

Consumer Responses to Online Recommendations: The Effects of Language Assertiveness on Website and Product Attitudes

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Abstract

As more and more consumers go online to shop, retailers face increasing difficulty in fostering genuine customer loyalty. Website design has become an increasingly important factor in influencing consumer attitudes, and one popular design element has become product recommendation systems. These systems have become popular given the ability they have to increase the perceived level of personalisation and interactivity of the website. However, research also suggests that they can also lead to negative outcomes for the firm as they can over-personalise, and cause consumers to feel their freedom is being threatened.

Research into the use of recommendations and similar online systems has seen many elements of recommendations linked to how well the systems perform. One element that has yet to receive attention is that of the recommendation language. The aim of this thesis was to fill this apparent gap in knowledge, drawing on theory from linguistic, pragmatic and human-computer interaction literature. Relying on the established idea that computers will be treated as social actors when they communicate to consumers using human language, this thesis provides a new theoretical framework to explain how consumers respond to online recommendations.

Through three experiments, it is shown that the degree to which a recommendation is made with assertive or non-assertive language will determine how positive a consumer's attitude is towards both the website and product. It is

also shown that the performance of assertive and non-assertive language is moderated by how high the threat to freedom is within the scenario. In scenarios where there is a high threat to freedom (recommendations made from a website where no prior connection has been made, unknown brand recommended), non-assertive language results in lower levels of reactance, higher levels of perceived confidence in the recommendation, and ultimately more positive attitudes. In scenarios where the threat to freedom is low (recommendation made by a website with a long term connection to the consumer, known brand recommended), reactance does not play a role, which sees assertive language lead to higher perceived confidence in the recommendation and thus more positive attitudes. A fourth experiment highlights that the role language plays can be affected by the presence of other signalling information such as price. Recommendations in which the higher priced product was recommended were considered to be more assertive regardless of language used, however more non-assertive language resulted in higher perceived confidence in the recommendation and more positive attitudes. No differences were found in attitudes across recommendations that recommended the lower priced product.

The framework put forward by this thesis provides a significant and novel contribution to knowledge through a new framework that extends current understanding across a range of constructs. A significant contribution to practice is also offered highlighting that retailers need to have an understanding of the consumers prior to exposing them to recommendations.

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List of Abbreviations

ANOVA Analysis of variance

FTA Face threatening act

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: QUT Verified Signature

Date: 04/03/2020

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CHAPTER 1

Introduction

Chapter Introduction

This chapter will provide an overview of the context in which this thesis sits. It will provide a brief preview of the key literature and an analysis of the research gap that this thesis seeks to fill. It will provide a brief preview of the four experimental studies that were conducted along with findings. It will conclude with a summary of the key contributions.

Purpose of this Thesis

Data analytics and predictive technology are becoming indispensable tools for 21st century marketers operating online (Fridman, 2016). Through the use of tools like ‘cookies’, retailers can collect information on which sites consumers visited while making their decision, and which products they purchased. Predictive systems can take this information and analyse it in a way that allows for predictions to be made with regards to future consumption patterns at both the individual and group level. Based on these predictions’ retailers can make product recommendations, highlighting the products that consumers are predicted to be most interested in and most likely to purchase. Current perceptions surrounding these systems are generally positive with recommendations being shown to allow firms to gain value from their website design through reported increases in personalisation and interactivity (Baier & Stuber, 2010; Barlow, Siddiqui & Mannion, 2004;

Holzwarth, Janiszewski & Neumann 2006). Many researchers and professionals believe these systems to be starting points/gateways towards gaining a greater understanding of consumers on which to build better relationships.

This thesis proposes an alternative view. Applying ideas from computer-human and human-human interaction research, this thesis seeks to highlight the importance of having a strong understanding of the consumer before the prediction and recommendation system is implemented. The overall aim of this thesis is to provide a new framework which suggests a number of factors are present that determine how consumers respond to recommendations including language (e.g. “We Recommend For You”, “You May Like...”), website attachment (e.g. a website where a consumer has held a membership for 5 years) and product familiarity (e.g. known or unknown brands). Through empirical testing of this framework, it is shown that retailers need to be more active in the implementation of online recommendations. The wrong approach can cause negative harm to the retailer and product image.

Research Context and Background

As reported by Australia Post, the end of 2017 saw Australian online retail sales reach \$21.3bn representing an 18.7% increase from 2016. This growth rate was significantly higher than the 2.5% growth in traditional retail sales (AustraliaPost, 2018). This is driven by four out of every ten Australians buying products online at least once a month (Roy Morgan, 2015) and the expectation that by the year 2020, 10% of all items will be purchased online (AustraliaPost, 2018). In other developed countries the trends are the same. In the United States, 96% of people

made an online purchase at least once in their life while 51% prefer to shop online (Wallace, 2017).

The internet has removed global retailing borders, allowing consumers to purchase directly from sellers in different countries, leading to an increase in competitive pressure faced by local firms (Srinivasan, Anderson & Ponnayolu, 2002). To explore this point further, an example of a small footwear manufacturer in New Zealand will be used. Under the traditional model, if the manufacturer wished to sell their product in Australia, they would need to either open Australian stores, or enter into a supply agreement with an Australian retailer. The latter allowing the Australian retailer the ability to gain competitive advantage by being the 'exclusive' supplier of the product. Within the contemporary environment, the manufacturer can sell directly from New Zealand through their website. This eliminates the ability for the Australian retailer to gain competitive advantage, even increasing the competition the Australian retailer faces.

The internet has also allowed consumers the ability to compare and contrast many more products and attributes than ever before with lower expenditures in terms of personal time, effort and money (Childers, Carr, Peck & Carson, 2001; Srinivasan et al., 2002). These benefits to the consumer have largely come with downsides for the firm. Online retailers have largely lost control over many aspects of the shopping experience. The lower time, effort and money required to compare and choose products results in lower switching costs. This provides a significant barrier to the ability for firms to create genuine loyalty among online customer bases (Srinivasan et al., 2002).

Another issue that retailers face is the lack product engagement prior to purchase. Firms face many difficulties now in demonstrating physical properties of products as consumers look at alternatives (Baier & Stuber, 2010). This means that any product related advantages that exist have their influence severely reduced. Because of this impact, online retailers have had to rely on trust (Gefen, Karahanna & Straub, 2003; Pavlou & Gefen, 2004; van der Heijden, Verhagen & Creemers, 2003), reputation (Caruana & Ewing, 2010), and retailer image (Aghekyan-Simonian, Forsythe, Kwon & Chattamaran, 2012) in order to influence the scale of repeat patronage and purchase behaviour that results from customer loyalty and brand equity.

Relevant website content and design have also been identified as crucial to help firms attract and retain customers online (Liang & Lai, 2002). A key design component that many websites rely on are targeted recommendations. Internet Retailing UK (IRUK) found in their Top500 2016 report that 76% of Top500 websites recommend products to browsing consumers. It was also found that 28% personalised these recommendations by taking into account collected customer data (Modenova, 2016). Increases in technology have been able to provide marketers with a powerful consumer targeting tool. Firms can now capture data about how consumers are feeling and behaving, responding to marketing efforts and maintaining relationships with other consumers and brands (Wedel & Kannan, 2016). The marketing data analytics sector has become so competitive that an 'arms race' has begun with key players such as Google (Swant, 2015) and IBM (Richards, 2016) seeking partnerships and investing billions into perfecting

technology that can learn consumer preferences and target the right products to the right consumers.

An increasing amount of academic research has focused on online recommendations and similar systems with the emergence of several distinct streams of research. One such stream has focused on understanding the strategic elements of these recommendations that retailers can manipulate. As a result, elements like the placement and timing of targeted online advertising (Bleier & Eisenbeiss, 2015a; Edwards, Li & Lee, 2002) and the nature of the information included in recommendations (Lambrecht & Tucker, 2013) have been shown to be important in terms of the effectiveness of targeted recommendations. A second research stream looking at more systemic elements of the recommendation has shown that the nature of the product being recommended and data used in the recommendation (Hennig-Thurau, Marchard & Marx, 2012; Summers, Smith & Reczek, 2016), the platform the recommendation is made on (Shankar et al., 2016), and source credibility (Bleier & Eisenbeiss, 2015b; Fitzsimons & Lehmann, 2004) can also change the effectiveness of the recommendation. Finally, a research stream looking at consumer based factors such as gender (Garbarino & Strahilevitz, 2004), and the stage of the decision making process a consumer is in (Hoban & Bucklin, 2015) can affect how well the recommendation works.

Research Gaps and Justification

Despite the prior research and depth in our understanding, authors such as Gai and Klesse (2019) highlight that research from a communication-based lens is lacking

with respect to online recommendations. By adopting such an approach, elements such as language use become a clear possible influence of recommendation effectiveness that has yet to be addressed in academic research. As examples, Figures 1.1 and 1.2 show recommendations made by Lego and Adidas in their online stores. One clear distinction between the retailers is the use different language to highlight the recommended products.

Theoretically, it is understood that the different statements could lead to different outcomes given that each statement has a different level of assertiveness associated to it (Brown & Levinson, 1987).

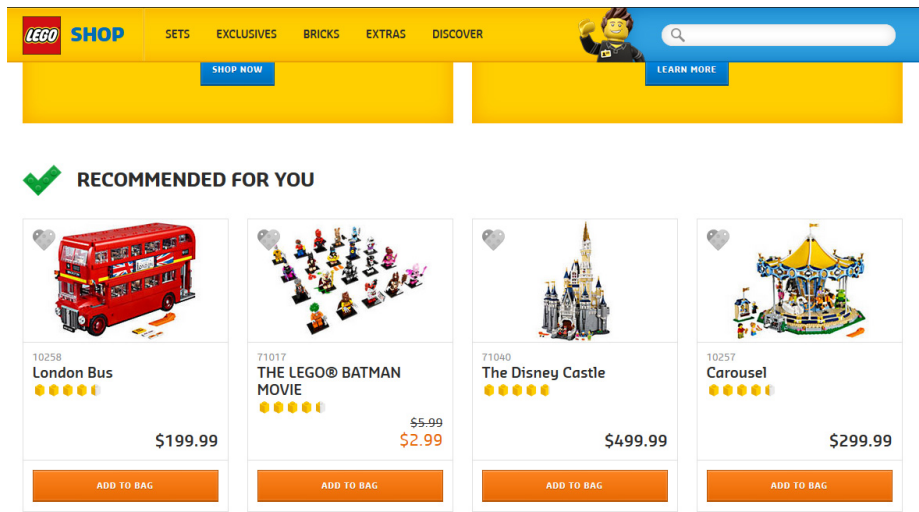


Figure 1.1 – Example of Recommendation (Source: shop.lego.com, 2017)

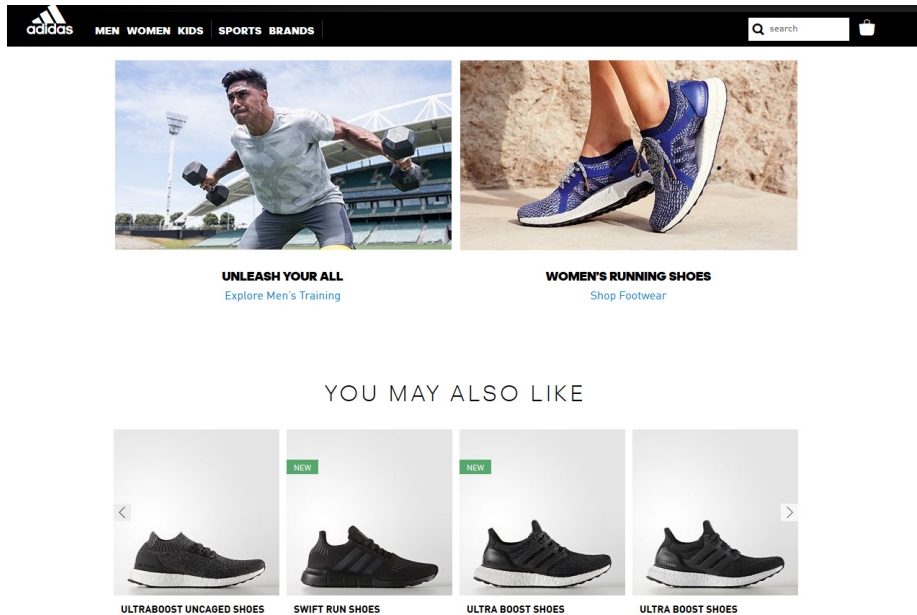


Figure 1.2 – Example of Recommendation (Source: adidas.com.au, 2017)

By analysing the effects of different recommendations through the lens of language, this thesis aims to provide a new and novel framework that includes elements from linguistic, psychology and economic theories that extends our understanding as to how and why different recommendation approaches lead to changes in consumer responses.

Within much of the recent work on online data driven systems, the common way effectiveness is approached is very immediate and sales based. Many of the outcome variables used in existing literature are conversion and click-through rates, or attention and sales. These papers show that by manipulating the right elements, there is a way to use these systems to increase sales. Work focused on consumer intentions to use the website highlighted that this increase in short term performance could be at the expense of customer loyalty with online

recommendations linked to consumers feeling threatened and not wanting to return to the website (Lee & Lee, 2009).

To date, little research exists looking at how this effect can be minimised, and loyalty encouraged. Given that this thesis proposes a framework that could provide some insight into this issue, the main focus of this research will be attitude based. By adopting this approach, a more relevant contribution could be offered in both addressing the issue highlighted by Lee and Lee (2009) as well as providing advice to marketers looking to gain customer loyalty and repeat visiting behaviour more efficiently. The degree to which a consumer's attitude towards the online retailer and product are positive, will determine the extent to which the consumer returns to the retailer in the future (Aghekyan-Simonian et al., 2012), and the degree to which genuine online loyalty is built (Caruana & Ewing, 2010).

Research Questions

The overall question this thesis seeks to answer is “*what effect does recommendation language have on consumer attitudes*”. An answer to this broad question can fill the above-mentioned gaps and significantly extend current knowledge. In order to answer this broad question, a number of sub questions will be systematically approached through a number of studies. The first two sub questions relate to an understanding of the overall effects between language and attitudes:

RQ1: How does recommendation language affect website attitudes?

RQ2: How does recommendation language affect product attitudes?

Subsequently, a number of research questions can help identify the boundary conditions to these effects:

RQ3: What role does website attachment play in the relationship between recommendation language and attitudes?

RQ4: What role does product familiarity play in the relationship between recommendation language and attitudes?

RQ5: What role do price reference points play in the relationship between recommendation language and attitudes?

Theoretical Summary

Within the current literature, there is some support for the idea that, if incorrectly implemented, online recommendations are capable of leading to negative outcomes. Increased perceptions of privacy concerns (Song, Kim, Kim, Lee & Lee, 2016), and perceived threats to autonomy (Lee & Lee, 2009), can lead to what is known as psychological reactance. From psychology research, reactance is defined as the motivational state we enter to regain a particular freedom or control that has been lost or threatened (Brehm, 1966). As humans, we value the ability to make our own decisions freely without influence (Ryan & Deci, 2006). When faced with a restriction or threat to this freedom we place a greater emphasis on the importance of the lost or threatened freedom. This causes us to behave in ways that removes the threat in both short- and long-term time frames (Brehm, 1966). Within the online retailing context, this would mean a consumer choosing not to shop at a particular website and seeking to avoid that website in the future. In recent research, reactance to recommendations has been looked at with respect to

source credibility and whether the recommendation is solicited or not (Fitzsimons & Lehmann, 2004), privacy concerns (Lee & Lee, 2009), self-concept clarity (Lee, Lee & Sanford, 2010) and level of intrusiveness (Edwards et al., 2002).

Within the field of pragmatics, Brown and Levinson's (1987) 'politeness theory' offers some insight into how reactance responses to recommendations can be managed more effectively. Built around human-human interaction, their theory suggests that the type of language used when making a recommendation will dictate the degree to which reactance is activated within the mind of the recipient. One of the core tenants is that when the speaker takes a non-assertive approach, and uses language reframed as questions, hedging (e.g. "you might like doing this"), or deferential statements (e.g. "perhaps you could do this"), the hearer is given a greater sense of control over the interaction (Brown & Levinson, 1987). In the context of online shopping, this thesis proposes that this type of language use can lessen the perceived threat to the consumer's ability to choose products freely, resulting in lower levels of reactance.

This thesis extends this idea and proposes that the level of reactance can change the way in which the recommendation is perceived. The particular focus of this perception is how confident the retailer is perceived to be about the recommendation they have made. It is proposed that this leads to a change in attitudes in that when the retailer appears more confident/certain about their recommendation, more positive attitudes occur. This proposed effect is based on ideas from our understanding of attitude certainty (Abelson, 1988; Karmarkar & Tormala, 2010; Petrocelli, Tormala & Rucker, 2007), persuasion (Friestad & Wright, 1994) and signalling theory (Spence, 1973). Bringing these ideas together

provides an understanding about how products are presented, promoted and sold, can affect consumer attitudes. It is proposed that recommendations that are presented in a way that is perceived to be too coercive rather than persuasive, can lead the consumer to feel as though the seller isn't certain or confident in their recommendation, resulting in more negative attitudes.

One of the more interesting findings relating to this idea comes from Kirmani (1997). It was found that an inverted u-shape appeared with advertising expenditure. As the level of advertising expenditure increased, consumers had more positive attitudes towards the product. This was due to consumers perceiving the firm as confident that they would recoup the money spent through sales. However, after a certain point, more advertising lead to increased negative attitudes as consumers felt the firm were advertising too aggressively, highlighting a lack of confidence.

This thesis considers this work important, as it suggests that direction in which different statements influence attitudes can be dependent upon website and product-based factors. Theoretically, Brown and Levinson's (1987) theory provides further support for this idea and identifies three factors that determine the level to which different language is perceived to be more/less assertive. Firstly, social distance, or the degree to which the hearer feels some level of attachment to the speaker will affect how the hearer perceives the recommendation. Secondly, the level of power that the speaker has over the hearer will determine the level to which the hearer perceives the recommendation must be followed. Lastly, the level of relative intrusion that the speaker brings when making the

recommendation will affect the hearer's perception of the recommendation (Brown and Levinson, 1987).

Social distance and relative power are of particular interest to this thesis as they can be evident within online shopping scenarios. Developing strong emotional attachment with consumers is widely seen as a core goal of many retailers. The way in which the language of the recommendation is perceived would theoretically change depending on whether the retailer was communicating with a first-time visitor to the site, or a close 'friend' of the site. Similarly, the perception of language would theoretically change if the product being recommended was well known to the consumer or not. In broader contexts, when interacting with people who seem to know more about a topic than others, the people who know more are endowed with higher levels of power. If consumers feel the retailer knows more, a power imbalance would occur between retailer and consumer.

Relative intrusion was not explored in this study given it was a factor that isn't apparent in the type of shopping scenarios this thesis would focus on. When people click on an online retailer, they are all to an extent inviting the retailer to communicate with them, meaning that intrusion would be somewhat low across the board. Instead, it was decided to explore the role that price information plays when added to a recommendation. This is due to the strong way in which price acts as a product quality signal and decision heuristic (Milgrom & Roberts, 1986; Rao & Monroe, 1989; Wolinsky, 1983) and the possibility that it changes the nature of the affect that language has.

The theoretical framework of this thesis is based on the assumption that consumers will respond to computers the same way we do to other humans. Research suggests that this assumption is valid. While people treat computers with different mindsets and emotional position, computers that exhibit human-like qualities during an interaction have been found to be treated as social actors (Nass & Moon, 2000; Nass, Moon, Morkes & Fogg, 1997). One such quality that triggers this is the use of human language (Moon & Nass, 1996). This leads to humans applying interpersonal communication conventions to computers within human-computer interaction (Reeves & Nass, 1996).

Methodology Overview

This thesis will focus on conducting quantitative based research (Edmonson & McManus, 2007) utilising experiments across four studies. The studies were grounded in a cautious realist ontological approach and a falsificationist epistemological approach (Blaikie, 2009). Table 1.1 summarises the studies that were conducted, with associated aims, research questions and hypotheses.

Summary of Results

It was found that in situations where the threat to freedom was considered high (e.g. low attachment, low brand familiarity), increasing the level of non-assertiveness in recommendation language lead to more positive attitudes. This was due to the level of reactance being lower as a result of the lower assertiveness in the language leading to higher levels of perceived confidence in the recommendation.

Table 1.1
Overview of Studies

	Pilot Study	Study 1	Study 2	Study 3	Study 4
Purpose/ Aim	To establish perceived assertiveness levels of recommendation statements. To establish high and low assertiveness conditions for studies.	Analyse the effect of recommendation language on attitudes. To provide baseline results for moderation studies.	To test the moderating effect of website attachment. Replicate results from study 1. Test mediation model including reactance and confidence.	To test the moderating effect of product familiarity. Provide further support for mediation models.	To test the effect of price knowledge and price reference points.
RQs and Hypotheses	-	RQ1,RQ2	RQ1, RQ2, RQ3, H1, H2, H3, H4	RQ4 H5, H6, H7	RQ5 H8
Design	Experiment - 5 conditions: Different recommendation statements	Experiment - 3 Conditions: Control, High Assertiveness, Low Assertiveness	2 (high/low assertiveness) x 2 (high/low attachment) Between Subjects Design	2 (high/low assertiveness) x 2 (established/new product) Between Subjects Design	3 (high/low assertiveness and control) x 2 (high/low price) Between Subjects Design
Target Product Category	Camera	Camera	Smartwatch	Portable Speaker	Wireless Headphones
Sample	149 Adults	235 Adults	250 Adults	248 Adults	439 Adults
Timeframe	Cross-sectional	Cross-sectional	Cross - Sectional	Cross - Sectional	Cross Sectional
Data Analysis	One Way ANOVA	One Way ANOVA,	Two Way ANOVA, PROCESS for SPSS Model 6	Two Way ANOVA, PROCESS for SPSS Model 6	Two Way ANOVA, PROCESS for SPSS Model 6

When the situation had a relatively lower threat to freedom (e.g. high attachment, high brand familiarity), differences in language assertiveness and reactance across the statements didn't occur. In these scenarios, language influenced the perceived confidence in the recommendation, resulting in more positive attitudes.

The fourth study explored what happened to the language effects when the consumer had price information for the product. More non-assertive language resulted in positive attitudes in the conditions where price was close to the higher end of the reference price scale. When the price was close to the lower end, not only did non-assertive language have no effect, but there seemed to be no negative effect of more assertive language either. This highlights the possibility that the effect of language changes significantly and might even be overridden when a second pre-existing heuristics or signal is also present.

Summary of Contribution and Proposed Future Research

This thesis provides three contributions. Theoretically, it adds to what we know about consumer responses to online recommendations. Current research had yet to explore the role that recommendation language plays. By adopting the position that computers act as social actors (Nass & Moon, 2000; Nass et al., 1997), this thesis was able to build a new framework including theoretical elements from linguistic based theory (Brown & Levinson, 1987), reactance (Brehm, 1966) and signalling theory (Spence, 1973). This thesis also expands this framework to include a series of boundary conditions providing a deeper understanding of the conditions that determine the nature in which the mechanisms within the framework operate. From a practical point of view, this thesis provides a

contribution that challenges the current approach to using online recommendations. Many practitioners treat these data driven systems as starting points for connecting with consumers and gaining a greater understanding of consumer behaviour. This thesis shows that in order for these systems to run and maximum efficiency, an understanding of consumers is needed beforehand. This thesis shows that online consumers will treat websites more like salespeople of the firm, rather than tools, and that if the firm does not understand the consumer, they can create negative outcomes through an interaction the consumer perceives to be improper.

While not strictly a contribution, a challenge faced by this thesis was the lack of established examples that could be used to create the experimental conditions. Given the subtle nature of the effects that this thesis was testing, and the level of attention needed by participants, it was important to ensure the conditions were truly capturing the variables of interest. The conditions used in this thesis can provide future researchers a blueprint moving forward.

Structure of the Thesis

This chapter has provided a brief overview and outline of the key points made in future chapters of this thesis. Following this chapter, a more detailed explanation of the current literature and conceptual framework is offered (Chapters 2 and 3). Following this, chapter 4 outlines the overall methodology and results for the pilot study. Studies one through three are explained through Chapters 5, 6 and 7 respectively. Chapter 8 then explores the fourth study, along with a detailed analysis of the theoretical shift and components that underlie the study. Chapter 9

outlines the overall discussion of this thesis, along with its contributions, limitations and possible directions for future research.

CHAPTER 2

Literature Review

Chapter Introduction

This chapter provides an overview and discussion of literature related to online shopping and the use of online recommendations. The discussion will identify gaps in current knowledge and serve as basis for the research question.

Research aim and background

The purpose and aim of this thesis fall within the context of online, business to consumer (B2C) retailing. While specific definitions vary between academic papers, prior research into online retailing exhibits common components. Firstly, it involves commercial interactions between consumers and firms. Interactions that include consumer to consumer (second-hand marketplaces), and/or business to business (B2B) interactions fall outside of the scope of the literature in online retailing. Secondly, these interactions take place within digitally mediated environments, resulting in the consumer dealing with a digital representation of the retailer.

