attractiveness, and the processing of persuasive information: A functional approach. *Journal of Personality and social Psychology*, *55*(4), 541.

Demirbilek, O., & Sener, B. (2001). A design language for products: designing for happiness. In *Proceedings of the International Conference on Affective Human Factors Design*(pp. 19-24).

Dimofte, C. V., & Yalch, R. F. (2011). The mere association effect and brand evaluations. *Journal of Consumer Psychology*, *21*(1), 24-37.

Dörnyei, Z., & Ushioda, E. (2013). Teaching and researching: Motivation. Routledge.

Dubé, L., LeBel, J. L., & Lu, J. (2005). Affect asymmetry and comfort food consumption. *Physiology & Behaviour*, *86*(4), 559-567.

Dubois, D., Rucker, D. D., & Galinsky, A. D. (2012). Super size me: Product size as a signal of status. *Journal of Consumer Research*, *38*(6), 1047-1062.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of personality and social psychology*, *92*(6), 1087.

Elliott, C. D. (2010). Sweet and salty: nutritional content and analysis of baby and toddler foods. *Journal of public health*, *33*(1), 63-70.

Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: a three-factor theory of anthropomorphism. *Psychological review*, *114*(4), 864.

Erdem, T., & Swait, J. (2004). Brand credibility, brand consideration, and choice. *Journal of consumer research*, *31*(1), 191-198.

Ericsson, K. A. (2008). Deliberate practice and acquisition of expert performance: a general overview. *Academic emergency medicine*, *15*(11), 988-994.

Ericsson, K. A., & Towne, T. J. (2010). Expertise. *WIREs Cognitive Science*.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological review*, *100*(3), 363.

Ericsson, K. A., Prietula, M. J., & Cokely, E. T. (2007). The making of an expert. *Harvard business review*, *85*(7/8), 114.

Esch, T., & Stefano, G. B. (2005). The neurobiology of love. *Neuroendocrinology Letters*, *26*(3), 175-192.

Esposito, G., Nakazawa, J., Ogawa, S., Stival, R., Kawashima, A., Putnick, D. L., & Bornstein, M. H. (2014). Baby, you light-up my face: culture-general physiological responses to infants and culture-specific cognitive judgements of adults. *PloS one*, *9*(10), e106705.

Etcoff, N. (1999). Survival of the prettiest: The science of beauty. New York, NY, US.

Feick, L. F., & Price, L. L. (1987). The market maven: A diffuser of marketplace information. *Journal of marketing*, *51*(1), 83-97.

Feldon, D. F. (2007). The implications of research on expertise for curriculum and pedagogy. *Educational Psychology Review*, *19*(2), 91-110.

Feltovich, P. J., Prietula, M. J., & Ericsson, K. A. (2006). Studies of expertise from psychological perspectives.

Ferreira, L., & Hitchcock, D. B. (2009). A comparison of hierarchical methods for clustering functional data. *Communications in Statistics-Simulation and Computation*, *38*(9), 1925-1949.

Filieri, R., McLeay, F., Tsui, B., & Lin, Z. (2018). Consumer perceptions of information helpfulness and determinants of purchase intention in online consumer reviews of services. *Information & Management*, *55*(8), 956-970.

Fischler, I. (1977). Semantic facilitation without association in a lexical decision task. *Memory & cognition*, *5*(3), 335-339.

Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in cognitive sciences*, *11*(2), 77-83.

Fitzsimons, G. M., Chartrand, T. L., & Fitzsimons, G. J. (2008). Automatic effects of brand exposure on motivated behaviour: how apple makes you "think different". *Journal of consumer research*, *35*(1), 21-35.

Flynn, N. (2019). *The Rise of Multiple Foreign Language Captions in Film and Media.* https://cielo24.com/2019/09/the-rise-of-multiple-foreign-language-captions-in-film-and-media/

Ford, P., Coughlan, E., & Williams, M. (2009). The expert-performance approach as a framework for understanding and enhancing coaching performance, expertise and learning. *International Journal of Sports Science & Coaching*, *4*(3), 451-463.

Förster, J., Liberman, N., & Friedman, R. S. (2007). Seven principles of goal activation: A systematic approach to distinguishing goal priming from priming of non-goal constructs. *Personality and Social Psychology Review*, *11*(3), 211–233.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of consumer research*, *24*(4), 343-373.

Fournier, S., & Alvarez, C. (2012). Brands as relationship partners: Warmth, competence, and in-between. *Journal of Consumer Psychology*, *22*(2), 177-185.

Funnell, E. (1995). Objects and properties: A study of the breakdown of semantic memory. *Memory*, *3*(3-4), 497-518.

Furley, P., & Wood, G. (2016). Working memory, attentional control, and expertise in sports: A review of current literature and directions for future research. *Journal of Applied Research in Memory and Cognition*, *5*(4), 415-425.

Gallup Jr, G. G., & Frederick, D. A. (2010). The science of sex appeal: An evolutionary perspective. *Review of General Psychology*, *14*(3), 240-250.

Garbarino, E. C., & Edell, J. A. (1997). Cognitive effort, affect, and choice. *Journal of consumer research*, *24*(2), 147-158.

Gaschler, R., Progscha, J., Smallbone, K., Ram, N., and Bilalić, M. (2014). Playing off the curve - testing quantitative predictions of skill acquisition theories in development of chess performance. *Front. Psychol*. 5:923. doi: 10.3389/fpsyg.2014.00923

Giese, J. L., & Cote, J. A. (2000). Defining consumer satisfaction. *Academy of marketing science review*, *1*(1), 1-22.

Glaser, R. (1994). Expertise. In M. W. Eysenck et al. (Eds.), The Blackwell Dictionary of Cognitive Psychology (pp. 139-142). Cambridge: Blackwell.

Glaser, R. (2013). *Expertise and learning: How do we think about instructional processes now that we have discovered knowledge structures?* (pp. 289-302). Psychology Press.

Glocker, M. L., Langleben, D. D., Ruparel, K., Loughead, J. W., Gur, R. C., & Sachser, N. (2009). Baby schema in infant faces induces cuteness perception and motivation for caretaking in adults. *Ethology*, *115*(3), 257-263.

Gobet, F., & Charness, N. (2018). Expertise in chess.

Gobet, F., and Ereku, M. H. (2014). Checkmate to deliberate practice: the case of Magnus Carlsen. *Front. Psychol*. 5:878. doi: 10.3389/fpsyg.2014.00878

Goff, P. A., Williams, M. J., Eberhardt, J. L., & Jackson, M. C. (2008). Not yet human: Implicit knowledge, historical dehumanization, and contemporary consequences. *JPSP, 94*, 292-306.