One significant difference between online and offline retail has been the increase in importance of consumer attitudes (Kwon & Lennon, 2009; Nicholson, Clarke & Blakemore 2002). Attitudes are often formed and/or changed in the information search and evaluation of alternative phases of the decision-making process (Engel & Blackwell, 1982; Puccinelli et al., 2009; Wright, 2006). These sections have

undergone significant change with the emergence of the internet as a retailing channel.

Within the traditional bricks and mortar retailing, the information search and evaluation of alternative phases required significant time and monetary resources for consumers. Offline retailers could rely on convenience and behavioural biases in order to ensure consumers kept returning to their store. The internet has significantly reduced the resource investment needed to seek information while also allowing for more information from non-retailer sources to be gathered. This has led to the phenomena of increased competition within the retail sector while at the same time significantly reducing product/brand switching costs for the consumer, causing significant erosion in customer loyalty. Now consumers can more freely choose where they shop and get their information meaning retailers must focus on creating positive attitudes. Several studies have explored the issue of attitudes in online shopping (e.g. Caruna & Ewing, 2010; Cyr, 2014; Kwon & Lennon, 2009; Srinivasan et al., 2002), however to date, research looking at the language of online recommendations has gone largely unexplored.

Recommendations are not a new phenomenon to consumer behaviourists. However, the nature of their deployment in online retailing has provided the need for a new perspective in how they work. A number of studies have analysed antecedents of positive attitudes and customer loyalty in online retailing. Some of the traditional offline elements translate to the online sphere. Elements such as corporate reputation, customer service and perceived value (Caruana & Ewing, 2010) still contribute to positive attitudes in online retailing, much the same way as they do in offline retailing. Similarly, Srinivasan et al., (2002) found that

connecting with the consumer on a more personal level through their website was a strong antecedent of online loyalty. Cyr (2014) echoed this idea suggesting that website design is the most important factors in developing online loyalty. One popular website design tool emerging for online retailers is that of targeted recommendations.

The use of recommendations in marketing

When faced with a purchase decision, before a choice can be made, consumers must determine which products they will consider and the information needed to make evaluations (Adam, 2001; Bikhchandani & Sharma, 1996; Weitzman, 1979). In some instances, this results in a very deliberate and conscious sequential process (Dellaert & Haubl, 2012; Haubl, Dellaert & Donkers 2010).

In other instances, consumers may rely on mental shortcuts, known as heuristics, to simplify their decision (Chaikin 1980; Olshavsky & Granbois, 1979; Rosen & Olshavsky, 1987). These heuristics can create what are known as ‘evoked sets’, or products that immediately come to mind as possibilities when faced with a consumption need, which act as shortcuts throughout the decision process.

Recommendations can be seen as a form of heuristic and can affect the decision process by changing the decision to an accept/reject decision rather than a comparison then selection decision, as well as providing an immediate evoked set from which to choose a product (Dellaert & Haubl, 2012). Prior to the popularity of internet retailing, recommendations could be from a variety of sources. Word of mouth (WOM), salespeople or advertising were among the most common interactions in which a consumer would receive a recommendation. Factors like

decision complexity, prior knowledge and instrumental cues (Duhan, Johnson, Wilcox & Harrell, 1997) as well as source credibility (Fitzsimons & Lehman, 2004) all influence the nature of response to these types of recommendations.

Recommendations in online retailing

Recommendations have been included in academic research as part of a broader interest in personalisation and targeted consumer marketing online. Personalised banner advertising and pop-up ads have received particular focus with their timing and placement been shown to be important factors influencing click-through rates (Bleir & Eisenbeiss, 2015a) and consumer moods (Edwards et al., 2002). Click through rates from banner advertising were also seen to be influenced by the level of trust consumers felt towards the retailers as well (Bleir & Eisenbeiss, 2015b). In a similar way, source credibility was found to significantly impact the degree to which a consumer ignored a recommendation or even intentionally contradicted the recommendation in an offline consumption setting (Fitzsimons & Lehmann, 2004). Gender is can also play a role as well. Garbarino and Strahilevitz (2004) found that women tend to perceive online retailing as riskier are more likely to base online purchases on the recommendations of friends compared to men. The stage of the decision funnel a consumer is in can also influence pop-up and banner ad effectiveness. Whether the ad was shown to someone who had browsed the site but not an authenticated user who had shopped their previously had a significant impact on click-through and conversion rates (Hoban & Bucklin, 2015).

Specifically looking at recommendations, Lambrecht and Tucker (2013) tested the level of specificity within the recommendation. Through a field and laboratory

experiment, the authors found that recommendations including only brand level information are more effective at earlier stages in consumer decision making. As consumers gather more information and go deeper into their decision process, recommendations including product specific information become more effective. The authors highlighted that as consumers narrow their construed preferences, they place a greater emphasis on product details, responding more favourably to recommendations that emphasise product features.

Other research has focused on the type of data that the recommendation is based on. Across two experiments, recommendations that are based on group data were found to be more effective in terms of choice intention (Hennig-Thurau et al., 2012). However, the authors provide two conditions for this effect to occur. Firstly, if the group member making the decision is exposed to free choice, rather than just accepting or rejecting the recommendation, the effectiveness of group recommendations is diminished. Secondly, the effectiveness of group-based recommendations was lower when the quality of the social relationship between decision maker and other group members was low (Hennig-Thurau et al., 2012). While this research was only conducted within the context of hedonic products (movies), Summers et al. (2016), supported and extended these findings showing that group-based recommendations see higher levels of effectiveness when the product is congruent with the social image of the consumer.

Much of this research however has taken a strategic approach looking at how consumer behaviour changes based on the interaction with strategic elements of the recommendation. As Gai and Klesse (2019) highlight, little research exists that follows a communication-based approach looking at how the consumer

behaviour changes as a result of the way the nature of the communication changes. This presents a clear gap in our knowledge as the emergence of digital platforms has seen a clear change in the way retailers and consumers communicate with each other, a point also highlighted by Shankar et al. (2016) when calling for more research in the field through their review of current literature.

Part of this gap could be due to a lack of emphasis within the research to look at retail websites as social actors. Much of the literature presented above assumes websites take little to no social role when consumers log on to shop. Through a more focused look at computers as social actors, this thesis intends to show that by adopting a different view, a new framework can be established in which the language of the recommendation becomes a key component in determining the effectiveness of the recommendation.

By adopting this approach, this thesis can also address findings suggesting a broad negative effect that recommendations have on attitudes. By focusing on reactance as one of the main triggers for negative outcomes, this thesis can address possible ways in which online retailers can influence consumers to return to their website more willingly, creating genuine loyalty.

Language's effect on persuasion in social marketing.

One subset of marketing literature has, however, looked at issues such as language and consumer response through a communication lens. Predominantly, social marketing research has explored the ability of language to influence persuasion and compliance to messaging. A series of papers found that gentler/less-assertive

language was more effective when messages were aimed at encouraging health related behaviours such as flossing and limiting alcohol intake (Dillard & Shen, 2005), increasing condom use (Quick & Stephenson, 2007) and exercising (Quick & Considine, 2008). The primary focus of these papers was to gain a greater understanding of the reactance response to assertive messaging and, as a result, found that less-assertive language limited the negative cognitive and affective responses to the message, resulting in greater persuasive power of the message (Dillard & Shen, 2005; Quick & Considine, 2008; Quick & Stephenson, 2007).

While these results provided support for findings within broader communication research that more assertive language affects the level of perceived freedom associated with the message (e.g. Francik & Clark, 1985; Paulson & Roloff, 1997), subsequent research highlighted that health-related messaging consists of an outcome that is consistent with private goals of the individual. As suggested by some authors (e.g. Meneses & Palacio, 2007; Wiener & Doescher, 1991), there are several pro-social causes that require messaging that creates a conflict between positive behaviour and an individual's private goals. Across a combination of laboratory experiments and field studies, Kronrod, Grinstein & Wathieu (2012a) challenged the idea that less assertive language is more effective within these types of messages and found that more assertive language can be more effective in persuading people to comply with environmentally friendly behaviour. Within their paper, a range of pro-environment behaviours were explored, and it was found that when the behaviour was perceived to be important, more assertive language was more effective. In contrast, if a behaviour was perceived to be less important, less-assertive language was more effective. The authors explain that

when we become overwhelmed with the importance of an issue or behaviour, we will tend towards avoiding or prolonging the decision-making process. More assertive language brings with it the implication that the action cannot be avoided and therefore helps people overcome this avoidance tendency. Baek, Yoon & Kim (2015) support and extend these findings in their experiments looking at compliance to recycling advertising. It was found that in addition to the level of importance of an issue, the degree to which people invest effort in the behaviour will determine the degree to which assertive, or non-assertive language will be more effective. When people are willing to invest significant effort to recycling, assertive language is more effective at encouraging recycling behaviour.

In addition to looking at language as a direct effect on persuasive outcomes, research within social marketing has also explored language and its moderating effects. Grinstein & Kronrod (2016), through several field and laboratory experiments, showed that the level of assertiveness will moderate responses to messages that praise or scold people with respect to improving personal hygienic practices, financial planning and encouraging environmentally friendly behaviour. Across their studies, it was found that praising messages made with assertive language are more effective and motivating people to behave a certain way. Additionally, scolding messages made with less-assertive language were also found to be useful in encouraging behaviour.

Language in product-based marketing

Moving beyond social marketing with the premise that assertive language can be effective in certain situations, our understanding of product-based marketing has

changed as well. Kronrod and Danziger (2013) highlight that language can influence emotional intensity and therefore the language of customer reviews can influence how they are perceived. Across four studies, they find that the more hedonic a consumption experience, the more figurative language a consumer will use when reviewing the product. The increased level of figurative language also influences more positive attitudes towards, and choice of hedonic products. These findings are based on the idea that figurative language is more conversationally normal, providing congruence with the more emotional way in which hedonic products are presented. While not strictly a test of assertive/non-assertive language, these findings provide support for the idea that communication norms can still be enforced even when people are not directly communicating with each other in a traditional person-person situation.

Looking specifically at assertiveness, research looking at brand messages (e.g. Nike's "Just Do It") also finds that the degree to which a product is hedonic, or utilitarian plays a role in how we respond to the language within the message (Kronrod, Grinstein & Wathieu, 2012b). Across three experiments, the authors show that products marketed using assertive brand language see higher compliance to the message when the product is or advertised as hedonic. This contrasts with more utilitarian products that see more positive responses when less-assertive language is used. The authors provide a framework that shows this effect is due to people experiencing more positive mood states with hedonic products, and more assertive/direct language being more effective when people are in positive mood states.

While this tested consumer responses to a brand's effort to try and sell their products, this thesis suggests this sales effort is not as direct or overt as a recommendation made by a retailer. Direct recommendations have a greater impact on a consumer's sense of freedom suggesting that the traditional view of less-assertive language being more effective may be true compared to the more contemporary research findings above. This presents the gap in our current understanding that this thesis seeks to fill.

Competing Approaches to Language

Much of the language research highlighted above relies on 'politeness theory' developed by Brown and Levinson (1987). The theory is built on the idea of managing social identities when in social interactions. Whenever we find ourselves within a social interaction, we have an identity within the interaction that we seek to manage. This identity is commonly conceptualised as 'face' (Goffman, 1967) and is considered dynamic in that it can be lost, enhanced and maintained throughout an interaction. Due to this, it is something that we tend to devote significant emotional energy to managing and protecting. Goffman (1967) suggested that it is within each person's interest to consider and maintain everyone's face within an interaction. Brown and Levinson (1987) suggest that the language used within an interaction is a core component to this management of face as it can change the level to which a person feels their face is under threat or being considered by the speaker. These principles have received strong support in human-human communication (e.g., Craig, Tracy & Spisak, 1986; Dolinski, 2016; Sanders & Fitch, 2001) and written communication (Cherry, 1988). Cherry (1988) conducted an analysis of a scenario in which twenty-two letters were

written by academic faculty members to a university president. The letters were written in support of a colleague the faculty felt had been unfairly passed over for promotion. Through the analysis, Cherry (1988) found that letters that included principles from Brown and Levinson's theory were more effective in conveying the message compared to those letters that included little to no elements from Brown and Levinson's work.

Despite broad application and support of Brown and Levinson's (1987) theory, debate has emerged as to the validity of the conceptualisation of face on which it is based. Brown and Levinson's theory relies on the assumption that a social interaction is the result of the sum of the interaction of responses to statements. This stream relies on the encode/decode model as the core theory to analyse social interaction. At the core of this model, a speaker encodes some sort of meaning into a statement based on their language knowledge and experience, and the hearer decodes it based on their knowledge and experience (e.g., Harris, 1996; Linell, 2005; Sperber & Wilson, 1995). Under this approach, face is managed by a summation of all decoded meanings. A more recent stream of research has been developed around the idea of shared meaning being the more appropriate way to analyse social interaction, taking a dyadic approach to the analysis of interactions (Arundale, 2006). This stream suggests that within any interaction the meaning of what is said is shared and therefore constructed by the group as a whole. Through cooperation, the face of all participants, as well as the shared face all participants involved, is maximised by ensuring a common understanding of the meaning is attained (Arundale, 2006; Arundale, 2010).

While it is agreed that Arundale's work in the context of human-human interaction provides a better understanding, this follows similar approaches to the literature from social, and product-based marketing that applies Brown and Levinson's approach as the basis of its conceptual model. Within online shopping, similar to scenarios where people are consuming a message communicated by a brand/organisation, the retail website is encoding a meaning into the language it displays on the screen. The consumer decodes this meaning based on their understanding of language cues and conventions, and what they perceived the desired outcome is of the retailer. The consumer does not have the ability to respond to, or question/double check what the website means exactly, significantly restricting the ability for shared meaning to be established.

CHAPTER 3

Conceptual Framework

Chapter Introduction

This chapter will introduce and examine the theoretical concepts that this thesis use to build the framework to be tested. It will analyse the foundations of the concepts and offer hypotheses to explain how the concepts are proposed to interact. It will conclude with an overall summary of the framework.

This thesis makes the distinction between website attitudes and product attitudes, despite the expectation that there will be a high correlation between the two. This thesis argues that each have unique practical outcomes. Some retailers operate as online department stores offering a wide variety of different product brands.

These retailers are likely to be less concerned if a consumer has a bad experience with a particular product, as long as they come back to the retailer to try a new brand next time. In contrast to this, some retailers only sell their own brand online. These retailers would be more likely to be focused on creating positive product attitudes as the demand for their individual products is what drives traffic to their site.

Computers as Social Actors

This thesis is built on the assumption that our knowledge about how human-human interactions play out, can also be applied to human-computer interactions. Research supported this assumption, with empirical work suggesting interactions

with computers will be approached in the same way as interactions with humans, if the computers exhibit humanlike features (Moon, 2000; Nass & Moon, 2000; Nass et al., 1997; Reeves and Nass, 1996). The theory is based on the understanding that humans are fundamentally social creatures. We have a bias towards seeking social settings, companions and see isolation and loneliness as negative influences in day to day life (Nass & Moon, 2000; Reeves and Nass, 1996).

To understand how the theory works, an understanding of mindlessness is required. In a similar way that consumers use heuristics to simplify their consumption decision, all humans will rely on heuristics to negotiate their way in different social situations (Langer, 1989; Langer, 1992). Rather than process the entirety of information exposed to during the interaction to make conclusions, we focus on recognisable cues. These cues trigger pre-established thought and behavioural patterns, as well as expectations that help focus on certain information and diverting us away from supposedly unnecessary information (Nass & Moon, 2000). In their review, Nass and Moon (2000) found that these same cues are applied to computers, leading to mindlessly reflexive responses to computers. They break the responses down into three broad categories. Firstly, people who overuse human social groupings, applying gender and ethnic identities to computers. The second category is people who overuse learned social behaviours and expect computers to conform to social norms during an interaction. Their final category is people who apply premature cognitive commitments effectively resulting in the anthropomorphism of computers (Nass & Moon, 2000).

From the point of view of this thesis, the most significant set of social cues and conventions that humans apply to computers are language based. Many human-computer interactions have the computer using human language to connect with the human triggering us, as actors in the interaction, to hold the computer to the same language standards that we would expect from any human in a similar situation (Moon, 2000; Wilson, 2003).

Psychological Reactance as a Consumer Response

Psychological reactance is a mindset that consumers enter when they feel their freedom is being threatened. As humans, we have a desire to behave freely and make decisions free from outside influence, effectively ‘controlling our own destiny’. When a threat is perceived that this freedom may be lost, people become motivated to regain or reattain the freedom perceived to be restricted (Brehm, 1966). Prior research has shown that this response can be the result of negative cognition, emotions, or a combination of both (Quick & Considine, 2008). Brehm (1966) also found that when in a state of psychological reactance, a person will perceive the restricted behaviour with a greater importance and the source of the restriction will be perceived more negatively. This leads the person to seek removal of the source of restriction both in the short and long term. In broader online shopping applications, reactance has been found to occur.

Several online marketing processes have been linked with reactance responses. White, Zahay, Thorjorsen and Shavitt (2008) found that consumers experience reactance to personalised email advertising. The strength of this reactance was dependent upon the fit between email message and consumer’s perceived utility

of the email. Banner ads can also increase reactance if a large enough amount of time has passed between the consumers providing the data to the service and when the banner ad is seen due to a perceived sense of over-personalisation (Bleir & Eisenbeiss, 2015a). Bleir and Eisenbeiss (2015b) also found that the depth of personalisation (how closely the advertising matches the consumer's interests) can affect the level of reactance. Reactance was higher when firms with lower levels of existing trust exposed consumers to personalised advertising that didn't match the consumer's interests.

Looking directly at intelligent recommendations, Lee and Lee (2009) found that intelligent recommendation systems presented a perceived threat to freedom, and this resulted in significantly lower intentions to use the recommendation service. Within their experiment, one group of people were told that a fictitious website would make a recommendation based on basic registration information. A second group was told that recommendations would be made based on a greater level of personal information that they would be asked to provide. The authors found that perceived threat to freedom was significantly higher within the group required to give more detailed personal information, with this effect driving the more negative attitudes towards, and intention to use the website. The authors replicate and extend these findings in further research showing that reactance to intelligent recommendations is stronger within people who have a lower confidence in their own identity (Lee et al., 2010). When people have a stronger sense of their identity, they feel less constrained and pressured by personalised recommendations.

While this research provides a clear link between recommendations and reactance, subsequent research by Martin, Borah & Palmatier (2017) suggests that consumer privacy concerns could also play an important role in the reactance response. The authors found that attitudes towards the firm, and overall firm performance are lower, when people are unsure, or unaware when/how their data has been used.

In addition to data-based variables, intrusiveness has also found to be a reactance trigger for online recommendations. Recommendations that are unsolicited, or from a source of unknown credibility have been found to be perceived as more intrusive. As a result, higher levels of reactance are found to occur compared to those from sources with higher levels of credibility (Fitzsimons & Lehmann, 2004).

Brown and Levinson's Approach to Reactance

As previously mentioned, Brown and Levinson (1987) considered face as a want that each member holds going into an interaction, but also being aware that the other person has the same want. Within their theory, face is broken down into two components. Firstly, 'positive face', which is the want by every member within an interaction to appear desirable by at least some other person. The second part is defined as 'negative face', which is the desire of people to appear to be in control of their own thoughts and choices (Brown & Levinson, 1987). Through this component, Brown and Levinson provide a framework conceptualising language as a reactance managing construct. It is suggested that any recommendation, suggestion or hint is a 'face-threatening act' (FTA) as it threatens our negative

face and makes us look as if we are unable to make our own decision or that the speaker does not intend to acknowledge our ability to make our own decisions.

Brown and Levinson (1987) show that, by altering language and making it non-assertive, this threat can be reduced. It is important to note that while the authors use the term 'politeness' to describe their theory, at a conceptual level, the theory describes the degree to which the language is perceived to assert influence over someone. This thesis follows the prior research within the literature review that adopted Brown and Levinson's theory as being a discussion of language assertiveness. This removes potential confusion to what is commonly understood to be 'polite'. Moving forward, this thesis uses the term assertive or non-assertive to describe language that has been changed according to Brown and Levinson (1987) aimed at reducing an FTA.

Brown and Levinson (1987) discuss a series of possibilities for reducing the FTA. Firstly, they suggest that the speaker not do the FTA. This approach prevents the hearer from having their face threatened, but also restricts the speaker from achieving their goal of having the hearer perform some desired action. Should a speaker decide to pursue the FTA, then different linguistic approaches can be implemented to increase the non-assertiveness of the language.

The approaches fall under two broad categories. Firstly, using language that hides the nature of the recommendation by suggesting that there is no desired outcome the speaker is trying to illicit. These strategies include using language that involves hints, metaphors, rhetorical questions or ambiguity around what the speaker is trying to achieve. The second broad strategy is to make it clear that the

speaker has a desired outcome but allowing the hearer to determine its importance. Reframing the recommendation as a question or using language that gives deference and hedges the speaker's position is the cornerstone of this second approach.

These language uses remove some of the perception that the hearer is doing something wrong, or contrary to the benefit of the group by rejecting the recommendation. The approach gives the hearer a sense of more options and a greater sense of control (Brown and Levinson 1987). As a result, it is expected that online recommendations with less-assertive language will lead to weaker reactance responses, leading to more positive attitudes towards the recommended product and website making the recommendation.

H₁: *The assertiveness of online recommendation statements is positively related to levels of psychological reactance.*

Language and Perceived Confidence in the Recommendation

In addition to being able to change the level of reactance, this thesis proposes that language can also affect attitudes through changing the how confident the speaker is perceived to be regarding the recommendation made. Confidence is a well-known mechanism through which attitudes are formed. This thesis identifies two broad ways in which confidence can influence attitudes. Firstly, elements like warranties and return policies can express confidence directly in the product. However, attitudes can also be formed through the degree to which a retailer appears confident in their discussion or promotion of a product. This thesis

proposes this second phenomena is an important link within the language framework.

Two theoretical models exist that can help explain this proposed link. First is the idea of attitude certainty. This model explains that the way in which people (salespeople/other consumers) talk about or discuss the product, can convey confidence and certainty, in their opinions (Abelson, 1988; Karmarkar & Tormala, 2010; Petrocelli et al., 2007). This model has featured in persuasion literature with statements that appear more certain or confident, also appearing to be more persuasive. This is because more certain statements have a link to higher attitude certainty levels and therefore are perceived to be given with more confidence (Karmarkar & Tormala, 2010). In their research into consumer word of mouth persuasion, Packard, Gershoff & Wooten (2016) found that in some situations, consumer reviews in which boastful language was used were more persuasive. The link was made that more boastful language would lead the reader to think the reviewer was more certain and confident in the points they were making in the review.

From this, it would seem that language considered more assertive by Brown and Levinson (1987) would be considered more certain and therefore lead the consumer to perceive the retailer as having more confidence in the recommendation. However, research into sales pressure and coercion offers the persuasion knowledge model (Friestad & Wright, 1994). Using this model it is shown that by using more assertive language, the salesperson might be seen to be too coercive rather than persuasive. Higher levels of coercion were shown to create more negative attitudes (Barron & Staten, 1995). Being too coercive has

also been identified as a potential cause of poor product attitudes within product quality signalling literature. This suggests that assertive language could convey differing levels of confidence within different situations, behaving in a similar way to advertising spending.

Originally from the field of economics, signalling theory was first used to explain how employers overcome information gaps when deciding which employees to hire (Spence, 1973). It is based on the idea that when faced with many decisions we often have incomplete information and so we extrapolate the information we have to fill in the gaps using 'signals'. In looking at advertising expenditure as a product signal Kirmani (1997) found an interesting pattern. When consumers thought firms had spent large amounts of money on advertising, it signalled that the firm was confident/certain enough that the product was good enough to generate sales that would exceed the advertising spend. However, there was a point at which increasing advertising spend lead to negative attitudes. This was because people felt the company had to coerce them into buying the product to make up poor quality (Kirmani, 1997). While this work is more focused on perceived confidence in the product rather than confidence in the recommendation, it highlights how one variable can create opposing effects depending on how that variable is perceived.

While confidence is not a construct explicitly dealt with through Brown and Levinson's (1987) theory, this thesis proposes that the level of language assertiveness can create different perceptions of how confident the website is in making the recommendation. One of the core tenants of their theory is reframing the statement to give the hearer more power to choose another option when there

is a perceived threat to freedom (Brown & Levinson, 1987). This thesis proposes that, in an online shopping context, this method to reduce reactance will also lead the consumer to feel less coerced, resulting in positive attitudes. Also, from this, this thesis proposes that the consumer will take the view that the retailer is offering to let the consumer scrutinise the product and make up their own mind about it. This will lead to the perception that the retailer is more confident in their recommendation by implicitly saying “we think you’ll agree with us after you have made up your own mind”.