Goldberg, Y., & Levy, O. (2014). word2vec explained: Deriving mikolov et al.'s negative-sampling word-embedding method. *arXiv preprint arXiv:1402.3722*.

Golle, J., Lisibach, S., Mast, F. W., & Lobmaier, J. S. (2013). Sweet puppies and cute babies: Perceptual adaptation to babyfacedness transfers across species. *PloS one*, *8*(3), e58248.

Gonçalves, C. E., Rama, L. M., & Figueiredo, A. B. (2012). Talent identification and specialization in sport: an overview of some unanswered questions. *International journal of sports physiology and performance*, *7*(4), 390-393.

Gordon, A. D. (1987). A review of hierarchical classification. *Journal of the Royal Statistical Society: Series A (General)*, *150*(2), 119-137.

Govers, P., Hekkert, P., & Schoormans, J. P. (2003, October). Happy, cute and tough: Can designers create a product personality that consumers understand. In *Design and emotion* (pp. 345-349).

Grabner, R. H., Neubauer, A. C., & Stern, E. (2006). Superior performance and neural efficiency: The impact of intelligence and expertise. *Brain research bulletin*, *69*(4), 422-439.

Graf, P., & Schacter, D. L. (1985). Implicit and explicit memory for new associations in normal and amnesic subjects. *Journal of Experimental Psychology: Learning, memory, and cognition*, *11*(3), 501.

Green, P. E., & Carmone, F. J. (1969). Multidimensional scaling: An introduction and comparison of nonmetric unfolding techniques. *Journal of Marketing Research*, *6*(3), 330-341.

Greenwald, A. G., Draine, S. C., & Abrams, R. L. (1996). Three cognitive markers of unconscious semantic activation. *Science*, *273*(5282), 1699-1702.

Grier, S. A. (2020). Marketing inclusion: A social justice project for diversity education. *Journal of Marketing Education*, *42*(1), 59-75.

Guida, A., Gobet, F., Tardieu, H., & Nicolas, S. (2012). How chunks, long-term working memory and templates offer a cognitive explanation for neuroimaging data on expertise acquisition: a two-stage framework. *Brain and cognition*, *79*(3), 221-244.

Hallman, C. (2022). The 25 Highest-Grossing Media Franchises of All Time. https://www.titlemax.com/discovery-center/money-finance/the-25-highest-grossing-media-franchises-of-all-time/

Hambrick, D. Z., Oswald, F. L., Altmann, E. M., Meinz, E. J., Gobet, F., and Campitelli, G. (2014). Deliberate practice: is that all it takes to become an expert? *Intelligence* 45, 34–45. doi: 10.1016/j.intell.2013.04.001

Hamilton, R., Vohs, K. D., & McGill, A. L. (2014). We'll be honest, this won't be the best article you'll ever read: The use of dispreferred markers in word-of-mouth communication. *Journal of Consumer Research*, *41*(1), 197-212.

Handler, A. (2014). An empirical study of semantic similarity in WordNet and Word2Vec.

Hardwig, J. (1994). Toward an ethics of expertise. *Professional ethics and social responsibility*, 83-101.

Harrison, D., Stevens, B., Bueno, M., Yamada, J., Adams-Webber, T., Beyene, J., & Ohlsson, A. (2010). Efficacy of sweet solutions for analgesia in infants between 1 and 12 months of age: a systematic review. *Archives of disease in childhood*, *95*(6), 406-413.

Hartung, M. and A. Frank (2011). Exploring supervised LDA models for assigning attributes to adjective noun phrases. *In Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing* pp. 540–551.

Hayati, A., & Mohmedi, F. (2011). The effect of films with and without subtitles on listening comprehension of EFL learners. *British Journal of Educational Technology*, *42*(1), 181-192.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.

He, R., & McAuley, J. (2016). Ups and downs: Modeling the visual evolution of fashion trends with one-class collaborative filtering. In *proceedings of the 25th international conference on world wide web* (pp. 507-517).

Hoffman, K. D., & Turley, L. W. (2002). Atmospherics, service encounters and consumer decision making: An integrattve perspective. *Journal of Marketing theory and practice*, *10*(3), 33-47.

Hoffman, R. R. (2014). *The psychology of expertise: Cognitive research and empirical AI*. Psychology Press.

Holbrook, M. B., Chestnut, R. W., Oliva, T. A., & Greenleaf, E. A. (1984). Play as a consumption experience: The roles of emotions, performance, and personality in the enjoyment of games. *Journal of consumer research*, *11*(2), 728-739.

Hollis, G., & Westbury, C. (2016). The principals of meaning: Extracting semantic dimensions from co-occurrence models of semantics. *Psychonomic bulletin & review*, *23*(6), 1744-1756.

Hollis, G., Westbury, C., & Lefsrud, L. (2017). Extrapolating human judgments from skip-gram vector representations of word meaning. *Quarterly Journal of Experimental Psychology*, *70*(8), 1603-1619.

Horton, J. (2018). For the love of cuddly toys. *Children's Geographies*, *16*(4), 446-454.

Hovy, D., Melumad, S., & Inman, J. J. (2021). Wordify: a Tool for Discovering and Differentiating Consumer Vocabularies. *Journal of Consumer Research*.

Hoyer, S. (1985). The effect of age on glucose and energy metabolism in brain cortex of rats. *Archives of gerontology and geriatrics*, *4*(3), 193-203.

Humphreys, A., & Wang, R. J. H. (2018). Automated text analysis for consumer research. *Journal of Consumer Research*, *44*(6), 1274-1306.

Humphreys, A., Isaac, M. S., & Wang, R. J. H. (2021). Construal matching in online search: applying text analysis to illuminate the consumer decision journey. *Journal of Marketing Research*, *58*(6), 1101-1119.

Hüttermann, S., Memmert, D., & Simons, D. J. (2014). The size and shape of the attentional "spotlight" varies with differences in sports expertise. *Journal of Experimental Psychology: Applied*, *20*(2), 147.

Inzlicht, M., Shenhav, A., & Olivola, C. Y. (2018). The effort paradox: Effort is both costly and valued. *Trends in cognitive sciences*, *22*(4), 337-349.

Ismagilova, E., Slade, E., Rana, N. P., & Dwivedi, Y. K. (2020). The effect of characteristics of source credibility on consumer behaviour: A meta-analysis. *Journal of Retailing and Consumer Services*, *53*.

Jacobi, C., van Atteveldt, W., & Welbers, K. (2016). Quantitiative analysis of large amounts of journalistic text using topic modeling. *Digital Journalism, 4*(1), 89-106.

Jacoby, J., & Hoyer, W. D. (1981). What if opinion leaders didn't know more? A question of nomological validity. *ACR North American Advances*.

Jain, A. K., & Dubes, R. C. (1988). *Algorithms for clustering data*. Prentice-Hall, Inc..

Jamal, A., & Anastasiadou, K. (2009). Investigating the effects of service quality dimensions and expertise on loyalty. *European Journal of marketing*.

Jatnika, D., Bijaksana, M. A., & Suryani, A. A. (2019). Word2vec model analysis for semantic similarities in english words. *Procedia Computer Science*, *157*, 160-167.

Jaworska, N., & Chupetlovska-Anastasova, A. (2009). A review of multidimensional scaling (MDS) and its utility in various psychological domains. *Tutorials in quantitative methods for psychology*, *5*(1), 1-10.

Jelodar, H., Wang, Y., Yuan, C., Feng, X., Jiang, X., Li, Y., & Zhao, L. (2019). Latent Dirichlet allocation (LDA) and topic modeling: models, applications, a survey. *Multimedia Tools and Applications*, *78*(11), 15169-15211.

Jia, H. M., Park, C. W., & Pol, G. (2015). Cuteness, nurturance, and implications for visual product design. *The psychology of design: Creating consumer appeal*, 168-179.

Johansson, J. K., Douglas, S. P., & Nonaka, I. (1985). Assessing the impact of country of origin on product evaluations: a new methodological perspective. *Journal of Marketing Research*, *22*(4), 388-396.

Johnson, A., & Proctor, R. W. (2016). *Skill acquisition and training: Achieving expertise in simple and complex tasks*. Routledge.

Johnson, E. J., & Russo, J. E. (1984). Product familiarity and learning new information. *Journal of consumer research*, *11*(1), 542-550.

Johnson, S. C. (1967). Hierarchical clustering schemes. *Psychometrika*, *32*(3), 241-254.

Kahle, L. R., & Homer, P. M. (1985). Physical attractiveness of the celebrity endorser: A social adaptation perspective. *Journal of consumer research*, *11*(4), 954-961.

Karkun, P., Chowdhury, A., & Dhar, D. (2018). Effect of baby-like product personality on visually perceived pleasure: A study on coffeemakers. In *Ergonomics in caring for people* (pp. 273-279). Springer, Singapore.

Karmarkar, U. R., & Tormala, Z. L. (2010). Believe me, I have no idea what I'm talking about: The effects of source certainty on consumer involvement and persuasion. *Journal of Consumer Research*, *36*(6), 1033-1049.

Kipnis, E., Demangeot, C., Pullig, C., Cross, S. N., Cui, C. C., Galalae, C., ... & Williams, J. D. (2021). Institutionalizing Diversity-and-Inclusion-Engaged Marketing for Multicultural Marketplace Well-Being. *Journal of Public Policy & Marketing*, *40*(2), 143-164.

Kivetz, R., & Zheng, Y. (2017). The effects of promotions on hedonic versus utilitarian purchases. *Journal of Consumer Psychology*, *27*(1), 59-68.

Kivetz, R., Urminsky, O., & Zheng, Y. (2006). The goal-gradient hypothesis resurrected: Purchase acceleration, illusionary goal progress, and customer retention. *Journal of marketing research*, *43*(1), 39-58.

Klix, F. (1980). On structure and function of semantic memory. In *Advances in Psychology* (Vol. 5, pp. 11-25). North-Holland.

Koh, T. H. H. G. (1996). Glucose and the newborn baby: Sweet justice?. *Journal of paediatrics and child health*, *32*(4), 281-284.

Koma, K. (2013). Kawaii as Represented in scientific research: the possibilities of Kawaii cultural studies. *Hemispheres. Studies on Cultures and Societies*, (28), 103-117.

Koolstra, C. M., Peeters, A. L., & Spinhof, H. (2002). The pros and cons of dubbing and subtitling. *European Journal of Communication*, *17*(3), 325-354.

Kounios, J., & Holcomb, P. J. (1992). Structure and process in semantic memory: Evidence from event-related brain potentials and reaction times. *Journal of experimental psychology: General*, *121*(4), 459.

Kovarovic, S. (2011). Hello Kitty: A brand made of cuteness. *Journal of Culture and Retail Image*, *4*(1), 1-8.

Kövecses, Z. (1988). *The language of love*. London: Bucknell University Press

Kövecses, Z. (2003). *Metaphor and emotion: Language, culture, and body in human feeling*. Cambridge University Press.

Koyama, R., Takahashi, Y., & Mori, K. (2006). Assessing the cuteness of children: Significant factors and gender differences. *Social Behaviour and Personality: an international journal*, *34*(9), 1087-1100.

Kringelbach, M. L., & Berridge, K. C. (2009). Towards a functional neuroanatomy of pleasure and happiness. *Trends in cognitive sciences*, *13*(11), 479-487.

Kringelbach, M. L., Stark, E. A., Alexander, C., Bornstein, M. H., & Stein, A. (2016). On cuteness: Unlocking the parental brain and beyond. *Trends in cognitive sciences*, *20*(7), 545-558.

Kruger, J. L., Hefer, E., & Matthew, G. (2013). Measuring the impact of subtitles on cognitive load: Eye tracking and dynamic audiovisual texts. In *Proceedings of the 2013 Conference on Eye Tracking South Africa* (pp. 62-66).

Kruger, J., Wirtz, D., Van Boven, L., & Altermatt, T. W. (2004). The effort heuristic. Journal of Experimental Social Psychology, 40(1), 91-98.

Kurdi, B., Lozano, S., & Banaji, M. R. (2017). Introducing the open affective standardized image set (OASIS). *Behaviour research methods*, *49*(2), 457-470.

Lachman, M. E., & Leff, R. (1989). Perceived control and intellectual functioning in the elderly: A 5-year longitudinal study. *Developmental Psychology*, *25*(5), 722.

Lafreniere, K. C., Moore, S. G., & Fisher, R. J. (2022). The Power of Profanity: The Meaning and Impact of Swear Words in Word of Mouth. *Journal of Marketing Research*, 00222437221078606.

Lakoff, G., & Johnson, M. (2008). *Metaphors we live by*. University of Chicago press.

Landau, M. J., Zhong, C. B., & Swanson, T. J. (2018). Conceptual metaphors shape consumer psychology. *Consumer Psychology Review*, *1*(1), 54-71

Langfelder, P., Zhang, B., & Horvath, S. (2008). Defining clusters from a hierarchical cluster tree: the Dynamic Tree Cut package for R. *Bioinformatics*, *24*(5), 719-720.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological bulletin*, *126*(3), 390.