Pilot Study – Assertive vs Non-Assertive Recommendation Language

A detailed overview of the implementation of the pilot study can be found in chapter four. Of the five recommendation statements made to participants, it was found that “You May Like...” was considered to be the most non-assertive. Fitting within the framework from Brown and Levinson (1987) this statement is showing a high level of ambiguity, as the language doesn’t point towards a desired outcome for the retailer (e.g. “are they suggesting I buy the product or just consider it?”). It also suggests a high level of hedging the retailer’s position (you make like this, but you may not also) and deferred power to the consumer. The recommendation statement reporting the highest level of assertiveness was “We Recommend For You”. The level of ambiguity and degree to which the retailer is hedging their position is significantly lower in this statement. Brown and Levinson (1987) suggest that one positive effect this statement might bring is that it comes across as attempting to build ‘affinity and solidarity’, highlighting that we (the retailer) are on your side and trying to help you. This detail is proposed to be important when looking at situations where the FTA is considered low.

Moderating Role of Website Attachment and Membership Accounts on Attitudes

As previously mentioned, Brown and Levinson (1987) approach any kind of recommendation as an FTA. However, they recognise that not all FTA's are equally strong. They identify three key elements of an interaction that determine the strength of the FTA, which in turn affects the degree that language is seen as assertive and reactance is triggered. One of the components is the degree of social distance between hearer and speaker (Brown & Levinson, 1987). Social distance is the degree of 'closeness' between parties. Someone you have recently met is considered more distant compared to a close friend of many years. In interactions where the social distance is lessened (e.g. the hearer feels a close connection to the speaker), the threat to face from recommendations is considerably lower, thus leading assertiveness to be a less important factor in the interaction. By lowering the level of threat, and significance that assertive language and reactance plays, interactions between two people who are close, are also expected to change the degree to which confidence becomes persuasive or coercive.

While social distance might not necessarily translate directly to the context of online shopping, looking at the way in which retailers create connections with consumers provides some important insights. From existing literature, it is established that people develop strong attachments to marketing entities (Fournier, 1998; Keller, 1993; Park, MacInnis, Priester, Eisingerich & Iacobucci, 2010; Schouten & McAlexander, 1995). Attachment is seen to be a strong positive relationship with the entity built through emotional connections to representations of the entity within our memory network. These result in thoughts and feelings towards the entity similar to those felt towards another person considered to be a

close friend (Mikulincer & Shaver, 2007). When looking at how attachment can be tested and operationalised, it is known that some consumers choose to maintain long term membership accounts with different retailers (Park et al., 2010). This thesis proposes that long term membership accounts are a sign of high levels of attachment between consumer and retailer.

While attachment and attitude strength may appear to be similar constructs, there are important conceptual differences that distinguish them from each other.

Attitudes are formed based heavily on evaluations of different objects whereas attachment is formed through a person's emotional and personality needs being met (Cohen & Areni, 1991; Mikulincer & Shaver, 2007). For example, a person might understand that their favourite website or brand isn't as good as others, but because it gives them a sense of personality and emotional fit, they will develop strong attachment to the entity. The degree to which attachment is formed is dependent upon personality congruence, as well as the interaction between a person's actual and ideal selves (Malar, Krohmer, Hoyer & Nyffenegger, 2011).

From the ideas above, it is proposed that the extent to which language is assertive, and the role that language plays is different depending on whether a consumer has a strong attachment with the website. Those with a long term membership will see recommendations as less of FTA given the high level of attachment, and lessened social distance.

H₂: *The differences in perceived assertiveness across recommendation statements is moderated by whether a consumer has high levels of attachment (e.g. long term membership) or low levels of attachment (e.g. new to the website).*

When a consumer is new to the website, significant differences in assertiveness will be perceived across the statements “You May Like...” and “We Recommend For You”. When a consumer has a long-term membership, these significant differences will not be present.

H₃: *The effect that language has on confidence is moderated by whether a consumer has high levels of attachment (e.g. long term membership) or low levels of attachment (e.g. new to the website). When a consumer is new to the website “You May Like...” will lead to higher perceived confidence. When a consumer has a long-term membership, “We Recommend For You” will lead to higher perceived confidence.*

H₄: *The effect that language has on attitudes is moderated by whether a consumer has high levels of attachment (e.g. long term membership) or low levels of attachment (e.g. new to the website). When a consumer is new to the website “You May Like...” will lead to more positive attitudes. When a consumer has a long-term membership, “We Recommend For You” will lead to more positive attitudes.*

Moderating Role of Power and Brand Familiarity on Attitudes

One other key component that dictates the strength of the FTA is power. Brown and Levinson (1987) highlighted that not all interactions take place where both hearer and speaker are on similar levels of power within the relationship. In human-human interactions, when a speaker is in a position of power, any recommendation or suggestion will come with extra pressure on the hearer to comply with such recommendation. This can amplify or change the need to manage assertiveness in order to reduce the perceived threat to the hearer’s face

(Brown & Levinson, 1987). It is expected that similar to the effect of attachment, the degree to which confidence appears as persuasive or coercive is also dependent upon the nature of the power imbalance within an interaction.

In order to understand how power dynamics operate in online shopping, a brief understanding of how power works in human-human communication is needed. Power is defined by Brown and Levinson (1987) as the degree to which the speaker can impose their own plans and evaluation without the hearer having the option to contribute. Also conceptualised as social influence in some literature (Carli, 1999), power can be endeared in different ways. In their work, French, Raven and Cartwright (1959) identified five mechanisms through which power can be bestowed. The most relevant route of power establishment to this thesis is that of expert power. Expert power is usually given through the perceived difference in expertise or knowledge between actors within an interaction. For example, doctors have expert power over their patients given the increased knowledge and training when it comes to treating health related issues (French et al., 1959).

This thesis proposes that familiarity with the brand/product can cause a power imbalance to occur within the online shopping interaction. Familiarity is considered to be the amount of information a person has, or thinks they have about the brand or product (Park & Lessig, 1981). It has been shown to play an important role in terms of being a heuristic and will often times determine the way in which people move through the consumer decision process. People with a high level of familiarity will make more simplified decisions, whereas people who are not familiar with the product will tend to follow more complex and involved

decisions (Park & Lessig, 1981). Familiarity will also determine how much information asymmetry exists between consumer and retailer; an element of the interaction that is proposed to trigger a degree of expert power being granted to the retailer.

Information asymmetry is a common concept in much of the economics, finance and accounting literature (e.g. Aboody & Lev, 2000; Balakrishnan & Koza, 1993; Healy & Palepu, 2001), with some application in marketing as well (e.g. Mishra, Heide, & Cort, 1998; Mishra & Prasad, 2004). It is defined as a situation in which one party has more/less information available to them compared other parties within the interaction. One of the key issues highlighted in previous sections of this chapter is the increased sense of risk associated with online shopping.

Because consumers cannot feel and have tangible interactions with the product before buying it, online shoppers always face a degree of information asymmetry, giving the retailers some degree of expert power. Information asymmetry can be increased when consumers have little experience or exposure with a product or brand. This makes consumers more sensitive to external signals when forming opinions about the product (Grewal, Krishnan, Baker & Borin, 1998).

This thesis argues that this information asymmetry increases when retailers recommend a brand-new product out on the market compared to a well-established product, increasing the strength of the FTA. When a very familiar brand is recommended the consumer will feel as though they have as much, or even more information about the product and therefore less pressure to rely on the retailer's recommendation to make their decision. However, when a product is recommended that the consumer has little to no information about, the consumer

will feel more pressure to follow the recommendation given that the retailer has more information about the product than they do, resulting in expert power being endowed to the retailer.

H₅: *The differences in perceived assertiveness across recommendation statements is moderated by the level of familiarity a consumer has with the brand. When a consumer is not familiar with the brand, significant differences in assertiveness will be perceived across the statements “You May Like...” and “We Recommend For You”. When a consumer is familiar with the brand, these significant differences will not be present.*

H₆: *The effect that language has on confidence is moderated by the level of familiarity a consumer has with the brand. When a consumer is not familiar with the brand, “You May Like...” will lead to higher perceived confidence. When a consumer is familiar with the brand, “We Recommend For You” will lead to higher perceived confidence.*

H₇: *The effect that language has on attitudes is moderated by the level of familiarity a consumer has with the brand. When a consumer is not familiar with the brand, “You May Like...” will lead to more positive attitudes. When a consumer is familiar with the brand, “We Recommend For You” will lead to more positive attitudes.*

Effect of price

Much of the above conceptual framework is based around the idea that the language of the recommendation is the only factor that would influence attitudes. It is often the case that product recommendations are made showing the product's price. Price is known to have significant power in influencing the way people think about a product (Darwar & Parker, 1996; Dodds & Monroe, 1985; Dodds, Monroe & Grewal, 1991; Lichtenstein, Block & Black 1988; Lichtenstein, Ridgway & Netemeyer, 1993; Teas & Agarwal, 2000). It is expected that when price and recommendation language co-exist as signals, the effect of language changes with respect to consumer attitudes.

H8: *Price will moderate the effect of recommendation language on attitudes. It is expected that "You May Like..." leads to more positive attitudes in conditions where prices are high. "We Recommend For You" leads to more positive attitudes when prices are low.*

A more detailed theoretical explanation of this hypothesis appears in chapter 8 of this thesis along with the detailed explanation of study four.

Summary of Theoretical Models

Figures 3.1 and 3.2 present the proposed theoretical models and hypotheses tested across studies one through three. Overall, the model is based on six moderation hypotheses.

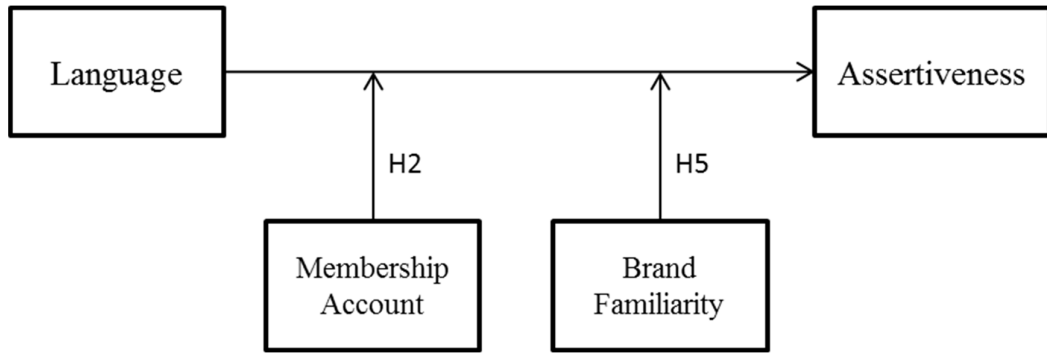


Figure 3.1 – Moderation Model (Assertiveness)

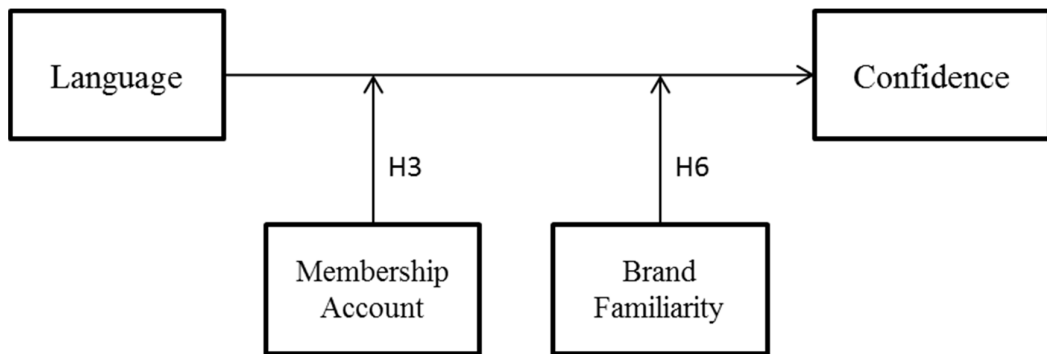


Figure 3.2 – Moderation Model (Confidence)

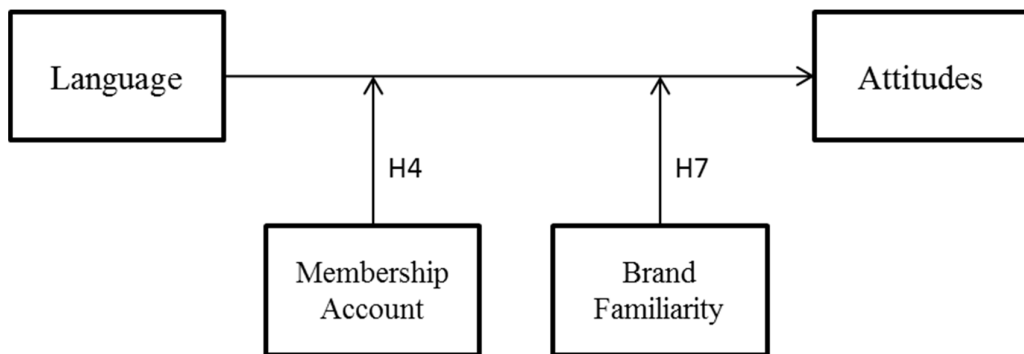


Figure 3.3 – Moderation Model (Attitudes)

CHAPTER 4

Overall Methodology and Pilot Study

Chapter Introduction

The purpose of this chapter is twofold. Firstly, it aims to provide an outline and justification for the broad overall approach taken within this thesis to design and implement the research program. It will outline the research paradigm and theoretical perspective behind the design and provide justification for the use of a quantitative approach. Then it seeks to provide a detailed outline of the data collection procedures, sampling procedure, final sample, and measurement of constructs for the pilot study.

Research Paradigm / Theoretical Perspective

In order to study the world around them, researchers must have an understanding of the philosophical and theoretical framework that the research sits in. These frameworks are driven by common sets of assumptions known as paradigms (Deshpande, 1983). Different paradigms can influence the factors and design elements that determine if proper methodological fit is occurring to provide answers to the research question (Crotty, 1998). It is common to break the philosophical assumptions down into two components. Firstly, ontological assumptions seek to give an understanding about the nature of reality, while epistemological assumptions seek to provide an understanding about what constitutes knowledge (Hudson & Ozanne, 1988). Crotty (1998) suggests that

these two assumptions combine to drive the theoretical perspective of a research project.

There has been much debate concerning which ontological and epistemological assumptions should be made when conducting consumer research. A positivist or interpretive approach has historically been favoured by authors in the field (Hudson & Ozanne, 1988; Hunt, 1991; Simonson, Carmon, Dhar, Drolet, & Nowlis, 2001), however these authors generally approached paradigms as independent to research strategies. A more contemporary way of approaching the issue has been offered by Blaikie (2009). Blaikie looked to provide a series of perspectives that incorporated research paradigms within the overall research strategy. Simonson et al. (2001) highlighted that the evolution of the consumer research field saw research become primarily focused on theory development and testing. Under Blaikie's (2009) framework this would be considered to be a 'deductive' approach. Given that this thesis is driven by the aim of testing theories and eliminating false ones, a cautious realist ontological approach will be combined with a falsificationist epistemological approach (Blaikie, 2009). Under such a philosophical perspective it is thought that reality exists independently of social scientists, however it must be observed cautiously and critically analysed given that the nature of reality can be open to interpretation. Knowledge of this reality is produced by trial and error, eliminating false theories against empirical data in a constantly updated process (Blaikie, 2009).

The overall purpose of this thesis is to provide an understanding of the effects that different recommendation language can have on attitudes. To achieve this, theoretical models with direct, mediating and moderating effects will be tested.

This approach should provide a better understanding of the boundaries that apply to the effects identified and create a unique contribution to current knowledge and matches the approach that Simonson et al., (2001) outlined as a modern consumer research approach.

Rationale for Quantitative Approach

The conceptual models within this thesis have been built using principles from a range of well-established and robust theories including politeness theory (Brown & Levinson, 1987), reactance theory (Brehm, 1966) and signalling theory (Spence, 1973). The contribution that this research seeks to provide is a new framework that can be used to explain how consumers respond to different online shopping situations. Given that many of the variables and constructs are derived from well-established theories, a quantitative approach is considered most appropriate so that hypothesised relationships can be tested against numerical data using statistical analysis (Edmonson & McManus, 2007).

While the individual constructs that form the conceptual models are mainly well-established constructs, the way in which this thesis proposes they interact with each other has yet to be tested empirically. According to the work of Edmonson and McManus (2007) this thesis can be categorised as late intermediate or early mature research, providing support for using a quantitative approach (Edmonson & McManus, 2007). Quantitative approaches have been used previously to establish much of the prior theory on which this study is based thus strengthening the methodical fit for this thesis (Edmonson & McManus, 2007). Achieving methodological fit is important for ensuring that there is a high level of

consistency between this study and the prior knowledge that has been generated previously ensuring that the theoretical and knowledge contribution of this thesis is significant and robust (Edmonson & McManus, 2007).

Justification for Experiments

The aim of this thesis is to test a theoretical framework that seeks to explain how attitudes and choice behaviours are affected by recommendation language.

Experiments are universally recognised as the best approach to making the types of causal claims necessary to answer this type of question (Perdue & Summers, 1986; Wilson, Johns, Miller, & Pentecost, 2010). Experiments work by systematically manipulating the independent variable through the creation of experimental conditions and subsequently measuring the dependent variable. Any changes observed in the dependent variable across the different conditions can be inferred to be a result of whatever difference exists between conditions (Perdue & Summers, 1986; Shadish, Cook & Campbell, 2002). While experimental research is used with regularity within marketing (e.g. Edwards et al., 2002; Fitzsimons & Lehman, 2004; Kronrod et al., 2012a), and broader social science research (Webster & Sell, 2007), there are potential weaknesses to adopting such an approach. Perdue & Summers (1986) in their review of experimental research highlighted that marketing research usually involves rather abstract ‘higher order’ variables. In the construction of experimental conditions, sometimes the exact nature of these variables are mischaracterised or measured incorrectly leading to incorrect causal inferences to be made. Cook and Campbell (1979) highlight the importance of having clearly defined constructs and empirically robust

measurement instruments for all variables before embarking on experimental research.

General Analysis Assumptions

All data was analysed using SPSS for windows software. Mediation analyses were conducted using PROCESS for SPSS (Hayes, 2013). Justification for specific tests are offered the first-time results are reported within this thesis. The main findings from this thesis are analysed using one-way and two-way ANOVAs (including syntax for marginal mean difference analysis) and mediation.

When conducting ANOVAs, it is assumed that the data is normally distributed and that there is an equal amount of variability within each cell (Allen, Bennett, & Heritage, 2014). This thesis relies on Levene's statistic as a measure of homogeneity as well as the skewness and kurtosis values as the measure of normality. Variables will be considered normally distributed if the skewness and kurtosis vales fall between -2 and 2 as highlighted by George and Mallery (2016). Post hoc analyses within the one-way ANOVAs will use the Tukey test to test for mutual significance between the groups (Allen et al., 2014).

Product choice for experimental stimuli

Across the four studies in this thesis, high involvement products were chosen as stimuli from the electronics/gadget sector of the retail market. The decision to focus on these products was made due to the desire to create shopping scenarios in which it was realistic for the respondents to imagine they were faced with a complex purchase decision that required high levels of information search. The products chosen across the four studies were cameras, smartwatches, portable

speakers and wireless headphones. This approach would ensure a higher level of external validity compared to asking people to consider complex decisions about products they would normally make based on personal style/taste preferences (e.g. shoes, clothing etc.).

Pilot Study

The aim of the pilot study was to establish which recommendation statements would be used as assertive and non-assertive language conditions for further experiments. A brief examination of a number of shopping websites showed that a range of language is used when making recommendations. The first step of the research program was to establish any differences between the levels of assertiveness perceived across some of this language. Perdue and Summers (1986) discuss the importance of pilot studies in establishing appropriate experimental conditions to ensure that the experimental treatment is truly capturing the change in independent variable to a satisfactorily robust way.

Sample and Design

One hundred and forty-nine participants (38.9% female) were recruited from Amazon MTurk, and randomly assigned to one of five conditions (“Check This Product Out”, “We Recommend For You”, “Consider This Product”, “Would You Consider this Product?”, “You May Like...”). The average age of participants was 32.47 ($SD = 8.87$). Each condition explained to them a shopping scenario in which a third party was shopping for a new camera:

“After winning a modest amount of money in the lottery, Sam decides to buy a new camera. Sam spends approximately one hour on the internet

researching camera features and comparing different models. Sam particularly focuses on camera manufacturer's and customer review websites that are found through googling terms such as "best rated cameras" and "which camera should I buy". After visiting these sites, Sam has narrowed the choice down to three DLSR models. Sam, still unsure, clicks on a link to an online camera store. On the homepage, Sam see's the following image. (Please click next to see image.)”

Participants were then shown an image of what the third party saw on the website. The image in each condition only differed in the recommendation statement used as shown in figure 4.1. Participants were then asked to score their opinions on how they would have perceived the recommendation language if they were in the third party’s position.

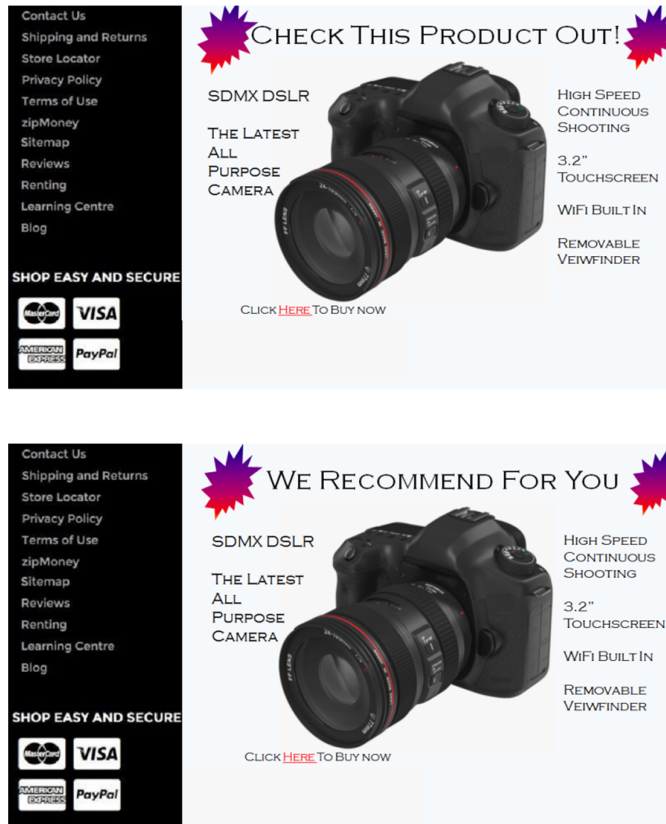


Figure 4.1- Examples of Pilot Study Stimuli

Recruiting from MTurk holds many advantages in cost effectiveness (Malhotra, Hall, Shaw & Oppenheim, 2006), allowing respondents to complete the task at a time that is least intrusive to them (Best & Kreuger, 2004) and free from influence or stress from having the research team present (Zikmund, 2007). Some potential issues arise when using MTurk however. Smith, Roster, Golden and Albaum, (2016) compared data quality across three samples from a ‘regular’ online panel, a US-based MTurk sample and non-US-based MTurk sample. They found that each sample provided different results and that the non-US-based MTurk sample reported the lowest quality data. They found that this was due to a high number of

duplicate IP addresses (people logging into the survey multiple times), and people ‘cheating’ the survey by rushing through it, not paying attention and simply responding with all 1s or 7s. Interestingly, Hauser and Schwarz (2016) found that MTurk samples showed lower attention check failure rates than samples from collegiate sample pools. In order to address some of these concerns, it was ensured that the surveys were programmed with an IP address blocker, so that once a survey had been completed, it could not be re-taken from the same IP address, as well as the inclusion of attention check questions and a question asking which state the participant was from. This allowed the ability to double check any suspicious results by comparing IP address location data to the location they said they were in. Finally, settings within MTurk were used to ensure only people from the US, and people who had a lifetime ‘work rejection rate’ of less than 5%.

Random assignment is an important component of between-group designs as it limits the ability of extraneous factors resulting from differences within the sample from causing systematic differences that could confound the ability to make causal inferences from the changes in dependent variable (Keppel, 1982; Shadish et al., 2002). For example, take a sample of sixty people completing an experiment with two conditions. If half the sample rush through the experiment and give answers without paying attention, then this could lead to results not truly reflecting the relationship that is found between independent and dependent variables. If all thirty of these rush jobs are assigned to the one condition, then results become invalid. Random assignment maximises the chance that these thirty rush jobs appear equally within each condition, along with equal numbers of

those who completed it correctly. This negates the effect of the rushed data's ability to confound results and casual inferences can be made given the differences in dependent variable across conditions.

The approach of asking participants to consider a hypothetical scenario (vignette) is an approach used in experimental research across many fields, particular related to psychology (Alexander & Becker, 1978; Collett & Childs, 2011; Eylon, Giacalone & Pollard, 2000; Hegtvedt, 1988; Sinaceur & Tiedens, 2005). The use of vignettes is a contestable subject with some questioning their ability to truly capture the spontaneity and experience of different situations (Hughes, 1998; Parkinson & Manstead, 1993). This thesis faced a number of key issues when deciding on the best approach. Firstly, participants would need to feel as though their exposure to the recommendation was as realistic as possible. Secondly, it was imperative that the important factors to control in the experiment were either salient for all participants or salient to none. It was decided that a vignette allowed both of these points to be covered. The number of ways people can go about shopping online is close to infinite. By creating a hypothetical scenario, the complexity of the shopping trip and relevant details were equal for all participants. It also allowed for the controlling of wealth, as part of the scenario made it clear that the affordability of the product was not an issue. The vignette was centred on a third party named Sam. It was decided that the name Sam provides a relatively gender-neutral name. This was to ensure both male and female would relate to the third party as strongly as possible. Female participants might not consider themselves in a male (e.g. Mark) scenario with that much

relevance, and in contrast male participants may be more dismissive of a female's (e.g. Claire) situation.

In choosing which recommendation statements to include in the conditions, it was decided that two conditions needed to be met. Firstly, the recommendation language had to be language that appeared on real life websites, to increase the external validity of the study allowing for relevant, actionable advice being able to be derived from the results. Secondly, the language had to fit into the framework of Brown and Levinson (1987). Being able to link a recommendation statement to the framework would allow for differences to be explained in ways that matched our theoretical understanding.

Measures

The perceived assertiveness of each recommendation was measured using five items (e.g. "The Language is imposing", "The language is assertive") combined from an established scale provided by a handbook detailing how to approach assertiveness in experimental research (Holtgraves & Bonnefon, 2017) as well as a scale used in prior message assertiveness research (Quick & Considine, 2008) on a 7-point scale (1= strongly disagree, 7= strongly agree). Higher scores indicate more assertive language while lower scores indicate more non-assertive language. Items included in measurement scales are listed in Appendix A.

The measurement of variables within experiments should rely on using previously developed scales. This ensures well-constructed measures are used (Hair, Black, Babin & Anderson, 2010), maximising reliability and validity. Through this, researchers benefit from less complex data analysis requirements (Robson, 2011).

Higher scores on the original scale represent more assertive language being perceived. Participants were also asked how much they agreed with the statement “I expect to see recommendations phrased like this when shopping online”.

A factor analysis was run on the scale items. Factor analyses are useful tools for identifying the underlying structure of a measurement scale (Hair et al., 2010) and if any sub-scales are present within a larger set of items (Allen et al., 2014). Principle axis factoring was selected within the analysis since this seeks the fewest number of factors which can account for the variance within a variable (Allen et al., 2014). One factor was reported with an Eigenvalue greater than 1 (3.58) accounting for 71.63% of the total variance.

The accurate reporting of reliability of measurement scales has been the subject of some debate amongst academia. Reliability is considered as the extent to which measurements are repeatable (Nunnally, 1967). Having high reliability somewhat ensures that a measurement scale is accurately capturing the phenomena of interest each and every time it is used. Historically, Cronbach’s (1951) alpha has been the more popular measure of reliability across a wide range of research contexts (Cortina, 1993) however questions have been raised regarding the apparent confusion and misinterpretation of Cronbach’s alpha over recent years (Cortina, 1993; Iacobucci & Duhachek, 2003; Schmitt, 1996). The main source of contention is the apparent misunderstanding of alpha’s sensitivity to the number of items within a scale, as well as the misunderstanding of alpha’s measurement of unidimensionality versus its measure of homogeneity (Schmitt, 1996). To this end, this thesis will follow the approach of Iacobucci and Duhachek (2003) and use a combination of Cronbach’s alpha in conjunction with

the 95% confidence interval when reporting reliability. Reliability of the assertiveness scale items was considered high ($\alpha = .90$, 95% CI [.87 – .92]).

Results

Table 4.1 summarises the descriptive statistics of assertiveness across each condition.

Table 4.1
Descriptives for Assertiveness Measure

Condition	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
“Check This Product Out”	29	3.51	1.47	0.27
“We Recommend For You”	31	4.15	1.52	0.27
“Consider This Product”	30	3.83	1.78	0.33
“Would You Consider This Product?”	29	3.52	1.36	0.25
“You May Like...”	30	3.01	1.36	0.25

A one-way ANOVA was conducted given that this thesis sought to test for statistically significant differences across the five conditions (“Check This Product Out”, “We Recommend For You”, Consider This Product”, Would You Consider This Product?”, “You May Like...”), and each condition had an independent sample mean (Allen et al., 2014). Levene’s test reported non-significance ($F(4, 144) = 1.74, p = .15$) showing that the assumption of homogeneity of variance had not been violated. Skewness for each condition ($skew = .46, .053, -.08, .01, -.48$) and kurtosis ($kurt = -.80, -1.00, -1.46, -1.21, -.55$) all fell within the parameters outlined to justify normal distribution.

The ANOVA reported statistically significant differences between the recommendation statement groups ($F(4,144) = 2.40, p = 0.05$). A post hoc test using the Tukey HSD test showed that a significant difference between the conditions containing “We Recommend For You” ($M = 4.15, SD = 1.52$) and

“You May Like...” ($M = 3.01$, $SD = 1.36$) appeared ($p = 0.03$). No other significant differences appeared between other conditions.

In terms of expectations of seeing recommendations phrased this way, both “We Recommend For You” ($M = 5.03$, $SD = 1.40$) and “You May Like...” ($M = 5.13$, $SD = 1.36$) had mean scores above five. This suggests general agreement that these statements reflected a realistic online shopping experience. A t-test between both groups showed no significant difference ($p = .79$) suggesting that participants do not expect to see one more/less than the other.

From this, the aim of the pilot study was achieved with a clear high and low assertiveness condition being able to be established. The research program progressed to study 1, using “We Recommend For You” as the assertive condition and “You May Like...” as the non-assertive condition.

CHAPTER 5

Study 1

Chapter Introduction

The following chapter outlines the procedure, design and results for study one. It will provide a detailed discussion of what was done as well as the statistical tests conducted along with the results that were found. It will conclude with a brief discussion of these results.

Sample and Design

The aim of study 1 was to analyse the effects that language had on consumer attitudes. The results from this study would be representative of a generic shopping scenario and provide a baseline understanding of the main effects within the theoretical models. Two hundred and thirty-five participants were recruited from Amazon MTurk (49.4% Female). The mean age of the sample was 34.08 ($SD = 10.87$) with participants being randomly assigned to one of three experimental conditions (control, low, high assertiveness). Each condition provided participants with the same shopping scenario as the pilot study and then showed them an image of the shopping website they clicked on. As shown below in Figure 5.1, the image was simplified from the pilot study and the recommendation statement was emphasised more. This was to improve the retention of the image as participants responded to the attitude items.

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3.2" Touchscreen

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Removable ViewFinder

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SDMX DSLR

The Latest All Purpose Camera



High Speed Continuous Shooting

3.2" Touchscreen

WiFi Built In

Removable ViewFinder

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WE RECOMMEND FOR YOU

SDMX DSLR

The Latest All Purpose Camera



High Speed Continuous Shooting

3.2" Touchscreen

WiFi Built In

Removable ViewFinder

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Figure 5.1 - Examples of Study 1 Stimuli

The experiment included an attention check that included asking each participant which recommendation statement they saw. The experiment also included two true/false questions as attention checks that asked participants “The capital city of the United States is Washington DC” and “ $2 \times 2 = 4$ ”. These questions ensured that it would be easy to see if a participant was paying attention to the survey and not just randomly clicking answers to progress or using an automated software system to fill out the survey for them.

Measures

Manipulation checks were considered not necessary for the studies in this thesis. In work looking at direct vs indirect manipulations, Coleman (2018) highlighted that as long as the operationalisation of the independent variable is the same as the experimental treatment, manipulation is considered to be direct. Given that direct manipulation provides an indisputable difference, manipulation checks are not required. Assertiveness was measured using the same scale as the pilot study and showed the same high reliability ($\alpha = 0.88$, 95% CI [0.84 – 0.91]).

The order in which website attitudes and product attitudes were measured was randomised for each participant. This would allow for the identification of any potential ordering effects that were present. For example, participants might score the product quality higher because they also scored the website highly. Website attitudes were measured using four items (e.g. “The website is helpful”, “I would return to this website”) from an online store image scale used in prior research (van der Heijden & Verhagen, 2004). All items were measured on a 1 to 7 scale with one item reverse coded. After the item had been recoded, a factor analysis showed one factor and the reliability of the items was high ($\alpha = 0.71$, 95% CI [0.64 – 0.76]), with higher reported scores indicating more positive website attitudes.

Product attitudes were measured using six items (e.g. “The likely quality of this product is high”, “I would be willing to pay a higher price for this produce over others”) combined from previous product/brand attitude research (Christodoulides, Cadogan & Veloutsou, 2015; Yoo & Donthu, 2001). Items

were measured on a 1 to 7 scale with higher scores representing more positive attitudes towards the product. A factor analysis again reported one factor and reliability of the scale was shown to be high ($\alpha = 0.90$, 95% CI [0.88 – 0.92]).

Analysis Overview

One important distinction to be made before running analysis is determining the level of statistical significance that will be used when analysing the data. It is important to understand how likely it is that differences observed in any data pattern are the result of random chance or not. This thesis uses a 95% confidence interval ($p < 0.05$) which means that any differences that are equal to, or less than 5% chance of being due to chance are considered statistically significant (Allen et al., 2014; Wilson et al., 2006).

Results

Table 5.1 summarises the descriptive statistics for the variables analysed in study 1 while Table 5.2 summarises the correlation matrix for all variables measured. An independent samples t-test was run on the assertiveness measure that reported the perceived assertiveness of “You May Like...” ($M = 2.84$, $SD = 1.46$) to be significantly lower than “We Recommend For You” ($M = 3.85$, $SD = 1.33$) ($t(155) = 4.52$, $p < 0.01$). Levene’s statistic was non-significant ($p = .49$) and skewness for both groups ($skew = .036$, $-.53$) were within the established parameters as was the kurtosis for both groups ($kurt = -.52$, $-.33$). This indicates that the two recommendation conditions successfully manipulated and captured changes in assertiveness. No significant difference in website attitudes ($t(233) = -1.27$, $p = .21$) or product attitudes ($t(233) = -.71$, $p = .48$) were reported between those who

saw the website attitudes questions first, and those who saw product attitude questions first. This indicates no order effect in attitude reporting exists.

Table 5.1
Descriptives for Study 1

Measure	Condition	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Website Attitudes	Control	78	4.45	1.22	0.14
	High Assertiveness	80	4.25	1.14	0.13
	Low Assertiveness	77	4.73	1.06	0.12
Product Attitudes	Control	78	4.90	1.03	0.12
	High Assertiveness	80	4.66	1.16	0.13
	Low Assertiveness	77	5.08	1.08	0.12
Assertiveness	Control	78	-	-	-
	High Assertiveness	80	3.85	1.33	0.15
	Low Assertiveness	77	2.84	1.46	0.17

Table 5.2
Correlation Matrix for Study 1

Measure	1	2	3
1. Website Attitudes	-		
2. Product Attitudes	.73**	-	
3. Assertiveness	-.36**	-.27**	-

** $p < 0.01$

Figure 5.2 shows the pattern of mean scores for both dependent variables across the three conditions. A one-way ANOVA was run which showed significant differences between groups for both product ($F(2,232) = 2.96, p = 0.05$) and website ($F(2,232) = 3.59, p = 0.03$) attitudes. Levene's test of homogeneity of variances was non-significant for both website ($F(2, 232) = .71, p = .49$) and product ($F(2, 232) = .37, p = .69$) attitudes, showing that the assumption of homogeneity of variance had not been violated. Skewness and kurtosis for website attitudes across the three conditions ($skew = -.17, -.39, -.58$) ($kurt = .61, .46, .40$)

were all within the parameters of normality, as was the case for product attitudes (*skew* = -.06, -.80, -.73) (*kurt* = -.09, .46, .79).

A post hoc analysis using Tukey HSD showed that significant differences ($p = .02$) occurred in website attitudes between “You May Like...” ($M = 4.73$, $SD = 1.06$) and “We Recommend For You” ($M = 4.25$, $SD = 1.14$). The same pattern also occurred in product attitudes with “You May Like...” ($M = 5.08$, $SD = 1.08$) being significantly higher ($p = .04$) than “We Recommend For You” ($M = 4.66$, $SD = 1.16$). The post hoc analysis showed that while the control condition reported attitudes between each of the recommendation conditions, no statistically significant differences were found between the control condition and recommendation conditions. The effect size for the website attitude comparison was $d = .36$, while the effect size for the product attitude comparison was $d = .32$.

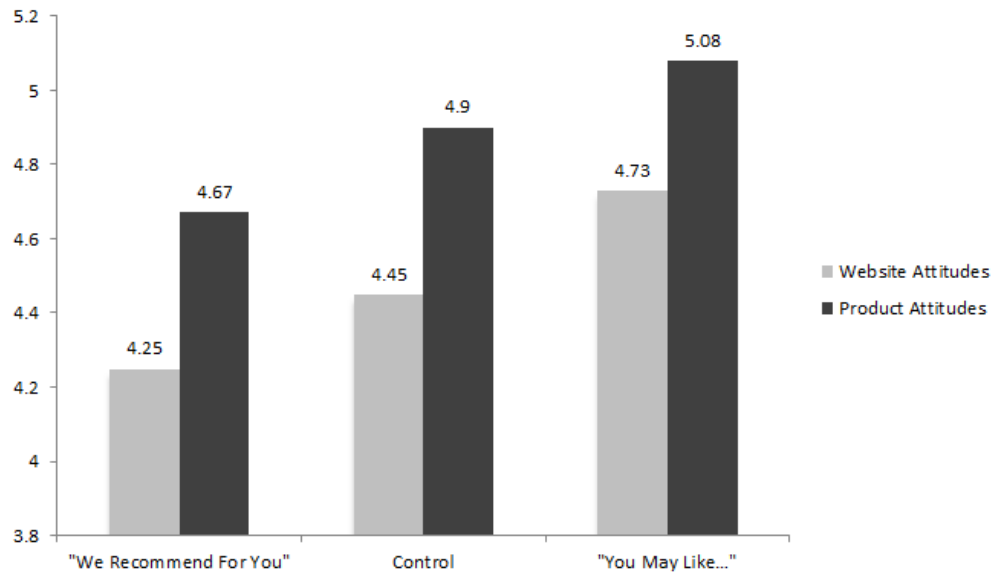


Figure 5.2 - Attitude means across conditions.

Discussion

Results from study one provides consistency with the pilot study suggesting that people perceive language used on retail websites with differing levels of assertiveness. The underlying approach for this thesis to take, treating computers as social actors (e.g. Moon, 2000; Nass & Moon, 2000) is therefore supported. Based on Brown and Levison's (1987) theory, it was expected that more positive attitudes would result from using more non-assertive language. Overall, results from study one support this idea within the scope of both website and product attitudes.

While a strong baseline effect within a generic shopping scenario provides a strong foundation on which the moderation hypotheses can be tested, an interesting point is worth of note. The attitudes of people who saw no recommendation statement (control condition) appear to fall somewhere between those of the two experimental conditions without being significantly different to either. This suggests that while "You May Like..." results in the most positive outcome, offering no recommendation language does not significantly damage the retailer's performance.

CHAPTER 6

Study 2

Chapter Introduction

The following chapter outlines the procedure, design and results for study two. It will provide a detailed discussion of what was done as well as the statistical tests conducted along with the statistical measures that were found. It will conclude with a brief discussion of the results.

Sample and Design

The aim of study 2 was to test the moderating hypotheses looking at effect of consumers having a membership account with the retailer or not (attachment) on assertiveness, confidence and attitudes. Within this, study 2 also tested a series of mediation models to provide a deeper explanation of the effects. To this end, a 2 (assertive v non-assertive) x 2 (high vs low website attachment) between subjects design was used. The same recommendation statements as study 1 were used for the language manipulation. The low attachment condition (having no membership account) directly replicated the shopping scenario from study 1, in order to ensure the baseline results were replicated. The high attachment condition (5-year membership account) made it clear in the scenario that the website the participants were visiting was one where they had a membership account for five years.

“Imagine that, after winning a modest amount in the lottery, you decide to buy a new smartwatch. You spend approximately one hour on the internet

researching smartwatch features and comparing different models. You particularly focus on different smartwatch manufacturer and customer review websites. These websites are found through googling terms such as "best rated smartwatches" and "which smartwatch should I buy".

After visiting these sites, you have narrowed the choice down to three different options. Still unsure of your decision, you decide to visit an online electronics retailer where you have had a membership account for the last five years. On the homepage, you see the following image. (click next)

Unlike study 1, the scenario for this study involved a first-person shopping vignette. This was done to increase the level of relevancy to the participant in having a connection to the website. The target product chosen for study 2 was a smart watch, with the images very similar to those from study 1.

Two hundred and fifty participants were recruited from Amazon MTurk (48.4% Female). The mean age of the sample was 35.8 ($SD = 10.40$) with participants being randomly assigned to one of the four conditions. This study included the same manipulation and attention checks as study 1 as well as a question asking them if the scenario mentioned the membership account or not.

Measures

Reactance and confidence were measured using three items each (e.g. "The language threatened my freedom to choose", "The retailer is certain about their recommendation") from prior research (Petty, Brinol & Tormala, 2002; Quick & Considine, 2008). Factor analyses showed one factor for each set of items with

reactance items accounting for 85.53% of variance, while confidence items accounted for 69.65% of variance. Both scales showed high reliability (reactance $\alpha = .92$, 95% CI [.90 – .94]) (confidence $\alpha = .78$, 95% CI [.73 – .82]).

Assertiveness ($\alpha = .91$, 95% CI [.89 – .92]), and product attitudes ($\alpha = .89$, 95% CI [.88 – .92]) were both measured using the same items as study 1. In order to provide a more reliable measure of website attitudes, the decision was made to increase the number of items in the website attitude scale. Additional items (e.g. “The website is pleasant”) from website attitude research within the computer-human communication field (Porat & Tractinsky, 2012) were added to items used in study 1. The total number of website attitude items participants responded to was nine. After a factor analysis was run, three items were removed due to poor loading onto the factor, leaving six items that accounted for 62.24% of the variance to be used in the analysis ($\alpha = .84$, 95% CI [.81-.87]).

Website attachment was measured with five items (e.g. “Please indicate how you would feel towards the website: Connected; Bonded”) from prior research (Thomson, McInnis & Park, 2005) measured on a 1 to 7 scale. A factor analysis showed one factor that accounted for 83.00% of the variance and reliability was shown to be high ($\alpha = .95$ 95% CI [.94-.96]).

Results

Tables 6.1 and 6.2 summarise the descriptives and correlations of the measured variables in study 2. The correlation matrix show’s a strong correlation between assertiveness and reactance. An independent t-test showed significant differences in website attachment for the no-account ($M = 2.97$, $SD = 1.69$) and account ($M =$

4.06, $SD = 1.87$) conditions ($t(248) = 4.80, p < .01$). Levene's statistic was non-significant ($p = .21$) and skewness for both groups ($skew = -.18, .30$) were within the established parameters as was the kurtosis for both groups ($kurt = -1.22, -1.21$). This provides support for the claim that any change seen across the account conditions is caused by different levels of website attachment.

As seen in prior studies, significant differences in assertiveness were found between the "We Recommend For You" ($M = 3.71, SD = 1.56$) and "You May Like..." ($M = 3.28, SD = 1.60$) ($t(248) = -2.14, p = .03$) across the full sample. Levene's statistic was non-significant ($p = .84$) and skewness for both groups ($skew = .05, -.27$) were within the established parameters as was the kurtosis for both groups ($kurt = -1.24, -1.15$). In the no account conditions, an independent samples t-test showed significant differences between assertiveness ($t(123) = -2.16, p = .03$), reactance ($t(123) = 2.20, p = .03$) and confidence ($t(123) = -2.51, p = .01$) across the different recommendation statements. In contrast, the account conditions saw no significant differences occurred between recommendation statements for assertiveness ($t(123) = -1.00, p = .32$) or reactance ($t(123) = .51, p = .61$) within the account conditions. There was a significant difference found in confidence ($t(123) = 3.09, p < .01$), however.

A series of two-way ANOVAs were run, with results summarised in tables 6.3 and 6.4. A two-way ANOVA is used to analyse differences in means between groups that are split into two independent variables (factors). The analysis can provide an understanding of main effects for each variable as well as the impact of variables in combination, known as interaction effects (Allen et al., 2014).

Levene's test of homogeneity of variances was found to be significant for website

($F(3, 246) = 4.74, p < .01$) suggest the assumption had been violated. Levene's test was non-significant for product attitudes ($F(3, 246) = 1.05, p = .37$), showing that the assumption of homogeneity of variance had not been violated. For website attitudes, skewness was within accepted parameters for all conditions ($skew = -.57, -.95, -.54, -.84$) as was kurtosis ($kurt = 1.27, .43, -.62, .26$). Allen et al. (2014) suggests that an ANOVA would not be sensitive to the violation of homogeneity assumption if a large sample size and close to equal group size was present. Due to this, the ANOVA was continued on website attitudes.

Website Attitudes

The first ANOVA reported a non-significant main effect on website attitudes for language ($F(1, 246) = .36, p = .55$). The main effect between account conditions was significant ($F(1,246) = 17.85, p < .01$). A significant interaction effect was also found that indicated the effect of language was dependent upon whether they had an account with the website or not ($F(1,246) = 11.47, p < .01$).

An analysis of the simple effects showed that website attitudes are significantly more positive when "You May Like..." is used compared to "We Recommend For You" ($F(1,246) = 7.96, p = .01$) within the no-account conditions. However in the account conditions, "We Recommend For You" leads to significantly higher website attitudes compared to "You May Like..." ($F(1,246) = 3.87, p = .05$).

Product Attitudes

Product attitudes presented a very similar pattern with the second ANOVA reporting a non-significant main effect for language ($F(1,246) = .04, p = .84$). Again, the account conditions had a significant direct effect ($F(1,246) = 17.64, p$

< .01). The interaction effect was also significant ($F(1,246) = 13.01, p < .01$). The nature of the interactions for both sets of attitudes is illustrated in figures 6.1 and 6.2.

Table 6.1
Descriptives for Study 2

Measure	Condition	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Website Attitudes	High Assertiveness – Account	63	6.18	.95	.12
	Low Assertiveness – Account	62	5.74	1.42	.18
	High Assertiveness - No Account	63	4.96	1.32	.17
	Low Assertiveness - No Account	62	5.60	1.32	.17
Product Attitudes	High Assertiveness – Account	63	5.41	.89	.11
	Low Assertiveness – Account	62	4.91	1.12	.14
	High Assertiveness - No Account	63	4.39	1.15	.14
	Low Assertiveness - No Account	62	4.84	.94	.12
Reactance	High Assertiveness – Account	63	3.15	1.95	.25
	Low Assertiveness – Account	62	2.97	1.89	.24
	High Assertiveness - No Account	63	3.08	1.44	.18
	Low Assertiveness - No Account	62	2.51	1.45	.18
Confidence	High Assertiveness – Account	63	5.47	.92	.12
	Low Assertiveness – Account	62	4.85	1.28	.16
	High Assertiveness - No Account	63	4.59	1.00	.13
	Low Assertiveness - No Account	62	5.04	1.00	.13
Assertiveness	High Assertiveness – Account	63	3.64	1.75	.22
	Low Assertiveness – Account	62	3.33	1.74	.22
	High Assertiveness - No Account	63	3.77	1.35	.17
	Low Assertiveness - No Account	62	3.23	1.45	.18

Table 6.2
Correlation Matrix for Study 2

Measure	1	2	3	4	5	6
1. Website Attitudes	-					
2. Product Attitudes	.75**	-				
3. Reactance	-.26**	-.09	-			
4. Confidence	.37**	.45**	-.02	-		
5. Assertiveness	-.25**	-.07	.83**	-.01	-	
6. Attachment	.47**	.57**	.33**	.26**	.34**	-

** $p < 0.01$, $n = 250$

Table 6.3
Two-way ANOVA Results, Study 2 – Website Attitudes

	Sum of Squares	<i>df</i>	<i>F</i>	Sig.
Corrected Model	48.00 ^a	3	9.97	.00
Intercept	7898.55	1	4922.52	.00
Language Condition	.58	1	.36	.55
Account Condition	28.64	1	17.85	.00
Interaction Term	18.40	1	11.47	.00
Error	394.73	246	-	-

^a $R^2 = .11$ (Adjusted $R^2 = .10$)

Simple effects for product attitudes matched website attitudes. In the no-account conditions, “You May Like...” resulted in more positive attitudes compared to “We Recommend For You” ($F(1,246) = 5.81, p = .02$). In the account condition,

“We Recommend For You” lead to more positive product attitudes compared to “You May Like...” ($F(1,246) = 7.24, p = .01$).