Laran, J., Janiszewski, C., & Salerno, A. (2016). Exploring the differences between conscious and unconscious goal pursuit. *Journal of Marketing Research*, *53*(3), 442-458.

LaTour, K. A., & Deighton, J. A. (2019). Learning to become a taste expert. *Journal of Consumer Research*, *46*(1), 1-19.

LaTour, K. A., Latour, M. S., & Feinstein, A. H. (2011). The effects of perceptual and conceptual training on novice wine drinkers' development. *Cornell Hospitality Quarterly*, *52*(4), 445-457.

Lee, C. J., Andrade, E. B., & Palmer, S. E. (2013). Interpersonal relationships and preferences for mood-congruency in aesthetic experiences. *Journal of Consumer Research*, *40*(2), 382-391.

Lee, H. C., Chang, C. T., Chen, Y. H., & Huang, Y. S. (2018). The spell of cuteness in food consumption? It depends on food type and consumption motivation. *Food Quality and Preference*, *65*, 110-117.

Lefcourt, H. M. (1981). The construction and development of the multidimensional-multiattributional causality scales. *Research with the locus of control construct*, *1*, 245-277.

Lehmann, A. C., Gruber, H., & Kopiez, R. (2018). Expertise in music.

Levenson, H. (1974). Activism and powerful others: Distinctions within the concept of internal-external control. *Journal of personality assessment*, *38*(4), 377-383.

Liao, H., & Xu, Z. (2015). Approaches to manage hesitant fuzzy linguistic information based on the cosine distance and similarity measures for HFLTSs and their application in qualitative decision making. *Expert Systems with Applications*, *42*(12), 5328-5336.

Liem, D. G., & De Graaf, C. (2004). Sweet and sour preferences in young children and adults: role of repeated exposure. *Physiology & behaviour*, *83*(3), 421-429.

Lis, B. (2013). In eWOM we trust. *Business & information systems engineering*, *5*(3), 129-140.

Liu, Y. (2006). Word of mouth for movies: Its dynamics and impact on box office revenue. *Journal of marketing*, *70*(3), 74-89.

Longacre, M. R., Drake, K. M., Titus, L. J., Cleveland, L. P., Langeloh, G., Hendricks, K., & Dalton, M. A. (2016). A toy story: Association between young children's knowledge of fast food toy premiums and their fast food consumption. *Appetite*, *96*, 473-480.

Lorenz, K. (1943). Die angeborenen formen mo¨glicher erfahrung [theinnate forms of potential experience]. *Zeitschrift fu¨r Tierpsychologie, 5*, 233-519.

Lovett, M. J., Peres, R., & Shachar, R. (2013). On brands and word of mouth. *Journal of marketing research*, *50*(4), 427-444.

Lovett, M. J., Peres, R., & Shachar, R. (2013). On brands and word of mouth. *Journal of marketing research*, *50*(4), 427-444

Lulkowska, A. (2020). An Oscar for Parasite? The global rise of South Korean film. *The Conversation UK*.

Lv, X., Luo, J., Liang, Y., Liu, Y., & Li, C. (2022). Is cuteness irresistible? The impact of cuteness on customers' intentions to use AI applications. *Tourism Management*, *90*, 104472.

Ma, L., & Zhang, Y. (2015, October). Using Word2Vec to process big text data. In *2015 IEEE International Conference on Big Data (Big Data)* (pp. 2895-2897). IEEE.

MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high- and low-involvement consumers' processing of ads. *Journal of consumer Research*, *18*(2), 161-173.

Mann, A. K., & Kaur, N. (2013). Review paper on clustering techniques. *Global Journal of Computer Science and Technology*.

Marcus, A., Kurosu, M., Ma, X., & Hashizume, A. (2017). *Cuteness engineering: Designing adorable products and services*. Springer.

Marko, M., & Riečanský, I. (2021). The structure of semantic representation shapes controlled semantic retrieval. *Memory*, 1-9.

Marshall, C. (2014). Cat Videos On Youtube: 2 Million Uploads, 25 Billion Views. Retrieved from http://tubularinsights.com/2-million-cat-videos-youtube/

Marshall, L. (2015). 'Let's keep music special. F—Spotify': on-demand streaming and the controversy over artist royalties. *Creative Industries Journal*, *8*(2), 177-189.

Marshall, T. C., Lefringhausen, K., & Ferenczi, N. (2015). The Big Five, self-esteem, and narcissism as predictors of the topics people write about in Facebook status updates. *Personality and Individual Differences*, *85*, 35-40.

Mason, Z. J. (2004). CorMet: a computational, corpus-based conventional metaphor extraction system. *Computational linguistics*, *30*(1), 23-44.

Matamala, A., Perego, E., & Bottiroli, S. (2017). Dubbing versus subtitling yet again?: An empirical study on user comprehension and preferences in Spain. *Babel*, *63*(3), 423-441.

Maxham III, J. G., & Netemeyer, R. G. (2002). A longitudinal study of complaining customers' evaluations of multiple service failures and recovery efforts. *Journal of marketing*, *66*(4), 57-71.

McAlister, L. (1982). A dynamic attribute satiation model of variety-seeking behaviour. *Journal of consumer research*, *9*(2), 141-150.

McAlister, L., & Pessemier, E. (1982). Variety seeking behaviour: An interdisciplinary review. *Journal of Consumer research*, *9*(3), 311-322.

McFerran, B., Dahl, D. W., Fitzsimons, G. J., & Morales, A. C. (2010). Might an overweight waitress make you eat more? How the body type of others is sufficient to alter our food consumption. *Journal of Consumer Psychology*, *20*(2), 146-151.

McVeigh, B. J. (2000). How Hello Kitty Commodifies the Cute, Cool and Camp: 'Consumutopia'versus 'Control'in Japan. *Journal of Material Culture*, *5*(2), 225-245.

Mead, A. (1992). Review of the development of multidimensional scaling methods. *Journal of the Royal Statistical Society: Series D (The Statistician)*, *41*(1), 27-39.

Mehta, R., Hoegg, J., & Chakravarti, A. (2011). Knowing too much: Expertise-induced false recall effects in product comparison. *Journal of Consumer Research*, *38*(3), 535-554.

Meier, B. P., & Robinson, M. D. (2004). Why the sunny side is up: Associations between affect and vertical position. *Psychological science*, *15*(4), 243-247.

Meier, B. P., Hauser, D J., Robinson, M. D., Friesen, C. K., & Schjeldahl, K. (2007). What's "Up" with God? Vertical space as a representation of the divine. *JPSP, 93*, 699-710.

Mennella, J. A., & Beauchamp, G. K. (1996). The human infants' response to vanilla flavors in mother's milk and formula. *Infant Behaviour and Development*, *19*(1), 13-19.

Mennella, J. A., & Beauchamp, G. K. (1997). Mothers' milk enhances the acceptance of cereal during weaning. *Pediatric Research*, *41*(2), 188.

Mikolov, T., Chen, K., Corrado, G., & Dean, J. (2013). Efficient estimation of word representations in vector space. *arXiv preprint arXiv:1301.3781*.

Mikolov, T., Grave, E., Bojanowski, P., Puhrsch, C., & Joulin, A. (2017). Advances in pre-training distributed word representations. *arXiv preprint arXiv:1712.09405*.

Mikolov, T., Sutskever, I., Chen, K., Corrado, G. S., & Dean, J. (2013). Distributed representations of words and phrases and their compositionality. In *Advances in Neural Information Processing Systems (Neural Information Processing Systems Conference, 2013)*; pp. 3111–3119).

Mikolov, T., Yih, W. T., & Zweig, G. (2013). Linguistic Regularities in Continuous Space Word Representations. In *Hlt-naacl* (Vol. 13, pp. 746-751).

Miller, L. (2011). Cute masquerade and the pimping of Japan. *International journal of Japanese sociology*, *20*(1), 18-29.

Min, B., & Schwarz, N. (2021). Novelty as opportunity and risk: a situated cognition analysis of psychological control and novelty seeking. *Journal of Consumer Psychology*.

Mitchell, A. A., & Dacin, P. A. (1996). The assessment of alternative measures of consumer expertise. *Journal of consumer research*, *23*(3), 219-239.

Moore, K. (2020). *Does Netflix Have Too Much Foreign Content*. https://www.whats-on-netflix.com/news/does-netflix-have-too-much-foreign-content/

Moore, S. G. (2012). Some things are better left unsaid: How word of mouth influences the storyteller. *Journal of Consumer Research*, *38*(6), 1140-1154.

Moore, S. G. (2015). Attitude predictability and helpfulness in online reviews: The role of explained actions and reactions. *Journal of Consumer Research*, *42*(1), 30-44.

Moore, S. G., & Lafreniere, K. C. (2020). How online word-of-mouth impacts receivers. *Consumer Psychology Review*, *3*(1), 34-59.

Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of marketing*, *57*(1), 81-101.

Moreau, C. P., Lehmann, D. R., & Markman, A. B. (2001). Entrenched knowledge structures and consumer response to new products. *Journal of marketing research*, *38*(1), 14-29.

Moss, L. (2021). Why Cats Rule the Internet. https://www.treehugger.com/why-cats-rule-internet-4862720

Müllner, D. (2011). Modern hierarchical, agglomerative clustering algorithms. *arXiv preprint arXiv:1109.2378*.

Muniz, A. M., & O'guinn, T. C. (2001). Brand community. *Journal of consumer research*, *27*(4), 412-432.

Murtagh, F., & Contreras, P. (2012). Algorithms for hierarchical clustering: an overview. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, *2*(1), 86-97.

Nelson, D. L., Kitto, K., Galea, D., McEvoy, C. L., & Bruza, P. D. (2013). How activation, entanglement, and searching a semantic network contribute to event memory. *Memory & cognition*, *41*(6), 797-819.

Nenkov, G. Y., & Scott, M. L. (2014). "So cute I could eat it up": Priming effects of cute products on indulgent consumption. *Journal of Consumer Research*, *41*(2), 326-341.

Nguyen, P., Wang, X., Li, X., & Cotte, J. (2021). Reviewing experts' restraint from extremes and its impact on service providers. *Journal of Consumer Research*, *47*(5), 654-674.

Ni, J., Flynn, B. B., & Jacobs, F. R. (2016). The effect of a toy industry product recall announcement on shareholder wealth. *International Journal of Production Research*, *54*(18), 5404-5415.

Nicolao, L., Irwin, J. R., & Goodman, J. K. (2009). Happiness for sale: Do experiential purchases make consumers happier than material purchases?. *Journal of consumer research*, *36*(2), 188-198.

Nielsen, F. (2016). Hierarchical clustering. In *Introduction to HPC with MPI for Data Science* (pp. 195-211). Springer, Cham.

Nitsch, R., & Hoyer, S. (1991). Local action of the diabetogenic drug, streptozotocin, on glucose and energy metabolism in rat brain cortex. *Neuroscience letters*, *128*(2), 199-202.

Nittono, H., Fukushima, M., Yano, A., & Moriya, H. (2012). The power of kawaii: Viewing cute images promotes a careful behaviour and narrows attentional focus. *PloS one*, *7*(9), e46362.

Norlin, P. F. (1981). The development of relational arcs in the lexical semantic memory structures of young children. *Journal of Child Language*, *8*(2), 385-402.

Obolenskaya, C. (2022). *Amazon Prime Video invests in content to entice international viewers.* https://www.emarketer.com/content/amazon-prime-video-invests-content-entice-international-viewers

O'Guinn, T. C., & Faber, R. J. (1989). Compulsive buying: A phenomenological exploration. *Journal of consumer research*, *16*(2), 147-157.

Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of advertising Research*.

Olson, C. M., & Gemmill, K. P. (1981). Association of sweet preference and food selection among four to five year old children. *Ecology of food and nutrition*, *11*(3), 145-150.

Otto, A. S., Clarkson, J. J., & Martin, N. S. (2021). Working Hard to Take the Easy Way Out: How the Need for Cognitive Closure Shapes Strategic Effort Investment to Ease Future Decision Making. *Journal of Consumer Psychology*.

Oyserman, D., & Schwarz, N. (2017). Conservatism as a situated identity: Implications for consumer behaviour. *Journal of Consumer Psychology*, *27*(4), 532-536.

Packard, G., & Berger, J. (2015). How Expertise and Endorsement Style Impact Word of Mouth Persuasion. *Marketing Science Institute Working Paper Series 2015*, 15-114.

Packard, G., & Berger, J. (2017). How language shapes word of mouth's impact. Journal of Marketing Research, 54(4), 572–588. https://doi. org/10.1509/jmr.15.0248

Packard, G., & Berger, J. (2021). How concrete language shapes customer satisfaction. *Journal of Consumer Research*, *47*(5), 787-806.