Table 6.4
Two-way ANOVA Results, Study 2 – Product Attitudes

	Sum of Squares	df	F	Sig.
Corrected Model	32.91 ^a	3	10.32	.00
Intercept	5972.50	1	5619.43	.00
Language Condition	.04	1	.04	.84
Account Condition	18.78	1	17.67	.00
Interaction Term	13.82	1	13.01	.00
Error	261.46	246	-	-

^aR² = .11 (Adjusted R² = .10)

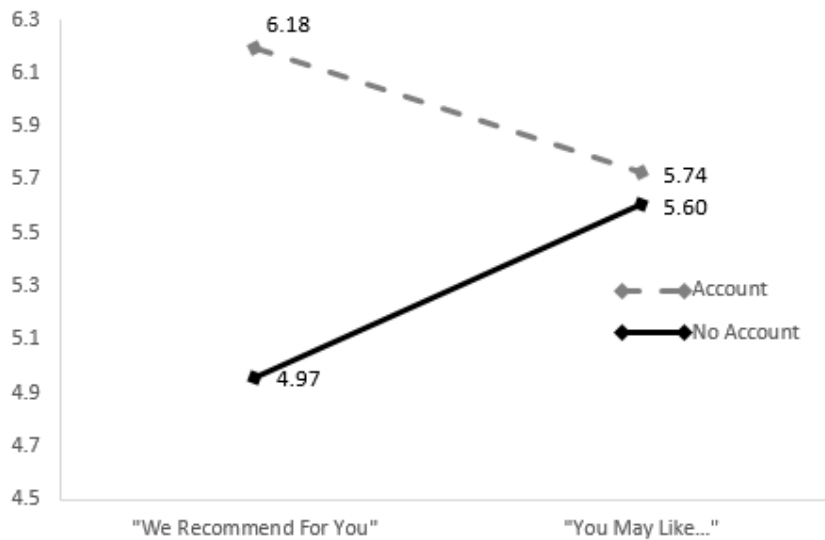


Figure 6.1 – Website Attitudes

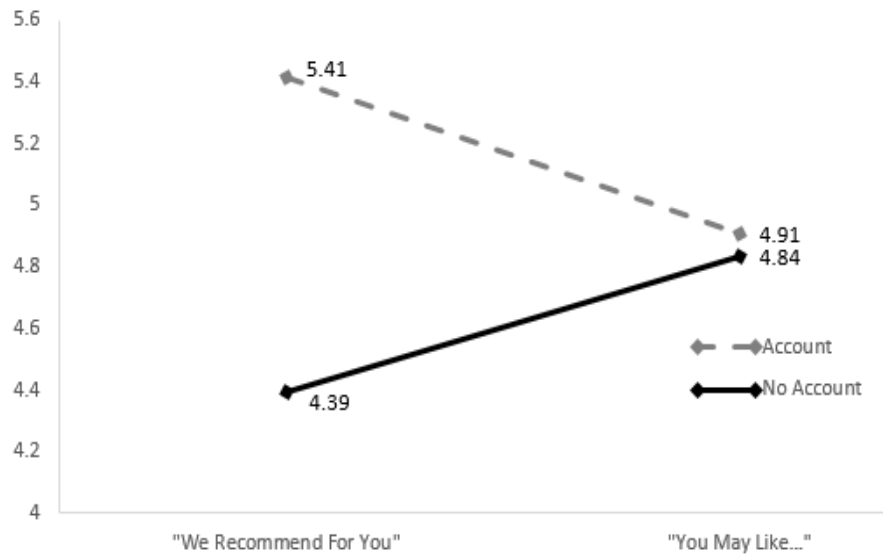


Figure 6.2 - Product Attitudes

No Account Conditions

Mediation analyses were run in order to explore the nature of the role these variables play. The first model tested included the two recommendation conditions (“We Recommend For You” = 0, “You May Like...” = 1) as the independent variable, website attitudes as the dependent variable and assertiveness, reactance and confidence as sequential mediators using model number 6 through PROCESS for SPSS (Hayes, 2013).

The recommendation condition was shown to significantly predict assertiveness ($\beta = -.54, p = .03$) and perceived confidence ($\beta = .38, p = .04$). Assertiveness significantly predicted reactance ($\beta = .80, p < .01$) and reactance marginally

predicted confidence ($\beta = -.18, p = .07$). Confidence significantly predicted website ($\beta = .24, p = .04$) and product attitudes ($\beta = .37, p < .01$). All other pathways were found to be non-significant.

Indirect effects were tested using 5000 bootstrap samples. Significant paths were found for language \rightarrow assertiveness \rightarrow reactance \rightarrow confidence \rightarrow website attitudes ($\beta = .02, SE = .02, 95\% CI [.0001, .09]$) and language \rightarrow confidence \rightarrow website attitudes ($\beta = .09, SE = .06, 95\% CI [.005, .27]$). The direct effect of recommendation language on website attitudes was shown to be non-significant ($\beta = .38, SE = .23, 95\% CI [-.08, .84]$), when the mediators were present, suggesting full mediation. All other indirect paths were found to be non-significant.

In terms of product attitudes, results were similar, with a significant path found for language \rightarrow assertiveness \rightarrow reactance \rightarrow confidence \rightarrow product attitudes ($\beta = .03, SE = .03, 95\% CI [.00012, .11]$) and language \rightarrow confidence \rightarrow product attitudes ($\beta = .14, SE = .08, 95\% CI [.02, .36]$). The direct effect of recommendation language on product attitudes was shown to be non-significant ($\beta = .22, SE = .18, 95\% CI [-.14, .58]$), when the mediators were present, suggesting full mediation. All other indirect paths were found to be non-significant.

Figure 6.3 illustrates the mediation model with significant and marginally significant coefficients found for website and product attitudes.

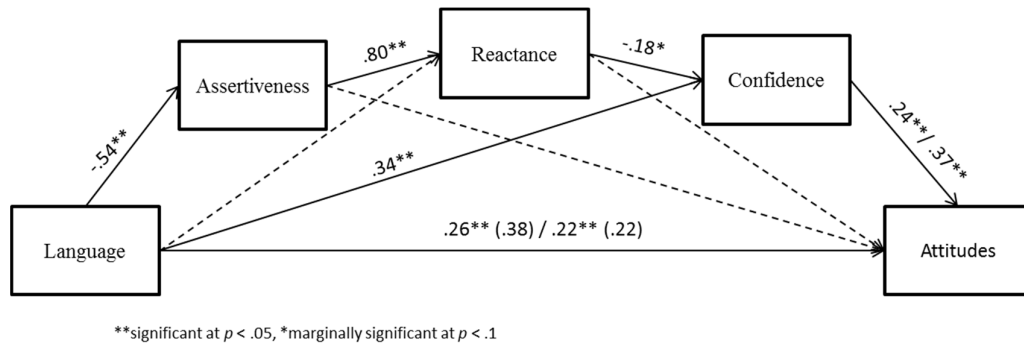


Figure 6.3 – Mediation Analysis in the No Account Conditions for Website/Product Attitudes

Account Conditions

Mediation analyses were run on the same models as the no account conditions. Recommendation language did not significantly predict assertiveness ($\beta = -.31, p = .32$) or reactance ($\beta = .12, p = .50$), however assertiveness did significantly predict reactance ($\beta = .95, p < .01$). Language did significantly predict confidence ($\beta = -.61, p < .01$) and confidence significantly predicted website attitudes ($\beta = .46, p < .01$). Interestingly, reactance also predicted website attitudes ($\beta = -.22, p = .03$). All other pathways were found to be non-significant.

An analysis of the indirect effects showed a significant path was only found for language \rightarrow confidence \rightarrow website attitudes ($\beta = -.28, SE = .10, 95\% CI = -.51, -.10$). The direct effect of language on website attitudes was shown to be non-significant ($\beta = -.19, SE = .20, 95\% CI = -.58, .20$), when the mediators were present, suggesting full mediation. All other indirect pathways were found to be non-significant.

Indirect effects for product attitudes were consistent with those above. The only significant path was found for language → confidence → product attitudes ($\beta = -.25$, $SE = .10$, 95% CI = $-.46, -.08$). The direct effect of language on product attitudes was shown to be non-significant ($\beta = -.22$, $SE = .17$, 95% CI = $-.56, .11$), when the mediators were present, suggesting full mediation. All other indirect pathways were found to be non-significant.

Figure 6.4 illustrates the mediation model with coefficients found for website and product attitudes.

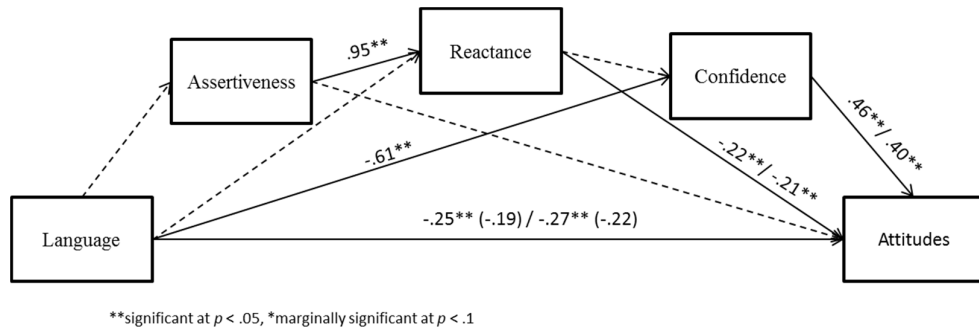


Figure 6.4 – Mediation analysis in the Account Conditions for Website/Product Attitudes

Discussion

Study 2 provides several key findings. Firstly, it provides replication of the findings from study one. This increases the reliability of the first study and reinforces the conceptual idea proposed by this thesis that language can influence consumer attitudes within online shopping environments. Within both account and no-account conditions, assertiveness was highly correlated to reactance, providing support for H1.

However study 2 supported the hypothesis H2 by showing that the role language plays in influencing assertiveness and reactance is dependent upon the nature of the website's connection to the consumer, established by the scenario. Hypothesis H3 is also supported with perceived levels of confidence changing across language statements within account and no-account conditions. As expected, when conditions were high threat, "You May Like..." resulted in higher levels of perceived confidence, but "We Recommend For You" resulting in higher levels of confidence in the low threat conditions. Finally, H4 was supported, with the effect of language on attitudes changing across the account and no-account conditions. The statement "You May Like..." resulted in significantly more positive attitudes in the no-account condition as it was perceived to be more non-assertive, leading to lower levels of reactance, increasing confidence and ultimately attitudes.

In contrast, the account condition saw "We Recommend For You" resulting in more positive attitudes. It seems that in the account condition, participants reported no difference across perceived assertiveness and "We Recommend For

You” influenced people into reporting high levels of perceived confidence in the recommendation. This confidence led to more positive attitudes.

It was expected that by having a long-term membership account, participants would feel a stronger attachment to the website. Based on Brown and Levinson’s (1987) idea, this would create a scenario in which the threat to freedom was reduced, and based on the attitude certainty and persuasion literature, the degree to which the online retailer would be seen as coercive or persuasive (Friestad & Wright, 1994; Karmarkar & Tormala, 2010). These drivers reduced the importance of language assertiveness. Findings broadly support this theoretical foundation. The language seen as assertive and reactance inducing in the no-account condition, is more effective at creating positive attitudes in the account, or low threat conditions.

CHAPTER 7

Study 3

Chapter Introduction

The following chapter outlines the procedure, design and results for study three. It will provide a detailed discussion of what was done as well as the statistical tests conducted along with the results that were reported. It will conclude with a brief discussion of the results.

Sample and Design

The aim of study 3 was to test the hypothesis that the familiarity of the product moderated the language effect established in study one. Like study two, study 3 employed a 2 (high vs low assertiveness) x 2 (familiar product vs new product) between subjects design. The shopping scenario highlighted that during their information search they came across a well-known brand as well as a completely new brand that had just been released. Once they clicked through to the image, they saw a recommendation for either the established brand, or fictitious brand. Like study 2, a first person vignette was used. For the well-known brand, a real-world product was used. The product chosen was the most popular product on Amazon over the last twelve months. For the newly released brand, a fictitious brand and product name, created by the author of this thesis was used, similar to studies 1 and 2.

“Imagine that, one day, you are decide to purchase a new portable speaker online. You decide to spend some time searching the internet to get information on what speakers are available. You spend approximately one hour looking up manufacturer's and customer review websites found through googling terms like "best portable speaker" and "latest portable speaker releases".

You narrow your choice down to two options, the well-known "Anker SoundCore" and the "JBL Flip 4".

You also notice a new company, "Muzzbeats" selling their brand new "Muzzbeats Crisp" portable speaker.

Still unsure, you decide to visit and online gadget store, and as you scroll down the homepage, you see the following image. (click next)”

The images were very similar to studies 1 and 2, as figure 3.3 shows, the fake brand used the identical shape as the established brand to control for any perceived differences in style across the two products.

You May Like...

Anker SoundCore

Bluetooth Connectivity Up to 66 Feet!

24-Hour Playtime
Crystal Clear Sound with Built in Microphone

Durable Drop-Proof Design



CLICK [HERE](#) TO BUY TODAY

We Recommend For You

BRAND NEW!!! Muzzebeats Crisp

Bluetooth Connectivity Up to 66 Feet!

24-Hour Playtime
Crystal Clear Sound with Built in Microphone

Durable Drop-Proof Design



CLICK [HERE](#) TO BUY TODAY

Figure 7.1 - Examples of Study 3 Stimuli

Two hundred and forty-eight participants were recruited from Amazon MTurk (45.6% Female). The mean age of the sample was 35.14 ($SD = 10.04$) with participants being randomly assigned to one of the four conditions. This study included the same manipulation and attention checks as study 1 as well as a question asking them if they were recommended the established product, or the brand new one.

Measures

Assertiveness ($\alpha = 0.92$, 95% CI [0.91 – 0.94]) and product attitudes ($\alpha = 0.88$, 95% CI [0.85 – 0.90]) were measured using the same items as study 1. Reactance ($\alpha = 0.90$, 95% CI [0.88 – 0.92]), confidence ($\alpha = 0.78$, 95% CI [0.73 – 0.82]) and

website attitudes ($\alpha = 0.83$, 95% CI [0.80 – 0.86]) were measured using the same items as study 2. In order to measure information asymmetry, a four item scale was used. Information asymmetry is a concept born primarily from the field of economics and finance (e.g. Dierkens, 1991; Hasbrouck, 1991) and as such is usually measured using mathematic models. Even within the field of marketing, information asymmetry is treated as a utility based mathematical model (e.g. Kornish & Li, 2010; Tellis & Wernerfelt, 1987). In order to come up with a scale to measure information asymmetry, this thesis took the theoretical ideas from these papers and applied it to scales from current online shopping literature (Rose, Clark, Samouel & Hair, 2012; Teo, 2002) to create four modified items (e.g. “The retailer is able to know the quality of the product better than I am able”, “I have to rely on the retailer in determining the quality of the product”). A factor analysis reported one factor that accounted for 66.16% of the total variance. Reliability was shown to be high ($\alpha = 0.83$, 95% CI [0.79 – 0.86]).

Results

Tables 7.1 and 7.2 summarise the descriptives and correlations of the measured variables in study 3. An independent t-test showed significant differences in information asymmetry for the known brand ($M = 4.55$, $SD = 1.33$) and unknown brand ($M = 4.98$, $SD = 1.02$) conditions ($t(230.65) = -2.86$, $p = .01$). Equal variances were not assumed as Levene’s statistic was significant ($p < .01$). Skewness for both groups ($skew = -.54, -1.13$) were within the established parameters as was the kurtosis for both groups ($kurt = -.17, 2.00$). This supports the idea that differences occurring between these conditions are being driven by information asymmetry.

Significant differences in assertiveness were found between the “We Recommend For You” ($M = 4.00, SD = 1.59$) and “You May Like...” ($M = 3.30, SD = 1.57$) ($t(246) = 3.51, p < .01$) across the whole sample, consistent with previous studies. Levene’s statistic was non-significant ($p = .86$) and skewness for both groups ($skew = .08, -.20$) were within the established parameters as was the kurtosis for both groups ($kurt = -1.08, -1.16$). In the unknown brand conditions an independent samples t-test showed significant differences between assertiveness ($t(122) = 3.06, p < .01$), reactance ($t(122) = 2.23, p = .03$) and confidence ($t(122) = -2.15, p = .03$) across the different recommendation statements. In contrast, no significant differences occurred between recommendation statements for reactance ($t(122) = 1.76, p = .08$) and assertiveness was marginally significant ($t(122) = 1.93, p = .06$) within the account conditions. There was a significant difference found in confidence ($t(122) = 2.61, p = .01$), however.

A series of two-way ANOVAs were run, with results summarised in tables 7.3 and 7.4. Levene’s test of homogeneity of variances was found to be non-significant for website ($F(3, 244) = .11, p = .96$) and product attitudes ($F(3, 244) = .53, p = .66$), showing that the assumption of homogeneity of variance had not been violated. For website attitudes, skewness was within accepted parameters for all conditions ($skew = -.57, -.95, -.54, -.84$) as was kurtosis ($kurt = 1.27, .43, -.62, .26$).

Website Attitudes

The first ANOVA reported non-significant main effects on website attitudes for language ($F(1, 244) = .02, p = .89$) and brand conditions ($F(1, 244) = .14, p = .70$).

A significant interaction effect was found that indicated the effect of language was dependent upon whether the known or unknown brand had been recommended ($F(1,244) = 9.45, p < .01$).

An analysis of the simple effects showed that website attitudes are significantly more positive when “You May Like...” is used compared to “We Recommend For You” ($F(1,244) = 4.31, p = .04$) within the conditions where the unknown brand was shown. However in the conditions with the known brand, “We Recommend For You” leads to significantly higher website attitudes compared to “You May Like...” ($F(1,244) = 5.16, p = .02$).

Product Attitudes

Product attitudes presented a similar pattern with the second ANOVA reporting a non-significant main effects for language ($F(1,244) = .93, p = .93$) however a significant effect was reported for brand conditions ($F(1,244) = 6.32, p = .01$). The interaction effect was also significant ($F(1,244) = 12.43, p < .01$). The nature of these interactions is illustrated in figures 7.2 and 7.3.

The same simple effect pattern was also found with product attitudes. In the unknown brand conditions, “You May Like...” resulted in more positive attitudes compared to “We Recommend For You” ($F(1,244) = 5.91, p = .02$). In the known brand condition, “We Recommend For You” lead to more positive product attitudes compared to “You May Like...” ($F(1,244) = 6.52, p = .01$).

Unknown Brand Conditions

Mediation analyses were run in order to explore the nature of the role these variables play. The models were the same as study 2, with the first model tested

including the two unknown brand recommendations as the independent variable (“We Recommend For You” = 0, “You May Like...” = 1), website attitudes as the dependent variable, and assertiveness, reactance and confidence as sequential mediators using model number 6 through PROCESS for SPSS (Hayes, 2013).

Language was shown to significantly predict assertiveness ($\beta = -.84, p < .01$) and marginally predict confidence ($\beta = .38, p = .07$). Assertiveness significantly predicted reactance ($\beta = .83, p < .01$), and website attitudes ($\beta = -.27, p = .02$). Reactance marginally predicted confidence ($\beta = -.20, p = .09$) and confidence significantly predicted website attitudes ($\beta = .43, p < .01$). All other paths were non-significant.

Indirect effects were tested using 5000 bootstrap samples. Significant paths were found for language \rightarrow assertiveness \rightarrow website attitudes ($\beta = .23, SE = .14, 95\% CI [.03, .60]$), language \rightarrow assertiveness \rightarrow reactance \rightarrow confidence \rightarrow website attitudes ($\beta = .06, SE = .04, 95\% CI [.009, .19]$), and language \rightarrow confidence \rightarrow website attitudes ($\beta = .16, SE = .09, 95\% CI [.01, .40]$). The direct effect of recommendation language on website attitudes was shown to be non-significant ($\beta = .04, SE = .20, 95\% CI [-.35, .43]$), when the mediators were present, suggesting full mediation. All other indirect pathways were found to be non-significant.

Table 7.1
Descriptives for Study 3

Measure	Condition	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Website Attitudes	High Assertiveness – Known Brand	62	5.84	1.15	.15
	Low Assertiveness – Known Brand	62	5.34	1.28	.16
	High Assertiveness – Unknown Brand	62	5.30	1.28	.16
	Low Assertiveness – Unknown Brand	62	5.76	1.18	.15
Product Attitudes	High Assertiveness – Known Brand	62	5.32	.92	.12
	Low Assertiveness – Known Brand	62	4.87	.98	.13
	High Assertiveness – Unknown Brand	62	4.56	1.07	.14
	Low Assertiveness – Unknown Brand	62	4.99	.96	.12
Reactance	High Assertiveness – Known Brand	62	3.52	1.69	.22
	Low Assertiveness – Known Brand	62	3.00	1.58	.20
	High Assertiveness – Unknown Brand	62	3.28	1.59	.20
	Low Assertiveness – Unknown Brand	62	2.67	1.44	.18
Confidence	High Assertiveness – Known Brand	62	5.32	.93	.12
	Low Assertiveness – Known Brand	62	4.87	.99	.13
	High Assertiveness – Unknown Brand	62	4.69	1.26	.16
	Low Assertiveness – Unknown Brand	62	5.13	.95	.12
Assertive	High Assertiveness – Known Brand	62	3.96	1.63	.21
	Low Assertiveness – Known Brand	62	3.38	1.65	.21
	High Assertiveness – Unknown Brand	62	4.05	1.56	.20
	Low Assertiveness – Unknown Brand	62	3.21	1.50	.19

Table 7.2
Correlation Matrix for Study 3

Measure	1	2	3	4	5	6
1. Website Attitudes	-					
2. Product Attitudes	.66**	-	-			
3. Reactance	-.24**	-.01	-			
4. Confidence	.42**	.51**	-.12	-		
5. Assertiveness	-.30**	-.01	.78**	-.05	-	
6. Information Asymmetry	.41**	.37**	.08	.31**	.08	-

**p<0.01, n = 248

Table 7.3
Two-way ANOVA Results, Study 3 – Website Attitudes

	Sum of Squares	df	F	Sig.
Corrected Model	14.44 ^a	3	3.20	.02
Intercept	7671.62	1	5106.66	.00
Language Condition	.03	1	.02	.89
Brand Condition	.22	1	.14	.70
Interaction Term	14.20	1	9.45	.00
Error	366.56	244	-	-

^aR² = .04 (Adjusted R² = .03)

Table 7.4
Two-way ANOVA Results, Study 3 – Product Attitudes

	Sum of Squares	df	F	Sig.
Corrected Model	18.19 ^a	3	6.25	.00
Intercept	6037.74	1	6225.98	.00
Language Condition	.01	1	.01	.93
Brand Condition	6.13	1	6.32	.01
Interaction Term	12.05	1	12.43	.00
Error	236.62	244	-	-

^aR² = .07 (Adjusted R² = .06)