Packard, G., & Wooten, D. B. (2013). Compensatory knowledge signaling in consumer word-of-mouth. *Journal of Consumer Psychology*, *23*(4), 434-450

Palmeira, M. (2020). Advice in the presence of external cues: The impact of conflicting judgments on perceptions of expertise. *Organizational Behaviour and Human Decision Processes*, *156*, 82-96.

Pamuksuz, U., Yun, J. T., & Humphreys, A. (2021). A Brand-New Look at You: Predicting Brand Personality in Social Media Networks with Machine Learning. *Journal of Interactive Marketing*, *56*(1), 1-15.

Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*.

Perego, E., Del Missier, F., & Bottiroli, S. (2015). Dubbing versus subtitling in young and older adults: cognitive and evaluative aspects. *Perspectives*, *23*(1), 1-21.

Perego, E., Del Missier, F., & Stragà, M. (2018). Dubbing vs. subtitling: Complexity matters. *Target. International Journal of Translation Studies*, *30*(1), 137-157.

Perkins, J. (2014). *Python 3 text processing with NLTK 3 cookbook*. Packt Publishing Ltd.

Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of consumer research*, *10*(2), 135-146.

Pilska, M., & Nesterowicz, J. (2016). Emotional determinants of sweets consumption. *J Nutr Health Sci*, *3*(4), 405.

Platz, F., Kopiez, R., Lehmann, A. C., and Wolf, A. (2014). The influence of deliberate practice on musical achievement: a meta-analysis. *Front. Psychol*. 5:646. doi: 10.3389/fpsyg.2014.00646

Poarch, G. J., & Krott, A. (2019). A bilingual advantage? An appeal for a change in perspective and recommendations for future research. Behavioural Sciences, 9(9), 95.

Prior, A., & MacWhinney, B. (2010). A bilingual advantage in task switching. Bilingualism: Language and cognition, 13(2), 253-262.

Rao, A. R., & Sieben, W. A. (1992). The effect of prior knowledge on price acceptability and the type of information examined. *Journal of consumer research*, *19*(2), 256-270.

Reichelt, J., Sievert, J., & Jacob, F. (2014). How credibility affects eWOM reading: The influences of expertise, trustworthiness, and similarity on utilitarian and social functions. *Journal of Marketing Communications*, *20*(1-2), 65-81.

Reinders, M. J., Frambach, R., & Kleijnen, M. (2015). Mandatory use of technology-based self-service: does expertise help or hurt?. *European Journal of Marketing*.

Reingen, P. H., & Kernan, J. B. (1993). Social perception and interpersonal influence: Some consequences of the physical attractiveness stereotype in a personal selling setting. *Journal of Consumer Psychology*, *2*(1), 25-38.

Reisenbichler, M., & Reutterer, T. (2019). Topic modeling in marketing: recent advances and research opportunities. *Journal of Business Economics*, *89*(3), 327-356.

Ren, D., Tan, K., Arriaga, X. B., & Chan, K. Q. (2015). Sweet love: The effects of sweet taste experience on romantic perceptions. *Journal of Social and Personal Relationships*, *32*(7), 905-921.

Richardson, J. H. (2014). The Spotify paradox: How the creation of a compulsory license scheme for streaming on-demand music platforms can save the music industry. *UCLA Ent. L. Rev.*, *22*, 45.

Riniolo, T. C., & Capuana, L. J. (2020). Directly comparing subtitling and dubbing using Netflix: Examining enjoyment issues in the natural setting. *Current Psychology*, 1-7.

Rishika, R., Feurer, S., & Haws, K. L. (2021). Really rewarding rewards: Strategic licensing in long-term healthy food consumption. *Journal of Consumer Research*.

Rocklage, M. D., & Rucker, D. D. (2019). Text analysis in consumer research: An overview and tutorial. *Handbook of Research Methods in Consumer Psychology*, 385-402.

Rocklage, M. D., Rucker, D. D., & Nordgren, L. F. (2021). Emotionally numb: Expertise dulls consumer experience. *Journal of Consumer Research*, *48*(3), 355-373.

Roehm, M. L., & Sternthal, B. (2001). The moderating effect of knowledge and resources on the persuasive impact of analogies. *Journal of Consumer Research*, *28*(2), 257-272.

Roux, M. (2018). A comparative study of divisive and agglomerative hierarchical clustering algorithms. *Journal of Classification*, *35*(2), 345-366.

Saad, G., & Gill, T. (2000). Applications of evolutionary psychology in marketing. *Psychology & Marketing*, *17*(12), 1005-1034.

Sela, A., Hadar, L., Morgan, S., & Maimaran, M. (2019). Variety-seeking and perceived expertise. *Journal of Consumer Psychology*, *29*(4), 671-679.

Shafto, P., & Coley, J. (2003). Development of categorization and reasoning in the natural world: Non-experts to experts, naïve similarity to ecological knowledge. Journal of Experimental Psychology: Learning, Memory & Cognition, 29, 641-649.

Shavitt, S., Swan, S., Lowrey, T. M., & Wänke, M. (1994). The interaction of endorser attractiveness and involvement in persuasion depends on the goal that guides message processing. *Journal of Consumer Psychology*, *3*(2), 137-162.

Shea, J. B., & Paull, G. (2014). Capturing expertise in sports. In *The road to excellence* (pp. 321-335). Psychology Press.

Shen, L., Fishbach, A., & Hsee, C. K. (2015). The motivating-uncertainty effect: Uncertainty increases resource investment in the process of reward pursuit. *Journal of Consumer Research*, *41*(5), 1301-1315.

Sherman, G. D., & Haidt, J. A. (2011). Cuteness and disgust: The humanizing and dehumanizing effects of emotion. *Emotion Review, 3*, 245-251.

Sherman, G. D., Haidt, J., & Coan, J. A. (2009). Viewing cute images increases behavioral carefulness. *Emotion*, *9*(2), 282.

Sherman, G. D., Haidt, J., Iyer, R., & Coan, J. A. (2013). Individual differences in the physical embodiment of care: Prosocially oriented women respond to cuteness by becoming more physically careful. *Emotion*, *13*(1), 151.

Shutova, E. (2010, July). Models of metaphor in NLP. In *Proceedings of the 48th annual meeting of the association for computational linguistics* (pp. 688-697).

Shutova, E., Devereux, B. J., & Korhonen, A. (2013). Conceptual metaphor theory meets the data: a corpus-based human annotation study. *Language resources and evaluation*, *47*(4), 1261-1284.

Sloboda, J. A. (2014). The acquisition of musical performance expertise: Deconstructing the "talent" account of individual differences in musical expressivity. In *The road to excellence* (pp. 107-126). Psychology Press.