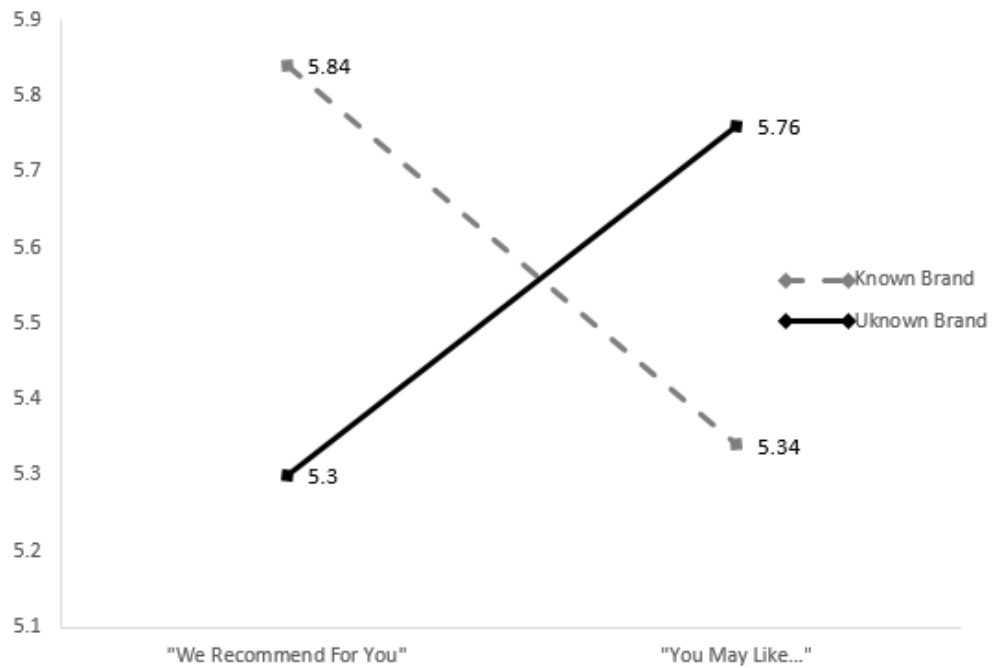


Figure 7.2 - Website Attitudes

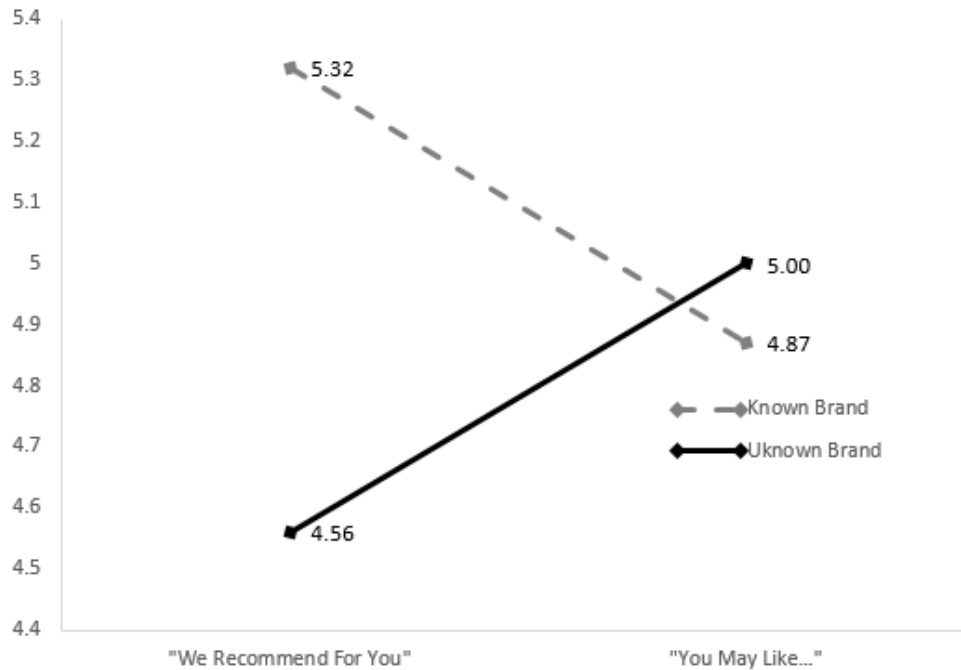
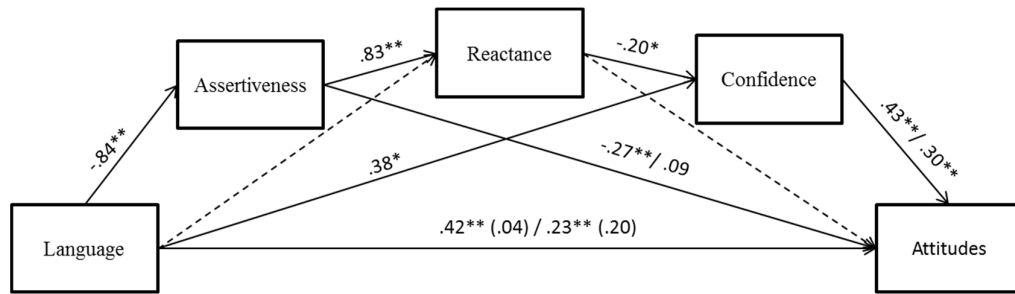


Figure 7.3 - Product Attitudes

In terms of product attitudes, significant path was found for language → assertiveness → reactance → confidence → product attitudes ($\beta = .06$, $SE = .04$, 95% CI [.009, .17]), and language → confidence → product attitudes ($\beta = .15$, $SE = .09$, 95% CI [.005, .36]). The direct effect of recommendation language on product attitudes was shown to be non-significant ($\beta = .20$, $SE = .17$, 95% CI = [-.14, .54]), when the mediators were present, suggesting full mediation. All other indirect pathways were found to be non-significant.

Figure 7.4 illustrates the results of the model that was run.



**significant at $p < .05$, *marginally significant at $p < .1$

Figure 7.4 – Mediation Analysis in the Unknown Brand Conditions for Website/Product Attitudes

Known Brand Conditions

Mediation analyses were run on the same models as the unknown brand conditions. Recommendation language marginally predicted assertiveness ($\beta = -.57, p = .06$), and website attitudes ($\beta = -.37, p = .08$) however significantly predicted confidence ($\beta = -.46, p = .01$). Assertiveness significantly predicted reactance ($\beta = .71, p < .01$) however reactance did not significantly predict confidence ($\beta = -.10, p = .18$). Confidence significantly predicted website attitudes ($\beta = .48, p < .01$). All other paths were non-significant.

An analysis of the indirect effects showed significant paths for language \rightarrow assertiveness \rightarrow website attitudes ($\beta = -.13, SE = .00, 95\% \text{ CI } [-.008, .34]$) and language \rightarrow confidence \rightarrow website attitudes ($\beta = -.21, SE = .10, 95\% \text{ CI } [-.46, -.06]$). The direct effect of language on website attitudes was shown to be non-significant ($\beta = -.37, SE = .21, 95\% \text{ CI } [-.79, .04]$), when the mediators were present, suggesting full mediation. All other indirect pathways were non-significant.

The only significant indirect effect on product attitudes was language → confidence → product attitudes ($\beta = -.24, SE = .10, 95\% CI [-.48, -.07]$) The direct effect of language on website attitudes was shown to be non-significant ($\beta = -.17, SE = .15, 95\% CI [-.47, .13]$), when the mediators were present, suggesting full mediation. No other indirect pathways were found to be significant. Figure 7.5 illustrates the results of the model that was run.

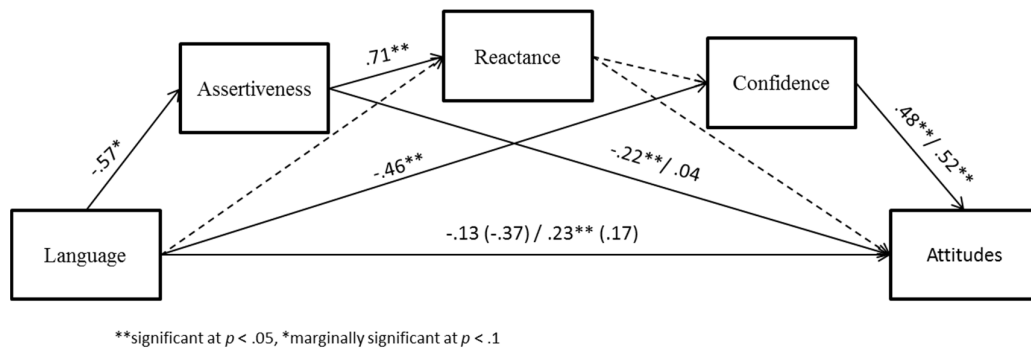


Figure 7.5 – Mediation Analysis in the Known Brand Conditions for Website/Product Attitudes

Discussion

Results provide some interesting findings. Firstly, hypothesis H7 is supported, with the effect of language on confidence and attitudes depending upon whether the participant is familiar or not with the brand. “You May Like...” led to more positive attitudes when participants were faced with a brand they had not encountered before, while “We Recommend For You” led to more positive attitudes when participants saw the well-known popular brand. Participants in these conditions reported a higher amount of information asymmetry, suggesting

that these were high threat to freedom conditions, similar to the no-account conditions from study two.

As expected, this was driven by mechanisms supported again by Brown and Levinson's (1987) work. The lower levels of information asymmetry felt by those who were recommended the known brand saw reactance and assertive play no role with "We Recommend For You" directly leading to higher confidence. In contrast, in the high threat conditions where participants were recommended the factitious brand, "You May Like..." resulted in higher levels of confidence through the lower perceived assertiveness and reactance. These findings support H6.

The surprising finding comes with respect to H5. It was hypothesised that like study two, the low threat condition would see no significant difference in perceived assertiveness. This does not appear to be the case, as "We Recommend For You" was still seen as more assertive regardless of threat level. While this means H5 cannot be fully supported, it is not outside of what can be explained through Brown and Levinson's (1987) theory. Participants showed they felt less of a power imbalance when they were recommended a familiar brand. According to Brown and Levinson (1987), this should result in assertive language being less impactful in terms of seeking an optimal outcome. Study three supports this overall suggesting that H5 can be partially supported.

CHAPTER 8

Study 4

Chapter Introduction

This chapter provides an overview of the fourth study in this thesis. The study aimed at looking at the effect of recommendation language when a second signal (price) was also present. This chapter starts with an overview of current literature and theoretical concepts necessary to understand the addition to the current framework studies one through three were based on. After this, a detailed explanation of study four will be offered along with results and discussion.

Study Overview and Question

Studies one through three displayed the effects that recommendation language can have on attitudes. In order to test these effects, the experimental conditions limited the amount of information on which participants could form an attitude about the product. While a certain number of product features were displayed with the product, these features were generic and would be expected to be seen on any modern product within the category. This was done in order for the language of the recommendation to be the only heuristic that could act as a signal for attitudes to be formed around.

These studies were successful in showing the signalling power of recommendation language, however in a real-world online shopping experience there is often more than one, sometimes conflicting signals that consumers are

exposed to. This raises an interesting question, “*what happens to the signalling power of recommendation language when a second signal is also present?*”

Given that price is often one of the dominant product signals we are exposed to, this study seeks to address the fifth research question of this thesis:

RQ5: What role do price reference points play in the relationship between recommendation language and attitudes?

Price as a Signal

Research into price as a signal is extensive (Darwar & Parker, 1996; Dodds & Monroe, 1985; Dodds, Monroe & Grewal, 1991; Lichtenstein, Block & Black 1988; Lichtenstein, Ridgway & Netemeyer, 1993; Teas & Agarwal, 2000). Much of this signalling is based on consumer levels of understanding and expectations with respect to how retailers operate. Consumers hold an understanding that higher quality products require higher levels of investment and spending which require higher prices passed on to consumers (Curry & Riesz, 1988; Dodds et al., 1991; Lichtenstein et al., 1993; Teas & Agarwal, 2000). This leads to the expectation that a product with a higher price is of higher quality. Price can also act as a determinant of the level of luxury a particular product, or brand displays (Kapferer & Laurent, 2016). Some luxury brand managers purposefully do not display prices to increase the fantasy surrounding the product (Kapferer & Bastien, 2009; 2012). Price can also influence the perceived sacrifice within a decision. In the consumers mind, a lower price means that they have less to lose if the decision turns out to be an incorrect one, thus making the value of the product seem higher (Dodds et al., 1991, Lichtenstein et al., 1993; Teas & Agarwal,

2000). Clee and Wicklund (1980) also linked price to reactance. They suggested that price helps dictate the level of freedom consumers perceive to have in purchasing the product. We are more free to buy lower cost items, but as cost increased, our freedom starts to be threatened (Clee & Wicklund, 1980).

In addition to this, way in which price related information is communicated, and presented, can have significant effects on how the price is perceived. Literature within the area of deals and promotions often looks at how changes in language when offering price based discounts or deals results in different attitudes towards the price (e.g. Chen, Monroe & Lou, 1998; Darke & Chung, 2005). Whether a discount is presented as a ‘% off’ or a ‘cents off’ will affect how consumer perceive the overall deal and can also affect their choices (DelVecchio, Krishnan & Smith, 2007). There is also research that suggests there is a difference between the phrases ‘Buy one get one free’ and ‘buy two, get 50% off’ despite the monetary impact being the same (Sinha & Smith, 2000). This suggests that the presence of price information could provide an interesting influence on the way the language of the recommendation is decoded by consumers.

H8: *Price will moderate the effect of recommendation language on attitudes. It is expected that “You May Like...” leads to more positive attitudes in conditions where prices are high. “We Recommend For You” leads to more positive attitudes when prices are low.*

Evaluability of Criteria

Before price can be tested, an understanding of how a consumer would evaluate it as a criteria also needs to be explored. As earlier academic work has shown, attitudes are general evaluations that we have towards an 'object' (Ajzen, 2001; Ajzen & Fishbein, 2000; Eagly & Chaiken, 1993; Petty, Wegener & Fabrigar, 1997). The level of complexity in attitude formation is largely determined by the ease at which the criteria can be evaluated. Hsee (1996) offers a theoretical framework for looking at the evaluability of an attribute. Evaluability is defined as the ease at which an attribute can be evaluated independently of others (Hsee, 1996; Hsee, Loewenstein, Blount & Bazeman, 1999). In the first three studies, the evaluability of the main attribute (recommendation language) was quite low. This was due to a large amount of subjectivity and the fact that there would be large differences in how relevant the language was to participants and what meaning the language held (Hsee et al., 1999). Price on the other hand has a higher level of evaluability given that it has a lower subjectivity to its meaning. In general, higher prices will always be seen as more expensive.

Despite this however, the exact meaning that consumers will derive from price information will depend upon reference points. For example we do not know if product A's price of \$150 is high or low until we know the price of other products in the category. Also, while we may all see higher prices as more expensive, the degree to which something is more expensive depends on the difference of the price compared to a reference price. Product A won't seem that much more expensive compare to product B if B is \$140. But it would seem more expensive if product B was \$100.

The inclusion of a reference point in this study was seen as important, given that it would provide a common meaning of the price signal among all participants. Hsee et al. (1999) provide two possible strategies for providing reference points. Firstly, to provide a 'neutral' reference point. In this strategy, one price would be offered as an average, and then participants would judge the price information as being either above or below this average. The second strategy is to provide a 'scale' reference by offering the highest possible price, and the lowest possible price. Both strategies provide strengths and weaknesses. A reference scale provides the easiest evaluability. People see the price and know exactly how close it is to the lowest outcome and highest. This reduces the level of subjectivity and creates a more common meaning for the individual price point (Hsee et al., 1999). The risk however is the observed phenomena of extremeness aversion, which shows that consumer preference and choice can be affected if they know the extremes of a particular choice (Simonson & Tversky, 1992).

By providing a neutral reference, this risk can largely be overcome, however the evaluability is reduced given that the difference between price and reference price can hold subjective meaning (Hsee et al., 1999). For example, we may know that a product is \$100 dollars, and the average price is \$120. The question would be is that \$20 a large difference or small difference? This thesis moves forward with the decision to offer a scale reference. While the risk of extremeness aversion is present, it provides a more common understanding of the price information, allowing for easier interpretation of the results of the experiment.

Design

Study four employed a 3 (control, high/low assertiveness) x 2 (high/low price) between subjects design. The scenario and stimuli that participants were exposed to was very similar to that used in study 1. The scenario made it clear however that after the online search had been conducted, the third party had come to the conclusion that popular products had a price range from \$200 to \$350.

“After winning a modest amount of money in the lottery, Sam decides to buy a new set of wireless headphones. Sam spends approximately one hour on the internet researching headphone features and comparing different models.

Sam particularly focuses on different headphone manufacturer's and customer review websites. These websites are found through googling terms such as "best rated headphones" and "which headphones should I buy". After visiting these sites, Sam discovers that the headphones popular with other consumers are between \$200 and \$350

Sam, still unsure, clicks on a link to an online electronics store. As Sam scrolls down the page they see the following banner....(Please click next)”

Figure 8.1 provides examples of the stimuli that were used. The prices of the products were chosen to be \$210 and \$340. This was done to maximise the price difference between the two, while attempting to limit the idea that either product were at the extreme ends of the price scale.

Four hundred and thirty-nine (49.2% female) participants were recruited from Amazon MTurk. The mean age of the sample was 35.45 ($SD = 10.44$) with

participants being randomly assigned to one of the six conditions. This study included the same manipulation and attention checks as study 1 as well as an attention check asking them what price the product was that was recommended.



Figure 8.1 – Examples of Stimuli for Study 4

Measures

Assertiveness ($\alpha = 0.91$, 95% CI [0.89 – 0.92]), and product attitudes ($\alpha = 0.83$, 95% CI [0.81 – 0.86]) were both measured using the same items as all previous

studies. Reactance ($\alpha = 0.92$, 95% CI [0.91 – 0.93]) and Confidence ($\alpha = 0.87$, 95% CI [0.84 – 0.89]) were measured with the same items as studies two and three. Website attitudes were measured using the combination of items from studies one, two and three, along with extra items from a study in attitudes towards store brands (Ittersum, Wansink, Pennings & Sheehan, 2013) and general attitudes towards shopping websites (Rose et al., 2012). After a factor analysis was run, twelve items were used that accounted for 62.73% of the total variance. Reliability of the twelve items was high ($\alpha = 0.93$, 95% CI [0.91 – 0.94]).

Results

Tables 8.1 and 8.2 summarise the descriptive statistics and correlations of the measured variables in study 4. A surprising result appeared when reactance seemed to positively correlate with website attitudes across the overall sample. However this correlation only appears to hold within the control conditions ($r(143) = .30, p < .01$). The conditions in which participants were exposed to some form of language, the correlation is non-significant ($r(292) = -.003, p = .96$). An independent t-test showed no significant difference in assertiveness across the conditions that had “We Recommend For You” ($M = 4.01, SD = 1.45$) and “You May Like...” ($M = 3.92, SD = 1.63$) ($p = .65$). There was a significant difference in assertiveness, however, across the two price conditions. Recommendations in the low price conditions ($M = 3.75, SD = 1.56$) were seen to be significantly more non-assertive than recommendations in the high price conditions ($M = 4.17, SD = 1.49$).

Table 8.1
Descriptives for Study 4

Measure	Condition	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>	
Website Attitudes	Control – Low Price	72	4.41	1.27	0.15	
	High Assertiveness– Low Price	73	4.31	1.19	0.14	
	Low Assertiveness – Low Price	73	4.68	0.91	0.11	
	Control – High Price	75	4.07	1.09	0.13	
	High Assertiveness – High Price	73	4.51	1.28	0.15	
	Low Assertiveness – High Price	73	4.79	1.07	0.13	
	Product Attitudes	Control – Low Price	72	5.04	0.90	0.11
		High Assertiveness– Low Price	73	5.00	0.92	0.11
		Low Assertiveness – Low Price	73	5.14	0.70	0.09
Control – High Price		75	4.88	0.98	0.11	
High Assertiveness – High Price		73	4.93	1.15	0.14	
Low Assertiveness – High Price		73	5.34	0.91	0.11	
Reactance	Control – Low Price	72	3.34	1.74	0.21	
	High Assertiveness– Low Price	73	3.11	1.78	0.21	
	Low Assertiveness – Low Price	73	3.21	1.69	0.20	
	Control – High Price	75	3.48	1.64	0.19	
	High Assertiveness – High Price	73	3.15	1.73	0.20	
	Low Assertiveness – High Price	73	3.48	1.83	0.21	
Confidence	Control – Low Price	72	4.80	1.31	0.15	
	High Assertiveness– Low Price	73	4.84	1.23	0.14	
	Low Assertiveness – Low Price	73	4.98	1.29	0.15	
	Control – High Price	75	5.01	1.06	0.12	
	High Assertiveness – High Price	73	5.19	1.04	0.12	
	Low Assertiveness – High Price	73	5.41	1.03	0.12	
Assertiveness	Control – Low Price	72	-	-	-	
	High Assertiveness– Low Price	73	3.82	1.53	.18	
	Low Assertiveness – Low Price	73	4.19	1.35	.16	
	Control – High Price	75	-	-	-	
	High Assertiveness – High Price	73	3.69	1.60	.19	
	Low Assertiveness – High Price	73	4.16	1.64	.09	

Table 8.2
Correlation Matrix for Study 4

Measure	1	2	3	4	5
1. Website Attitudes	-				
2. Product Attitudes	.74**	-			
3. Reactance	.11*	.02	-		
4. Confidence	.45**	.43**	.08	-	
5. Assertiveness	.02	-.02	.81**	.08	-

**p<0.01; *p<0.05

Tables 8.3 and 8.4 summarise the results of the two-way ANOVAs run. A significant direct effect of language on website attitudes was found ($F(2,433) = 2.98, p = .05$) however the direct effect of price was non-significant ($F(1,433) = 1.78, p = .19$). The interaction between language and price conditions and its effect on website attitudes was found to be significant ($F(2,433) = 5.62, p < .01$). In terms of product attitudes neither the direct effect of language ($F(2,433) = .87, p = .42$) or price ($F(2,433) = .15, p = .70$) were significant. The interaction of language and price was significant however ($F(2,433) = 4.88, p = .01$). Figures 8.2 and 8.3 illustrate the effects.

Table 8.3
Two-way ANOVA Results, Study 4 – Website Attitudes

	Sum of Squares	df	F	Sig.
Corrected Model	25.00 ^a	5	3.82	.00
Intercept	8729.25	1	6675.22	.00
Language Condition	7.79	2	2.98	.05
Price Condition	2.32	1	1.78	.19
Interaction Term	14.69	2	5.62	.00
Error	566.24	433	-	-

^aR² = .04 (Adjusted R² = .03)

Table 8.4
Two-way ANOVA Results, Study 4 – Product Attitudes

	Sum of Squares	df	F	Sig.
Corrected Model	10.30 ^a	5	2.33	.04
Intercept	11219.81	1	12719.17	.00
Language Condition	1.54	2	.87	.42
Price Condition	.14	1	.15	.70
Interaction Term	8.60	2	4.88	.01
Error	381.96	433	-	-

^aR² = .03 (Adjusted R² = .02)

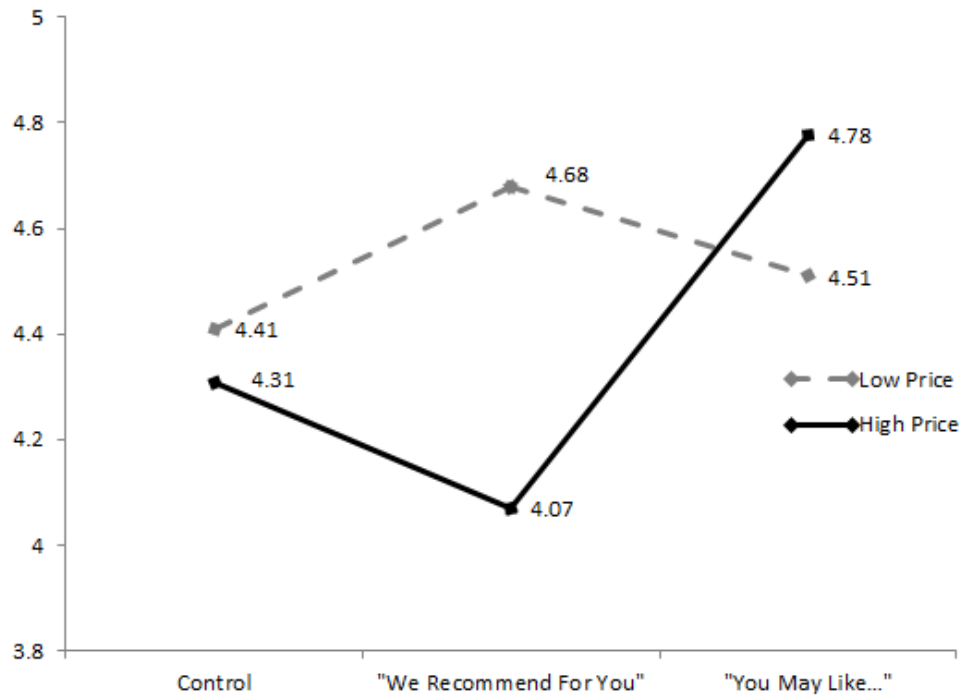


Figure 8.2 – Website Attitudes

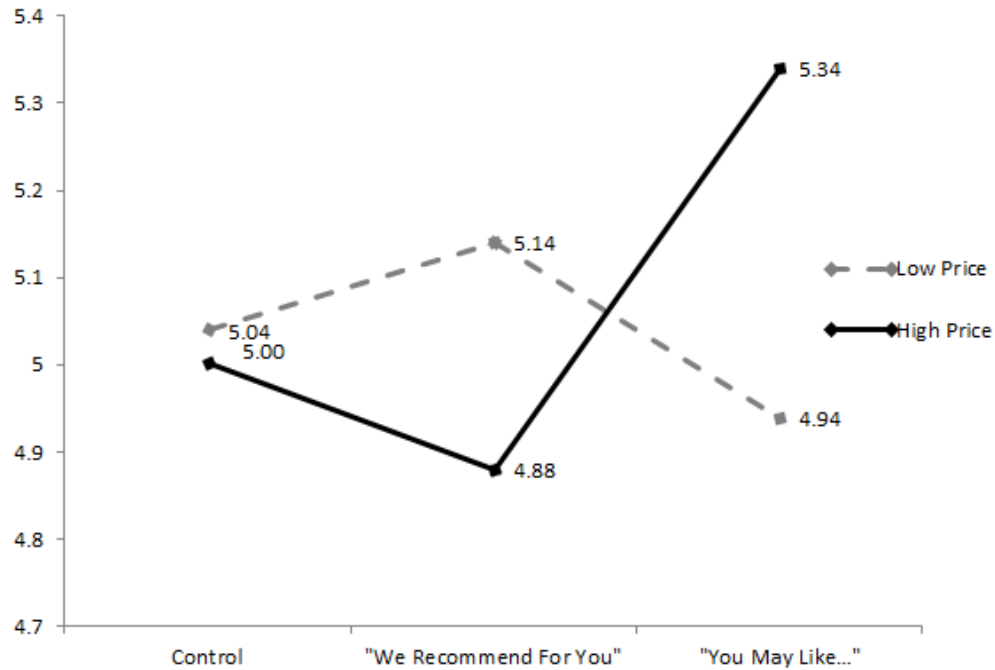


Figure 8.3 – Product Attitudes

A series of one-way ANOVAs were run and found that in the low price conditions, there was no significant differences between groups for website ($F(2,215) = 1.04, p = .36$) or product attitudes ($F(2,215) = .86, p = .43$). In the high price condition however, significant differences between groups were found for website attitudes ($F(2,218) = 7.89, p < .01$) and product attitudes ($F(2,218) = 4.91, p = .01$).