Smith, P. B., Dugan, S., & Trompenaars, F. (1997). Locus of control and affectivity by gender and occupational status: A 14 nation study. *Sex roles*, *36*(1), 51-77.

Snyman, J. H., & Gilliard, D. J. (2019). The Streaming Television Industry: Mature or Still Growing?. *Journal of Marketing Development and Competitiveness*, *13*(4), 94-105.

Spangler, T. (2021). *'Squid Game' Is Decisively Netflix No. 1 Show of All Time With 1.65 Billion Hours Streamed in First Four Weeks, Company Says*. https://variety.com/2021/digital/news/squid-game-all-time-most-popular-show-netflix-1235113196/

Spence, M. T., & Brucks, M. (1997). The moderating effects of problem characteristics on experts' and novices' judgments. *Journal of marketing Research*, *34*(2), 233-247.

Spencer, S. (2021). *How Many Subscribers Do Netflix, Disney+ and the Rest of the Streaming Services Have?* https://www.newsweek.com/netflix-amazon-hulu-disney-most-subscribers-streaming-service-1590463

Srull, T. K., & Wyer, R. S. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social psychology*, *37*(10), 1660.

Srull, T. K., & Wyer, R. S. (1980). Category accessibility and social perception: Some implications for the study of person memory and interpersonal judgments. *Journal of personality and social psychology*, *38*(6), 841.

Starkes, J. L., & Ericsson, K. A. (2003). Expert performance in sports: Advances in research on sport expertise.

Stavropoulos, K. K., & Alba, L. A. (2018). "It's so cute I could crush it!": Understanding neural mechanisms of cute aggression. *Frontiers in behavioural neuroscience*, *12*, 300.

Steenkamp, J. B. E., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of consumer research*, *25*(1), 78-90.

Steinnes, K. K., Blomster, J. K., Seibt, B., Zickfeld, J. H., & Fiske, A. P. (2019). Too Cute for Words: Cuteness Evokes the Heartwarming Emotion of Kama Muta. *Frontiers in Psychology*, *10*, 387.

Sung, Y., & De Gregorio, F. (2008). New brand worlds: College student consumer attitudes toward brand placement in films, television shows, songs, and video games. *Journal of Promotion Management*, *14*(1-2), 85-101.

Swami, V., & Furnham, A. (2007). *The psychology of physical attraction*. Routledge.

Swami, V., Stieger, S., Haubner, T., Voracek, M., & Furnham, A. (2009). Evaluating the physical attractiveness of oneself and one's romantic partner: Individual and relationship correlates of the love-is-blind bias. *Journal of Individual Differences*, *30*(1), 35.

Swanson, R. (2007). *Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise*. Berrett-Koehler Publishers.

Thomas, J. S. (2001). A methodology for linking customer acquisition to customer retention. *Journal of marketing research*, *38*(2), 262-268.

Thomas, M., & Tsai, C. I. (2012). Psychological distance and subjective experience: How distancing reduces the feeling of difficulty. *Journal of Consumer Research*, *39*(2), 324-340.

Tormala, Z. L., & Petty, R. E. (2004). Source credibility and attitude certainty: A metacognitive analysis of resistance to persuasion. *Journal of Consumer Psychology*, *14*(4), 427-442.

Toubia, O., Iyengar, G., Bunnell, R., & Lemaire, A. (2019). Extracting features of entertainment products: A guided latent dirichlet allocation approach informed by the psychology of media consumption. *Journal of Marketing Research*, *56*(1), 18-36.

Touré-Tillery, M., & Fishbach, A. (2011). The course of motivation. *Journal of Consumer Psychology*, *21*(4), 414-423.

Trevathan, W. R., & Rosenberg, K. R. (Eds.). (2016). *Costly and cute: Helpless infants and human evolution*. University of New Mexico Press.

Ullman, J. (2011). *Mining of massive datasets*. Cambridge University Press.

Van Kleef, E., Kavvouris, C., & van Trijp, H. C. (2014). The unit size effect of indulgent food: How eating smaller sized items signals impulsivity and makes consumers eat less. *Psychology & health*, *29*(9), 1081-1103.

van Wensem, J. (2015). Overview of scientific evidence for chocolate health benefits. *Integrated environmental assessment and management*, *11*(1), 176-177.

Vayansky, I., & Kumar, S. A. (2020). A review of topic modeling methods. *Information Systems*, *94*, 101582.

Ventura, A. K., & Mennella, J. A. (2011). Innate and learned preferences for sweet taste during childhood. *Current Opinion in Clinical Nutrition & Metabolic Care*, *14*(4), 379-384.

Vilnai-Yavetz, I., & Tifferet, S. (2015). A picture is worth a thousand words: segmenting consumers by facebook profile images. *Journal of Interactive Marketing*, *32*, 53-69.

Voss, J. F., Vesonder, G. T., & Spilich, G. J. (1980). Text generation and recall by high-knowledge and low-knowledge individuals. *Journal of Verbal Learning and Verbal Behaviour*, *19*(6), 651-667.

Wagner, A., & Gasche, L. A. (2018). *Sharenting: Making Decisions about Other's Privacy on Social Networking Sites*(No. 90477). Darmstadt Technical University, Department of Business Administration, Economics and Law, Institute for Business Studies (BWL).

Wang, T., & Mukhopadyay, A. (2015). How consumers respond to cute products. *The psychology of design: Creating consumer appeal*, 149-167.

Wang, T., Mukhopadhyay, A., & Patrick, V. M. (2017). Getting Consumers to Recycle NOW! When and Why Cuteness Appeals Influence Prosocial and Sustainable Behaviour. *Journal of Public Policy & Marketing*, *36*(2), 269-283.

Ware, A. T., Kirkovski, M., & Lum, J. A. (2020). Meta-analysis reveals a bilingual advantage that is dependent on task and age. Frontiers in Psychology, 11, 1458.

Warren, C., & Campbell, M. C. (2014). What makes things cool? How autonomy influences perceived coolness. *Journal of Consumer Research*, *41*(2), 543-563.

Weingarten, E., Chen, Q., McAdams, M., Yi, J., Hepler, J., & Albarracín, D. (2016). From primed concepts to action: A meta-analysis of the behavioural effects of incidentally presented words. *Psychological bulletin*, *142*(5), 472.

Weiss, A. M., Lurie, N. H., & MacInnis, D. J. (2008). Listening to strangers: whose responses are valuable, how valuable are they, and why?. *Journal of marketing Research*, *45*(4), 425-436.

Westbrook, R. A. (1980). A rating scale for measuring product/service satisfaction. *Journal of marketing*, *44*(4), 68-72.