A post hoc analysis using Tukey on the high price conditions found that website attitudes in the “You May Like...” condition ($M = 4.79, SD = 1.07$) were significantly higher compared to “We Recommend For You” ($M = 4.07, SD = 1.09$) ($p < .01$) and the control condition ($M = 4.31, SD = 1.19$) ($p = .03$). Effect sizes for these comparisons were $d = .53$ and $.35$ respectively.

In terms of product attitudes, “You May Like...” ($M = 5.34, SD = .91$) reported significantly higher product attitudes compared to “We Recommend For You” ($M = 4.88, SD = .09$) ($p < .01$) and marginally significantly higher compared to the control condition ($M = 5.00, SD = .92$) ($p = .07$). Effect sizes for these comparisons were $d = .41$ and $.30$ respectively.

A mediation analysis were run on a model identical to those in studies two and three. The model included the two high price language conditions as the independent variable (“We Recommend For You” = 0, “You May Like...” = 1), attitudes as the dependent variable and assertiveness, reactance and confidence as the mediators. Language significantly predicted confidence ($\beta = .40, p = .02$) and website attitudes ($\beta = .33, p = .03$). Assertiveness significantly predicted reactance ($\beta = .94, p < .01$) and marginally predicted confidence ($\beta = .18, p = .07$). Confidence significantly predicted website attitudes ($\beta = .33, p < .01$). All other paths were found to be non-significant.

Indirect effects found only one significant path was for language → confidence → website attitudes ($\beta = .13, SE = .07, 95\% CI [.01, .29]$). The direct effect of language on website attitudes was shown to be significant ($\beta = .33, SE = .15, 95\% CI [.03, .64]$), when the mediators were present, suggesting partial mediation. All other indirect pathways were found to be non-significant.

Indirect effects for product attitudes were consistent with those above. Only a significant path was found for language → confidence → product attitudes ($\beta = .14, SE = .07, 95\% CI [.02, .31]$). The direct effect of language on website attitudes was shown to be non-significant ($\beta = .33, SE = .15, 95\% CI [.04, .62]$), when the

mediators were present, suggesting partial mediation. All other indirect pathways were found to be non-significant.

Figure 8.4 illustrates the mediation analysis within the model tested.

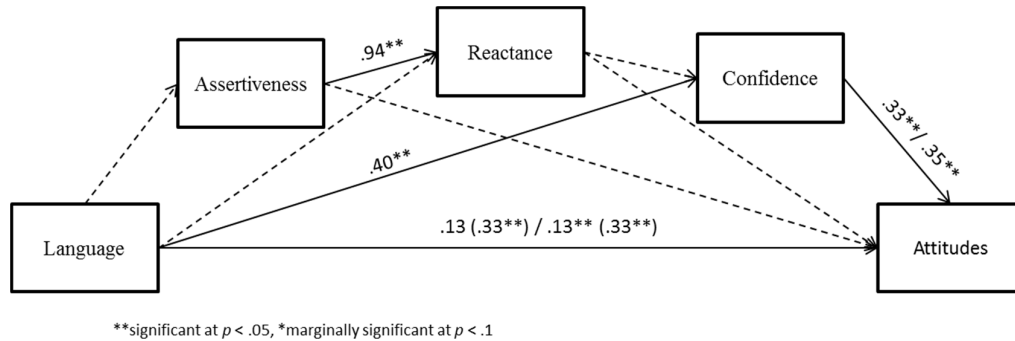


Figure 8.4 – Mediation Analysis within the High Price Conditions for Website/Product Attitudes

Discussion

Study four shifted the theoretical focus away from the previous studies to look at the language effects when a second heuristic or signal was present. Results suggest that the hypothesis is partially supported (H6); however the precise nature of the moderating effect may need further focus in the future. It was anticipated that price, being a strong signal in its own right, would change the degree to which each recommendation statement was considered assertive. This does not appear to be the case, as it seems that it was the price itself that determined how the level of assertiveness was perceived, rather than the language. Any recommendation that recommended the lower price was considered on average, more non-assertive than any recommendation that recommended the higher priced

product. However, reactance didn't appear to show the same differences across conditions despite having the same close correlation to assertiveness as seen in the other three studies. This many indicate that price and language work together to create/influence reactance.

Overall however, it can be said that language did play some role in changes in attitudes. In the high price conditions, which were theoretically the high threat condition, the use of "You May Like" resulted in more positive attitudes. This seemed to be driven in part by the way in which the language resulting in higher levels of perceived confidence in the recommendation. This appears to provide some level of consistency with the previous studies, given that "You May Like..." was the more effective statement within the high threat conditions from studies two and three, despite the lack of influence from reactance. However more research is needed to fully explore and analyse the precise nature of the effects within the data pattern.

CHAPTER 9

Overall Discussion

Chapter Introduction

This chapter provides an in-depth and integrated discussion of all four studies within this thesis. It will explore what the results mean in terms of the literature and theoretical framework discussed in chapter two. It will then explore the various contributions that this thesis has made. It will conclude with an analysis of the limitations of this thesis and propose directions for further research and future questions that could be posed.

Research Aim

The overall research aim was to answer the question “what effect does recommendation language have on consumer attitudes”. The emergence of the internet has created an increasing importance for retailers to manage consumer attitudes, with online recommendations becoming a popular tool for retailers to use. The literature surrounding online recommendations seemed to be split into two main arguments. Some authors showed that recommendations can improve attitudes towards online retailers with through improved perceptions of interactivity and personalisation (Baier & Stuber, 2010; Barlow et al., 2004; Holzwarth, et al., 2006). However, some authors showed that online recommendations have the ability to lead to more negative attitudes through triggering psychological responses such as reactance (Lee & Lee, 2009; Lee et al.,

2010). This thesis sought to focus on this latter stream, trying to identify elements of the recommendation that could be managed in order to reduce negative responses among consumers.

Language was considered a factor that could influence the degree to which these negative responses occurred. The idea that language could be a variable of interest was based on three main points. Firstly, computers can act as social actors when computers try and communicate with humans in a humanlike way (Moon, 2000; Nass & Moon, 2000; Nass et al., 1997; Reeves and Nass, 1996). Secondly, language has been shown to be an influencing factor in determining how successfully social marketing campaigns can be at, managing reactance and initiating behavioural compliance to messaging (Dillard & Shen, 2005; Kronrod et al., 2012a; Quick & Considine, 2008; Quick & Stephenson, 2007). Thirdly, Brown and Levinson's (1987) politeness theory provides a framework that explains how language could affect the mechanism through which negative responses were occurring as a result of recommendations, namely reactance.

Overall the proposed conceptual framework was confirmed with all hypotheses supported through analysis of the data. The research questions were answered in a way consistent with expectations based on the theory. A summary of findings is presented in table 9.1.

Table 9.1
Summary of Studies

	Associated Research Question	Associated Hypothesis	Results
Pilot Study	-	-	Established that language of recommendation can influence perceived assertiveness.
Study 1	RQ1, RQ2	-	Established that language of recommendation can influence attitudes towards the website and product.
Study 2	RQ3	H1 – H4	Hypotheses supported. Attitudes were more positive when people with low attachment were exposed to non-assertive language, due to the low levels of assertiveness leading to lower reactance and higher confidence. Attitudes were more positive when people with high attachment were exposed to assertive language, due to the assertive language leading to higher levels of confidence.
Study 3	RQ4	H1, H5-H7	Hypotheses supported. Attitudes were more positive when people with low familiarity were exposed to non-assertive language, due to the low levels of assertiveness leading to lower reactance and higher confidence. Attitudes were more positive when people with high familiarity were exposed to assertive language, due to the assertive language leading to higher levels of confidence.
Study 4	RQ5	H8	Hypotheses partially supported. Attitudes were more positive when non-assertive language was used to recommend the high-priced product, due to non-assertive language resulting in more confidence. No significant differences were found across recommendation language in the low-price conditions.

Discussion of Findings

Across the four studies, language was found to have a significant impact on the attitudes of participants, through the role it plays in influence perceived assertiveness and confidence. The precise nature of the response depended upon the nature of shopping scenario in which the online recommendation was made. This supports Brown and Levinson's (1987) work from human-human communication research that suggests the exact language that was more effective depended upon the degree to which the situation threatened people's perceived freedom. Across the four studies in this thesis, the degree to which the recommendation would create an FTA was manipulated and the work of Brown and Levinson (1987) was supported.

One approach put forward by Brown and Levinson (1987) is to use language that hedges the speaker's position and suggests that there is no desired outcome from the recommendation. The pilot study and study one of this thesis showed congruence with this idea within the context of online shopping. Using a generic shopping scenario, in which all participants were faced with the same website, "You May Like..." was found to be a less assertive recommendation statement than "We Recommend For You". "We Recommend For You" is a more certain statement that conveys an idea that the retailer thinks the consumer should be giving attention to and buying a particular product. "You May Like..." on the other hand is less certain and conveys the idea that while the retailer considers a product more worthy of consideration than others, the decision to purchase the product is more in the hands of the consumer.

The differences in perceived assertiveness translated to more positive attitudes occurring within the group that was exposed to “You May Like...”. It was interesting to note that the group that saw no recommendation language reported attitudes that fell somewhere between the other two groups, however attitudes within this control group were not significantly better than “We Recommend For You” nor significantly worse than “You May Like...”. It can be argued from this that using “We Recommend For You” won’t lead to outcomes that are more negative than a baseline level, however the outcome would be significantly sub-optimal compared to the outcome the retailer could gain by using “You May Like...”. Another interesting finding was that the difference in attitudes appeared to be relatively consistent across website and product attitudes. This highlights that neither one nor the other is more sensitive to recommendation language. The mediation analysis highlighted how these attitude differences were facilitated through the level of perceived assertiveness, consistent with the expectation from Brown and Levinson (1987).

The way in which study one supported and applied the ideas from Brown and Levinson (1987) also provided support for the overall approach taken to treat computers as social actors. The core assumption made by this thesis was that following the work of authors such as Moon (2000), Nass and Moon (2000), and Reeves and Nass (1996), a framework could be developed that applied human-human communication theory in the context of online shopping, where consumers are dealing with computerised versions of a retailer. The idea that principles from Brown and Levinson’s (1987) theory were supported and consistent with data from the pilot study and study one, suggest that the underlying assumption of

treating computers as social actors is valid and that the framework provides a contribution to both practice and theory.

Study two had a series of aims. The first aim was to replicate study one in order to provide further empirical support for the broad effects of language on attitudes.

This was successfully achieved given that two of the four conditions were identical to the conditions from study one and, consistent with those findings, “You May Like...” led to significantly higher attitudes than “We Recommend For You”. It is worthy of note, however, that website attitudes reported across these conditions in study two seemed to be considerably higher than those in study one. One explanation could be due to the nature of the scenarios in study two being first person. That decision was made to make the scenarios more personally relevant given that website attachment was being measured as a moderating variable. As highlighted by Collett and Childs (2011), elements related to social exchange can be heightened when using first-person vignettes. This could offer some explanation for higher website attitudes reported in study two compared to study one.

The second aim of study two was to explore the roles of assertiveness, reactance and perceived confidence. Reactance has long been tied to the idea of our desire to make decisions freely of other, and our desire to avoid and remove threats to this freedom (Brehm, 1966). It had also been identified as one of the key factors in negative consumer outcomes from the use of recommendations (Lee & Lee, 2009; Lee et al., 2010). Brown and Levinson (1987) positioned reactance at the core of their theory and suggested that non-assertive language reduces the amount of reactance felt. Study two showed strong support for this idea with assertiveness

and reactance having a strong correlation. It was also supported with “We Recommend For You” resulting in significantly higher levels of reactance compared to “You May Like...”

It was also hypothesised that through lowering reactance, non-assertive language would be perceived as more confident. Research exists that highlights the role that perceived certainty and confidence could be changed through language that appeared more coercive or persuasive under different circumstances (Barron & Staten, 1995; Friestad & Wright, 1994, Kirmani, 1997). It was hypothesised that the same changes in language that led to statements being considered more non-assertive would also lead to them affecting the level to which consumers thought the retailer was confident in the recommendation. Again, study two provided support for the hypothesis, showing that participants considered the retailer was significantly more confident in the recommendation when they used “You May Like...” compared to “We Recommend For You”. Sequential mediation analyses showed that the lower levels of reactance triggered by less assertive language led to increased confidence, resulting in more positive attitudes. One main conclusion from these findings is that consumers will have better perceptions of retailers who use more non-assertive language since they are less likely to feel the retailer is trying to force them into a certain decision, and that the retailer sounds more confident about what they are recommended. This conclusion provides support for our current understanding of how reactance can play a role in responses to online recommendations (Lee & Lee, 2009; Lee et al., 2010), how this links to our responses to language (Brown and Levinson, 1987), and adds to our

understanding of sales techniques and persuasion (Barron & Staten, 1995; Friestad & Wright, 1994).

The final aim of study two was to test the moderating effect of website attachment given that the above effects were only considered to be prominent in situations where the perceived threat to freedom was high. As expected, while “You May Like...” was the statement that led to better attitudes in the conditions without the membership account, “We Recommend For You” was the statement that led to better attitudes for participants who had the strong attachment of being a member for five years. These findings support the theoretical framework from Brown and Levinson (1987). They suggested that the degree to which assertiveness would work was impacted in part by the social distance between hearer and speaker (consumer and website). It was anticipated that consumers who had already developed a strong attachment to retailer would be less sensitive to the language. The study used the idea of someone who had signed up for a membership account and had held the account for five years as being a proxy for strong website attachment. This was supported with data showing significantly higher levels of attachment in the conditions where the membership account was held. The hypothesised effect of this attachment was also supported with no significant differences in perceived assertiveness and reactance appearing as a result of the language. The model pathway clearly showed that language was having a direct effect on confidence, bypassing assertiveness and reactance. It was shown that “We Recommend For You” provided a higher level of confidence compared to “You May Like...” in the account conditions. This is significant as it supports the hypothesised idea that higher levels of attachment also changed the way in which

language conveyed confidence in addition to the role proposed by Brown and Levinson (1987).

The main aim for study three was to explore the moderating effect of product familiarity. Studies one and two had considered scenarios in which all participants were faced with a situation where they had little knowledge about the fictitious brand, with only the nature of the website being manipulated. This thesis identified that in many situations however, people would have higher levels of knowledge about the products. This was thought to have an impact on the effect of recommendation language, exploring one of the other elements that Brown and Levinson (1987) identified.

When there is a different level of power between speaker and hearer, the impact of the recommendation changes, as people will feel more compelled to follow a recommendation from someone who has power over them, creating another high threat situation (Brown & Levinson, 1987). Within the literature reviewed, two elements that could contribute to the power dynamic within an online shopping scenario interaction were information asymmetry and risk (Aboody & Lev, 2000; Balakrishnan & Koza, 1993; Healy & Palepu, 2001; Mishra et al., 1998; Mishra & Prasad, 2004). It was highlighted that when consumers were asked to consider a product they had little information about, they considered the decision to be higher risk compared to a product they were very familiar with. Under this scenario, the effect of external signals would be enhanced (Grewal et al., 1998). It was hypothesised that if a retailer made a recommendation for a product consumers didn't have a high level of knowledge about, it would possibly suggest that the retailer knew something the consumer didn't. From this, a greater level of

information asymmetry would be felt between consumer and retailer. This would lead to a change in the effect of the language under Brown and Levinson's (1987) given that the consumer would give the retailer a degree of expert power (Carli, 1999; French et al., 1959).

The hypotheses were mostly supported by study three, however a surprising result appeared to suggest H5 could only be partially supported. Participants who were recommended the fictitious brand that was 'brand new to the market', reported significantly higher levels of information asymmetry compared to participants who were recommended the real-life brand popular brand. This led to the effect of language being similar to that in study two, where "You May Like..." resulted in more favourable attitudes for the fictitious brand recommendation, while "We Recommend For You" led to better attitudes for the real-life brand.

As expected, in the fictitious brand scenarios, "You May Like..." was the better performer due to it being perceived as more non-assertive, and the reactance and confidence effects that resulting from this matching those from the low threat conditions in study two. In the real-life brand scenarios it was interesting to see that the recommendation statements still had different levels of assertiveness. However, the resulting reactance did not have an impact on attitudes. It was once again, the higher levels of confidence that led to "We Recommend For You" causing more positive attitudes. Even though this doesn't fully support the hypothesis for this thesis, it still provides broad support for the theory the hypothesis is built on. Brown and Levinson (1987) suggested that the degree of social distance and power imbalance within an interaction would determine the degree to which language could be used to manage reactance within the

interaction. Results from this thesis suggest this is true, but while the degree of social distance changed the degree to which “We Recommend For You” was considered assertive, the nature of the power imbalance only changed the degree to which participants perceived assertive language to be a negative statement. In fact, when people feel they have the same level of information as the retailer, they seem to value assertiveness. This is an important finding as it relates to, and extends, the work done on persuasion and coercion in sales techniques (Barron & Staten, 1995; Friestad & Wright, 1994).

Studies one, two and three provide an understanding of the important role that language plays when consumers are presented, and interact with online recommendations. One element that was consistent across the three studies however was that the recommendation language was the only main heuristic, or signal. Compared to real-world situations, consumers often face scenarios in which more than one heuristic, or signal, is present.

In order to explore what happens when a second heuristic (or signal) is present, study four was designed with the aim of identifying the effect that price information would have. Price has previously been identified as a significantly strong signal of product quality (Darwar & Parker, 1994; Dodds & Monroe, 1985; Dodds et al., 1991; Lichtenstein et al., 1988; Lichtenstein et al., 1993; Teas & Agarwal, 2000) and it was expected that price might compete with language and alter the way in which language affects attitudes.

This was largely supported by study four. There were a number of interesting findings within the data that are worthy of note. Firstly, it seemed that it was price

that took over the role of determining whether the recommendation was assertive or not. Any recommendation made in the higher price conditions was considered to be more assertive than any recommendation made in the low price conditions. In a further interesting finding from study four, assertiveness and reactance didn't have the same strong correlation compared to the previous studies. It appears that a recommendation for a higher price product is perceived as trying to make the decision for the consumer, however this is not translating to negative cognition or emotion nor a feeling that freedom is being threatened. From the variables measured in study four, a definitive explanation of this effect cannot be supported empirically. One possible explanation could be that retailers are expected by consumers to recommend the products that provide the greatest value to the consumer. More research would need to be conducted in this area.

Study four did provide some data patterns that provide support for previous studies and the overall hypotheses however. In the low price conditions, no significant differences occurred in attitudes between the control condition, "We Recommend For You" or "You May Like..." conditions. Compared to study one, this shows that the presence of price information can change the way in which language affects attitudes. In the high price conditions, no significant difference was observed between the control condition and "We Recommend For You", however "You May Like..." saw significantly more positive attitudes. There was also support for the idea based on literature surrounding language and perceived confidence in interactions (Barron & Staten, 1995; Friestad & Wright, 1994, Kirmani, 1997) in that the more positive attitudes were being driven by higher levels of perceived confidence within the high price conditions.

Theoretical Contribution

As stated earlier, this main aim of this thesis was to identify elements of online recommendations that could be managed in order to minimise potential negative effects of their use. The primary gap in our knowledge that was identified was a lack of understanding surrounding the effects of the recommendation language. As highlighted at the beginning of this thesis, current literature looking at consumer responses data driven customer targeting systems has largely ignored the role that language plays. By adopting the work of authors like Moon (2000) and Nass et al., (1997), this thesis was able to treat online websites as social actors. This allowed for looking at online recommendations through a theoretical lens developed for human-human communication and analyse the role that language plays.

By looking through this lens, a framework was developed that has provided significant theoretical extension of a number of ideas relating to language, and its ability to influence consumer attitudes through psychological reactance and confidence. The main theory the underpinned the hypothesis came from Brown and Levinson' (1987) approach to human-human interactions suggesting that recommendations were linked to Brehm's (1966) account of psychological reactance. Across four studies, this theory was supported within the human-computer context of online retailer, however the complexity of the context suggests that the application of Brown and Levinson's theory (1987) needed more depth. To add this depth, principles from attitude certainty theory (Abelson, 1988), persuasion theory (Friestad & Wright, 1994) and signalling theory (Kirmani, 2007) were all included in order to provide a more complete

understanding of the role that language plays when consumers interact with online product recommendations. Given that literature has yet to provide examine the way in which these elements come together within an online retailing background, the framework presented by this thesis is argued to be novel and a significant contribution to academia. Through an analysis of the moderating effect of boundary conditions such as website membership and product familiarity, the theoretical contribution of this thesis sought to provide enough depth to also provide a significant, actionable advice to marketer.

Due to the inclusion of Brown and Levinson's (1987) theory within the theoretical framework, this thesis also provides some interesting insight into current debate within the field of pragmatics. Brown and Levinson (1987) had seen significant support historically, however recently general agreement has emerged that a different theoretical approach is more appropriate (Arundale, 2006, 2010) to apply to human-human interaction. Moving out into the field of human-computer interaction, this thesis suggests that Brown and Levinson's (1987) work still has relevancy.

Practical Contribution

This thesis provides clear empirical evidence that online retailers can influence consumer attitudes through the language they use when recommending products. Given that attitudes are now seen to be the crucial foundations to creating long term customer revisit intention, and general loyalty in online retailer, this provides a significant finding for professional marketers. In a broader sense, the findings

also highlight an important reason to shift away from the current thinking in terms of these data driven systems.

Much of the current attitude towards these kinds of ‘intelligent’ recommender systems is that they are great tools for gaining customer insights and increasing sales. This thesis provides some challenges to this thinking. Firstly, considering them as tools can be dangerous. Consumers are clearly interacting with them in a similar way they would interact with another human, and so a more appropriate point of view would be to treat them as an extension of the salesforce, or salespeople representing the retailer. Treating them this way would highlight the need to continually evaluate the messages that they are delivering to your customers, and acknowledge that consumers respond to them as social actors.

Secondly, while these types of systems can provide an enormous amount of insight into individual customer shopping and browsing behaviour, a significant amount of insight is needed to go into the system before it interacts with the customer. This thesis showed that the level of website attachment, the degree to which a consumer is familiar with the brand, and where the product fits into a consumer’s understanding of pricing, are all elements that determine the best language to use in the final output of the recommendation. These findings may require retailers to take a more hands-on approach to implementing these systems in the future. Perhaps a dual-system approach is needed where one system gathers data and provides the language which is used in the recommendation, while a second system gathers data about which products to display.

Significance of Methodological Approach

This thesis provides an approach to experimental research within this topic for future researcher to build on. The lack of prior experimental work surrounding online recommendation language and attitudes required that stimuli and experimental scenarios be created from the ground up. Given the subtleness of the changes across conditions led to significant changes in variables, it highlights the level of sensitivity that participants had to certain information within the scenarios and images presented to them. Moving forward, future research can use this thesis as a starting point for experiments into similar constructs.

Limitations and Future Research

In order to maximise internal validity, and ensure that differences in dependent variables were caused by differences in language, the images presented to participants across the four studies placed the recommendation statement in a prominent position. In reality, some websites present the recommendation language in a much less prominent manner, raising the question of the degree to which consumers take notice of language when shopping online. If consumers are not taking notice of the recommendation language then the ability to apply results from this thesis to a wide range of actual online shopping scenarios is limited.

One argument that could be presented is that the way in which we treat computers as social actors is considered ‘mindless’ (Nass & Moon, 2000), suggesting that even though we don’t give much attention to the language, we still react to it.

Another possible response to this limitation is that retailers may benefit from making the language more noticeable and/or prominent. Further research into the

prominence and noticeability of the recommendation language is needed in order to reconcile these competing viewpoints, however.