Westbrook, R. A., & Oliver, R. L. (1991). The dimensionality of consumption emotion patterns and consumer satisfaction. *Journal of consumer research*, *18*(1), 84-91.

Weun, S., Beatty, S. E., & Jones, M. A. (2004). The impact of service failure severity on service recovery evaluations andpost-recovery relationships. *Journal of services marketing*.

Wiebenga, J. H., & Fennis, B. M. (2014). The road traveled, the road ahead, or simply on the road? When progress framing affects motivation in goal pursuit. *Journal of Consumer Psychology*, *24*(1), 49-62.

Wilson, E. J., & Sherrell, D. L. (1993). Source effects in communication and persuasion research: A meta-analysis of effect size. *Journal of the academy of marketing science*, *21*(2), 101-112.

Winke, P., Gass, S., & Sydorenko, T. (2013). Factors influencing the use of captions by foreign language learners: An eye-tracking study. *The Modern language journal*, *97*(1), 254-275.

Wissmath, B., Weibel, D., & Groner, R. (2009). Dubbing or subtitling?: Effects on spatial presence, transportation, flow, and enjoyment. *Journal of Media Psychology: Theories, Methods, and Applications*, *21*(3), 114.

Wojnicki, A. C., & Godes, D. (2008). Word-of-mouth as self-enhancement. *HBS marketing research paper*, (06-01).

Wood, S. L., & Lynch Jr, J. G. (2002). Prior knowledge and complacency in new product learning. *Journal of Consumer Research*, *29*(3), 416-426.

Wu, F., Samper, A., Morales, A. C., & Fitzsimons, G. J. (2017). It's too pretty to use! When and how enhanced product aesthetics discourage usage and lower consumption enjoyment. *Journal of Consumer Research*, *44*(3), 651-672.

Yamashita, Y., Ishikawa, T., Mitake, H., Takase, Y., Kato, F., Susa, I., ... & Sato, M. (2012). Stuffed toys alive! cuddly robots from fantasy world. In *ACM SIGGRAPH 2012 Emerging Technologies* (pp. 1-1).

Yim, C. K., Tse, D. K., & Chan, K. W. (2008). Strengthening customer loyalty through intimacy and passion: Roles of customer–firm affection and customer–staff relationships in services. *Journal of marketing research*, *45*(6), 741-756.

Zhang, M., & Li, X. (2011). From physical weight to psychological significance: The contribution of semantic activations. *Journal of Consumer Research*, *38*(6), 1063-1075.

Zhang, S., & Markman, A. B. (2001). Processing product unique features: Alignability and involvement in preference construction. *Journal of Consumer Psychology*, *11*(1), 13-27.

Zhang, Y., Xu, J., Jiang, Z., & Huang, S. C. (2011). Been there, done that: The impact of effort investment on goal value and consumer motivation. *Journal of Consumer Research*, *38*(1), 78-93.

Appendix A – Top 100 cosine distance words to ‘cute’ from word2vec

Index	WORD	Distance to Cute
1	cute	0
2	adorable	0.209778
3	cutesy	0.284366
4	girly	0.339157
5	goofy	0.339378
6	funny	0.360248
7	sexy	0.366386
8	cutest	0.37325
9	dorky	0.379946
10	lovable	0.382892
11	cuddly	0.397593
12	cuter	0.400294
13	silly	0.409535
14	cutie	0.410924
15	slutty	0.412106
16	cuteness	0.413484
17	cutey	0.418298
18	lovely	0.419337
19	chubby	0.422262
20	adorably	0.422723
21	corny	0.425522
22	loveable	0.428274
23	smiley	0.429968
24	charming	0.430227
25	cheesy	0.433157
26	kooky	0.438228
27	cheeky	0.438307
28	playful	0.439245
29	babyish	0.440386
30	foxy	0.440557
31	creepy	0.441884
32	sassy	0.442378
33	endearing	0.442601
34	cuties	0.447355
35	tacky	0.447847
36	huggable	0.448223

37	weird	0.45114
38	teeny	0.451836
39	gorgeous	0.453148
40	nerdy	0.453983
41	freaky	0.459914
42	homely	0.461429
43	teethe	0.462585
44	giggly	0.46381
45	quirky	0.464058
46	yummy	0.465575
47	kitschy	0.465762
48	mousey	0.465886
49	dopey	0.46692
50	geeky	0.467029
51	perky	0.467319
52	cuddlesome	0.467783
53	cooky	0.468118
54	flirty	0.469505
55	spunky	0.469958
56	lovey	0.470529
57	winsome	0.470934
58	skinny	0.471067
59	naughty	0.472073
60	poofy	0.472207
61	funky	0.47398
62	tike	0.477258
63	whimsical	0.477411
64	snazzy	0.478015
65	twirly	0.478917
66	dainty	0.47999
67	frisky	0.482177
68	sweet	0.482523
69	naggy	0.483423
70	hilarious	0.485124
71	annoying	0.485519
72	furry	0.486119
73	girlies	0.487009
74	snaggletooth	0.48746
75	adorableness	0.48966
76	fluffy	0.49029
77	kewpie	0.491976

78	ditzy	0.492192
79	girlie	0.493459
80	she's	0.494514
81	kissy	0.495804
82	sparkly	0.495862
83	clever	0.496498
84	skanky	0.496605
85	dumpy	0.49662
86	stupid	0.496661
87	clingy	0.496876
88	frilly	0.497478
89	dork	0.497893
90	giggle	0.498203
91	amusing	0.498262
92	girlish	0.500989
93	dumb	0.50111
94	dinky	0.501367
95	prissy	0.502012
96	cutely	0.504542
97	wiggly	0.505285
98	gawky	0.505433
99	uncool	0.506182
100	tomboyish	0.50669

Appendix B – Sweet terminology for cute things across languages

Language	Word(s)	Meaning
English	Sweetie, Sweetheart, Cupcake, Sugar, Candy, Honey	NA
Spanish	Dulzura, Terron de azucar	Sweetie, Lump of sugar
Indonesian	Bua Hatiko	Fruit of my heart
Brazilian	Chuchuzinho	Pumpkin
Urdu and Hindi	Mithoo, Ladoo	Sweetie, sweet
Italian	Dolcezza	Sweetie
German	Süsser/Süsse	Sweet
Russian	Милая моя / милый мой	Sweetie
Korean	Ae-in	Sweetheart
Arabic	Halu	Sweet
Hebrew	Mami, Motek	honey/sweetie, sweetie

Appendix C – Cluster tree (dendrogram) from cluster analysis