The measurement of website attitudes changed slightly across the four studies in this thesis. Using differing scales across studies can make it difficult to provide consistent discussions of the findings across studies, as the reported measures are not equivalent. While it needs to be acknowledged that different results may occur if the studies are re-run using the same scale, it is not expected that these differences significantly alter the nature of the findings. The scales used between studies are not wholly different from each other, but rather items from study one are added to in studies two, three and four. The overall measurement scale in each subsequent study still shares items from the previous scale, reducing the impact of equivalency issues.

All studies within this thesis included hypothetical scenarios using product categories that were high involvement, complex and technical products.

Hypothetical scenarios were used in order to be able to control for salient details that would affect attitudes, given that attitude change was part of the core aim of this thesis. By using these hypothetical scenarios, the ability to use the findings to offer meaningful understand of what would happen when consumers had to spend their own money is weakened. In order to address this issue a field experiment or choice experiment should be conducted. High involvement products were used to ensure that the scenarios were realistic in that participants would connect with the idea of having to search for information about product features etc. The narrow range of product categories limits the ability to generalise the findings. It is entirely possible that for lower involvement products or products that consumers

make more basic decisions about may not see the same effects of recommendation language. Future research should identify if/how products with simpler decision rules (e.g. style based decisions within fashion purchases) interact with recommendation language. To keep time and monetary costs low, this thesis based its studies on MTurk participants from the United States. This presents two possible limitations. First, as highlighted by Brown and Levinson (1987), politeness theory is built around the idea of ‘face’ from Goffman (1967). Face, as a construct is heavily dependent on culture with clear distinctions being made with regards to face in western culture against face in eastern cultures. While our samples can be argued to be indicative of western cultures, applying to Australia, Britain and parts of Western Europe, they may not be indicative of cultures from Asia, Eastern Europe or the Middle East. Further research into the role that culture plays in terms of recommendation language in online shopping would be necessary. Secondly, as highlighted in the methodology section of this thesis, there is still debate surrounding the suitability of MTurk for ensuring academic rigour. While it is acknowledged that more traditional sample recruitment may hold some benefits over MTurk, further research into the effectiveness of MTurk samples in online shopping research could reconcile some of these points.

Study four showed clear significant interaction when price information was provided to consumers in the recommendation. While these results were directly relevant to the research questions of this thesis, variables that could effectively explain why this interaction occurred were not measured. This highlights that some construct/s outside of the framework used for this thesis could be responsible. Extending this, because an effective explanation cannot be provided,

it is difficult to understand what other established heuristics or signals can also significantly interact with recommendation language, limiting the depth of findings of this thesis. Further research into the question of price's role would be needed to look at which specific mechanisms play a role.

Appendix A – Scale Measurement Items

Item	Study Used	Source
Assertiveness	All Studies	
The language is imposing		Holtgraves & Bonnefon (2017)
The language is assertive		Holtgraves & Bonnefon (2017)
The recommendation tried to make the decision for me		Quick & Considine (2008)
The recommendation tried to manipulate me		Quick & Considine (2008)
The recommendation tried to pressure me		Quick & Considine (2008)
Product Attitudes	Studies 1 -4	
The likely quality of this product is high		Yoo & Donthu (2001)
The likelihood that this product is functional is high		Yoo & Donthu (2001)
This product has excellent features		Christodoulides et al. (2015)
This product is the best product in its category		Christodoulides et al. (2015)
This product is effective		Christodoulides et al. (2015)
I would be willing to pay a higher price for this produce over others		Christodoulides et al. (2015)
Website Attitudes	Study 1	
The website is attractive		van der Heijden & Verhagen (2004)
The website is helpful		van der Heijden & Verhagen (2004)
The website is pushy		van der Heijden & Verhagen (2004)
I would return to the website		van der Heijden & Verhagen (2004)
Website Attitudes	Studies 2 & 3	
The website is helpful		van der Heijden & Verhagen (2004)
The website is pushy		van der Heijden & Verhagen (2004)
The website is pleasant		Porat & Tractinsky (2012)
How would you feel when you visited the website: Disappointed/Satisfied		Porat & Tractinsky (2012)
How would you feel when you visited the website: Annoyed/Content		Porat & Tractinsky (2012)
How would you feel when you visited the website: Helpless/In Control		Porat & Tractinsky (2012)

Item	Study Used	Source
Website Attitudes	Study 4	
The website is fun to shop at		van der Heijden & Verhagen (2004)
The website is attractive		van der Heijden & Verhagen (2004)
The website is helpful		van der Heijden & Verhagen (2004)
The website is friendly		van der Heijden & Verhagen (2004)
The website is pushy		van der Heijden & Verhagen (2004)
I would like to return to this website		van der Heijden & Verhagen (2004)
The website would make me feel like buying		Ittersum et al. (2013); Rose et al. (2012)
I would recommend this website to others		Ittersum et al. (2013); Rose et al. (2012)
I liked the website		Ittersum et al. (2013); Rose et al. (2012)
The website is spectacular		Porat & Tractinsky (2012)
The website is sophisticated		Porat & Tractinsky (2012)
The website is pleasant		Porat & Tractinsky (2012)
Reactance	Studies 2-4	
The recommendation threatened my freedom to choose		Quick & Considine, (2008)
The recommendation would have irritated me		Quick & Considine, (2008)
The recommendation would have annoyed me		Quick & Considine, (2008)
Confidence	Studies 2-4	
The retailer is certain about their recommendation		Petty et al. (2002)
The retailer thinks the recommendation is valid		Petty et al. (2002)
The retailer is sure they have made a good recommendation		Petty et al. (2002)
Website Attachment	Study 2	
Please indicate how well the following statements describe how you would feel towards the website - Affectionate		Thomson, McInnis & Park, (2005)
Please indicate how well the following statements describe how you would feel towards the website - Loved		Thomson, McInnis & Park, (2005)
Please indicate how well the following statements describe how you would feel towards the website - Passionate		Thomson, McInnis & Park, (2005)
Please indicate how well the following statements describe how you would feel towards the website - Delighted		Thomson, McInnis & Park, (2005)
Please indicate how well the following statements describe how you would feel towards the website - Connected		Thomson, McInnis & Park, (2005)

Item	Study Used	Source
Information Asymmetry	Study 3	
The retailer seemed to have more information about the product than I did		Created for this study from Kornish & Li, (2010); Rose et al., (2012); Tellis & Wernerfelt, (1987); Teo, (2002)
The retailer is able to know the quality of the product better than I am		Created for this study from Kornish & Li, (2010); Rose et al., (2012); Tellis & Wernerfelt, (1987); Teo, (2002)
I have to rely on the retailer to determine the quality of the product		Created for this study from Kornish & Li, (2010); Rose et al., (2012); Tellis & Wernerfelt, (1987); Teo, (2002)
The retailer is in a powerful position with regards to my ability to know about the product.		Created for this study from Kornish & Li, (2010); Rose et al., (2012); Tellis & Wernerfelt, (1987); Teo, (2002)

Appendix B – Statement on Ethics Approval

The data presented in the studies of this thesis was collected between 2016 and 2019 under approval by the Queensland University of Technology Office of Research Ethics and Integrity: Human research ethics. The office applies the principles for ethical research under the Australian Code for the Responsible Conduct of Research as well as the Singapore Statement on Research Integrity.

All four studies met the requirements of being low/negligible risk involving human participants providing anonymous responses. For further enquiries, please contact humanethics@qut.edu.au.

References

- Abelson, R.P. (1988). Conviction. *American Psychologist*, 43(4), 267-275.
- Aboody, D., & Lev, B. (2000). Information asymmetry, R&D, and insider gains. *The Journal of Finance*, 55(6), 2747-2766.
- Adam, K. (2001). Learning While Searching for the Best Alternative. *Journal of Economic Theory*, 101(1), 252-280.
- Aghekyan-Simonian, M., Forsythe, S., Kwon, W.S., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services*, 19, 325-331.
- Ajzen, I. (2001). Nature and Operation of Attitudes. *Annual Review of Psychology*, 52, 27-58.
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behaviour relation: reasoned and automatic processes. In W. Stroebe, & M Hewstone (ed.), *European Review of Social Psychology*. Chichester, UK: Wiley.
- Alexander, C.S., & Becker, H.J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly*, 42, 93-104.
- Allen, P., Bennett, K., & Heritage, B. (2014). *SPSS Statistics Version 22: A Practical Guide*. Melbourne, VIC: Cengage Learning Australia.
- Arundale, R.B., (2006). Face as relational and interactional: A communication framework for research on face, facework, and politeness. *Journal of Politeness Research*, 2, 193-216.
- Arundale, R.B. (2010). Constituting face in conversation: Face, facework, and interactional achievement. *Journal of Pragmatics*, 42, 2078-2105.
- AustraliaPost. (2018). *Inside Australian Online Shopping: 2018 eCommerce Industry Paper*. Retrieved from Australia Post website <http://www.auspost.com.au>
- Baek, T.H., Yoon, S., & Kim, S. (2015). When environmental messages should be assertive: examining the moderating role of effort investment. *International Journal of Advertising*, 34(1), 135-157.
- Baier, D., & Stuber, E. (2010). Acceptance of recommendations to buy in online retailing. *Journal of Retailing and Consumer Services*, 17, 173-180.
- Balakrishnan, S., & Koza, M.P. (1993). Information asymmetry, adverse selection and joint-ventures: Theory and evidence. *Journal of Economic Behavior and Organization*, 20(1), 99-117.
- Barlow, A.K.J., Siddiqui, N.Q., & Mannion, M. (2004). Developments in information and communication technologies for retail marketing channels. *International Journal of Retail and Distribution Management*, 32(3), 157-163.
- Barron, J.M., & Staten, M.E. (1995). Coercion in the selling of credit life insurance. *Psychology & Marketing*, 12(8), 765-787.
- Best, S.J., & Krueger, B.S. (2004). *Internet data collection*. Thousand Oaks, CA: Sage Publications

- Bikchandani, S., & Sharma, S. (1996). Optimal search with learning. *Journal of Economic Dynamics and Control*, 20(1-3), 333-359.
- Blaikie, N.W.H. (2009). *Designing social research* (2nd ed.). Malden, MA: Polity
- Bleier, A., & Eisenbeiss, M. (2015a). Personalized Online Advertising Effectiveness: The Interplay of What, When and Where. *Marketing Science*, 34(5), 669-688.
- Bleier, A., & Eisenbeiss, M. (2015b). The Importance of Trust for Personalized Online Advertising. *Journal of Retailing*, 91(3), 390-409.
- Brehm, J.W. (1966). *A Theory of Psychological Reactance*. New York, NY: Academic Press
- Brown, P., & Levinson, S.C. (1987). *Politeness: Some Universals in Language Usage*. Cambridge, UK: Cambridge University Press.
- Carli, L.L. (1999). Gender, Interpersonal Power, and Social Influence. *Journal of Social Issues*, 55(1), 81-99.
- Caruana, A., & Ewing, M.T. (2010). How corporate reputation, quality, and value influence online loyalty. *Journal of Business Research*, 63, 1103-1110.
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752-766.
- Chen, S.F.S., Monroe, K.B., & Lou, Y.C. (1998). The effects of framing price promotion messages on consumers' perceptions and purchase intentions. *Journal of retailing*, 74(3), 353-372.
- Cherry, R.D. (1988). Politeness in Written Persuasion. *Journal of Pragmatics*, 12, 63-81.
- Childers, T.L., Carr, C.L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behaviour. *Journal of Retailing*, 77, 511-535.
- Christodoulides, G., Cadogan, J.W., & Veloutsou, C. (2015). Consumer-based brand equity measurement: lessons learning from an international study. *International Marketing Review*, 32(3/4), 307-328.
- Clee, M.A., & Wicklund, R.A. (1980). Consumer behavior and psychological reactance. *Journal of consumer research*, 6(4), 389-405.
- Cohen, J.B., & Areni, C.S. (1991). Affect and consumer behavior. In T.S. Robertson & H.H. Kassarian (ed.). *Handbook of Consumer Behavior*. Englewood Cliffs, N.J: Prentice-Hall.
- Coleman, R. (2018). *Designing Experiments for the Social Sciences: How to Plan, Create, and Execute Research Using Experiments*. Thousand Oaks, CA: Sage Publications.
- Collett, J.L., & Childs, E. (2011). Minding the gap: Meaning, affect, and the potential shortcomings of vignettes. *Social Science Research*, 40, 513-522.
- Cook, T.D., & Campbell, D.T. (1979). The design and conduct of true experiments and quasi-experiments in field settings. In R.T. Mowday, & R.M. Steers (Eds.), *Reproduced in part in Research in Organizations: Issues and Controversies* Santa Monica, CA: Goodyear Publishing Company.
- Cortina, J.M. (1993). What Is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology*, 78(1), 98-104.

- Craig, R.T., Tracy, K., & Spisak, F. (1986). The Discourse of Requests: Assessment of a Politeness Approach. *Human Communication Research, 12*(4), 437-468.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334.
- Crotty, M. (1998). *The foundations of social research: meaning and perspective in the research process*. St Leonards, NSW: Allen & Unwin.
- Curry, D.J., & Riesz, P.C. (1988). Prices and Price/Quality Relationships: A Longitudinal Analysis. *Journal of Marketing, 52*(1), 36-51.
- Cyr, D. (2014). Return visits: a review of how Web site design can engender visitor loyalty. *Journal of Information Technology, 29*(1), 1-26.
- Darke, P.R., & Chung, C.M. (2005). Effects of pricing and promotion on consumer perceptions: it depends on how you frame it. *Journal of Retailing, 81*(1), 35-47.
- Dawar, N., & Parker, P. (1996). Marketing Universals: Consumers' Use of Brand Name, Price, Physical Appearance, and Retailer Reputation as Signals of Product Quality. *Journal of Marketing, 58*(1), 81-95.
- Dellaert, B.G.C., & Haubl, G. (2012). Searching in Choice Mode: Consumer Decision Processes in Product Search with Recommendations. *Journal of Marketing Research, 49*, 277-288.
- DelVecchio, D., Krishnan, H.S., & Smith, D.C. (2007). Cents or percent? The effects of promotion framing on price expectations and choice. *Journal of Marketing, 71*(3), 158-170.
- Deshpande, R. (1983). "Paradigms Lost": On Theory and Method in Research in Marketing. *Journal of Marketing, 47*(4), 101-110.
- Dierkens, N. (1991). Information Asymmetry and Equity Issues. *Journal of Financial and Quantitative Analysis, 26*(2), 181-199.
- Dillard, J.P., & Shen, L. (2005). On the Nature of Reactance and its Role in Persuasive Health Communication. *Communication Monographs, 72*(2), 144-168.
- Dodds, W.B., & Monroe, K.B. (1985). The Effect of Brand and Price Information on Subjective Product Evaluation. *Advances in Consumer Research, 12*, 85-90.
- Dodds, W.B., Monroe, K.B., & Grewal, D. (1991). Effects of Price, Brand and Store Information on Buyers' Product Evaluation. *Journal of Marketing Research, 28*(2), 307-319.
- Dolinsky, D. (2016). *Techniques of Social Influence: The Psychology of Gaining Compliance*. New York, NY: Routledge
- Duhan, D.F., Johnson, S.D., Wilcox, J.B., & Harrell, G.D. (1997). Influences on Consumer Use of Word-of-Mouth Recommendation Sources. *Journal of the Academy of Marketing Science, 25*(4), 283-295.
- Eagly, A.H., & Chaiken, S. (1998). *The Psychology of Attitudes*. Fort Worth, TX: Harcourt Brace.
- Edmonson, A.C., & McManus, S.E. (2007). Methodological Fit in Management Field Research. *Academy of Management Review, 32*(4), 1155-1179.
- Edwards, S.M., Li, L.H., & Lee, J. (2002). Forced Exposure and Psychological Reactance: Antecedents and Consequences of the Perceived Intrusiveness of Pop-up Ads. *Journal of Advertising, 31*(3), 83-95.

- Engel, J.F., & Blackwell, R.D. (1982). *Consumer Behaviour*. New York, NY; Holt, Rinehart, and Winston.
- Eylon, D., Giacalone, R.A., & Pollard, H.G. (2000). Beyond contractual interpretation: bias in arbitrators' case perceptions and award recommendations. *Journal of Organizational Behavior*, 21, 513-524.
- Francik, E.P., & Clark, H.H. (1985). How to make requests that overcome obstacles to compliance. *Journal of Memory and Language*, 24(5), 560-568.
- French, J.R., Raven, B., & Cartwright, D. (1959). The bases of social power. *Classics of Organization Theory*, 7, 311-320.
- Fridman, A. (2016, August 9). 10 Examples of AI in Marketing. *Inc.com*. Retrieved from <http://www.inc.com>
- Friestad, M., & Wright, P. (1994). The Persuasion Knowledge Model: How People Cope with Persuasion Attempts. *Journal of Consumer Research*, 21(1), 1-31
- Fitzsimons, G.J., & Lehmann, D.R. (2004). Reactance to Recommendations: When Unsolicited Advice Yields Contrary Responses. *Marketing Science*, 23(1), 82-94.
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of consumer research*, 24(4), 343-373.
- Gai, P.J., & Klesse, A. (2019). Making recommendations more effective through framings: Impacts of user-versus item-based framings on recommendation click-throughs. *Journal of Marketing*, 83(6), 61-75.
- Garbarino, E., & Strahilevitz, M. (2004). Gender difference in the perceived risk of buying online and the effects of receiving a site recommendation. *Journal of Business Research*, 57(7), 768-775.
- Gefen, D., Karahanna, E., & Straub, D.W. (2003). Trust and TAM in online shopping: an integrated model. *MIS Quarterly*, 27(1), 51-90.
- George, D., & Mallery, P. (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference*. London, UK: Routledge.
- Goffman, E. (1967). *Interaction Ritual. Essays on Face-to-Face Behaviour*. London, UK: Penguin
- Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of retailing*, 74(3), 331-352.
- Grinstein, A., & Kronrod, A. (2016). Does Sparing the Rod Spoil the Child? How Praising, Scolding, and an Assertive Tone Can Encourage Desired Behaviors. *Journal of Marketing Research*, 53(3), 433-441.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2014). *Multivariate Data Analysis*. Harlow, UK: Pearson Education Limited.
- Harris, R. (1996). *The Language Connection: Philosophy and Linguistics*. Bristol, UK: Thoemmes
- Hasbrouck, J. (1991). Measuring the information content of stock trades. *The Journal of Finance*, 46(1), 179-207.
- Haubl, G., Dellaert, B.G.C., & Donkers, B. (2010). Tunnel Vision: Local Behavioral Influences on Consumer Decisions in Product Search. *Marketing Science*, 29(3), 393-584.

- Hauser, D.J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods*, 48(1), 400-407.
- Hayes, A.F. (2013). *Introduction to Mediation, Moderation, and Conceptual Process Analysis: A Regression Based Approach*. New York, NY: The Guildford Press
- Healy, P.M., & Palepu, K.G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of accounting and economics*, 31(1-3), 405-440.
- Hegtvedt, K.A. (1988). Social Determinants of perception : power, equity, and status effects in an exchange situation. *Social Psychology Quarterly*, 51, 141-153.
- van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: contributions from technology and trust perspectives. *European Journal of Information Systems*, 12(1), 41-48.
- Hennig-Thurau, T., Marchard, A., & Marx, P. (2012). Can Automated Group Recommender Systems Help Consumers Make Better Choices. *Journal of Marketing*, 76, 89-109.
- Hoban, P.R., & Bucklin, R.E. (2015). Effects of Internet Display Advertising in the Purchase Funnel: Model-Based Insights from a Randomized Field Experiment, *Journal of Marketing Research*, 52, 375-393.
- Holtgraves, T., & Bonnefon, J. (2017). Experimental Approaches to Linguistic (Im)Politeness. In J. Culpeper et al. (Eds.), *The Pulgrave Handbook of Linguistic (Im)Politeness* (pp. 381-401). London, UK: MacMillan Publishers
- Holzwarth, M., Janiszewski, C., & Neumann, M.M. (2006). The Influence of Avatars on Online Consumer Shopping Behavior. *Journal of Marketing*, 70(4), 19-36.
- Hsee, C.K. (1996). The evaluability hypothesis: An explanation of preference reversals between joint and separate evaluations of alternatives. *Organizational Behaviour and Human Decision Processes*, 46, 247-257.
- Hsee, C.K., Loewenstein, G.F., Blount, S., & Bazeman, M.H. (1999). Preference Reversals Between Join and Separate Evaluations of Options: A Review and Theoretical Analysis. *Psychological Bulletin*, 125(5), 576-590.
- Hudson, L.A., & Ozanne, J.L. (1988). Alternative Ways of Seeking Knowledge in Consumer Research. *Journal of Consumer Research*, 14(1), 508-521.
- Hughes, R. (1998). Considering the vignette technique and its application to a study of drug-injecting and HIV risk and safer behaviour. *Sociology of Health and Illness*, 20, 381-400.
- Hunt, S.D. (1991). Positivism and Paradigm Dominance in Consumer Research: Toward Critical Pluralism and Rapprochement. *Journal of Consumer Research*, 18(2), 32-44.
- Iacobucchi, D., & Duhachek, A. (2003). Advancing Alpha: Measuring Reliability With Confidence. *Journal of Consumer Psychology*, 13(4), 478-487.
- Ittersum, K., Wansink, B., Pennings, J.M., & Sheehan, D. (2013). Smart shopping carts: How real-time feedback influences spending. *Journal of Marketing*, 77(6), 21-36.

- Kapferer, J.N., & Bastien, V. (2009). The specificity of luxury management: Turning marketing upside down. *Journal of Brand Management*, 16(5-6), 311-322.
- Kapferer, J.N., & Bastien, V. (2012). *The luxury strategy: Break the rules of marketing to build luxury brands*. London, UK: Kogan Page.
- Kapferer, J.N., & Laurent, G. (2016). Where do consumers think luxury begins? A study of perceived minimum price for 21 luxury goods in 7 countries. *Journal of Business Research*, 69(1), 332-340.
- Karmarkar, U.R., & Tormala, Z.L. (2010). Believe Me, I Have No Idea What I'm Talking About: The Effects of Source Confidence on Consumer Involvement and Persuasion. *Journal of Consumer Research*, 36(6), 1033-1049.
- Keller, K.L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Keppel, G. (1982). *Design and Analysis: A Researchers Handbook*. Englewood Cliffs, NJ: Prentice-Hall.
- Kirmani, A. (1997). Advertising Repetition as a Signal of Quality: If It's Advertised So Often, Something Must Be Wrong. *Journal of Advertising*, 26(3), 77-86.
- Kornish, L.J., & Li, Q. (2010). Optimal referral bonuses with asymmetric information: Firm-offered and interpersonal incentives. *Marketing Science*, 29(1), 108-121.
- Kronrod, A., & Danziger, S. (2013). "Wii Will Rock You!" The Use and Effect of Figurative Language in Consumer Reviews of Hedonic and Utilitarian Consumption. *Journal of Consumer Research*, 40, 726-739.
- Kronrod, A., Grinstein, A., & Wathieu, L. (2012a). Go Green! Should Environmental Messages Be So Assertive? *Journal of Marketing*, 76, 95-102.
- Kronrod, A., Grinstein, A., & Wathieu, L. (2012b). Enjoy! Hedonic Consumption and Compliance with Assertive Messages. *Journal of Consumer Research*, 39, 51-61.
- Kwon, W.S., & Lennon, S.J. (2009). What induces online loyalty? Online versus offline brand images. *Journal of Business Research*, 62(5), 557-564.
- Lambrecht, A., & Tucker, C. (2013). When Does Retargeting Work? Information Specificity in Online Advertising. *Journal of Marketing Research*, 50, 561-576.
- Langer, E.J. (1989). *Mindfulness*. Boston, MA: Addison-Wesley.
- Langer, E.J. (1992). Matters of mind: Mindfulness/mindlessness in perspective. *Consciousness and Cognition*, 1(3), 289-305.
- Lee, G., & Lee, W.J. (2009). Psychological Reactance to online recommendation services. *Information & Management*, 46, 448-452.
- Lee, G., Lee, J., & Sanford, C. (2010). The roles of self-concept clarity and psychological reactance in compliance with product and service recommendations. *Computers in Human Behavior*, 26, 1481-1487.
- Liang, T.P., & Lai, H.J. (2002) Effect of store design on consumer purchases: an empirical study of online bookstores. *Information and Management*, 39(6), 431-444.

- Lichtenstein, D.R., Block, P.H., & Black, W.C. (1988). Correlates of Price Acceptability. *Journal of Consumer Research*, 15(3), 243-252.
- Lichtenstein, D.R., Ridgway, N.M., & Netemeyer, R.G. (1993). Price Perception and Consumer Shopping Behavior: A Field Study. *Journal of Marketing Research*, 30(2), 234-245.
- Linell, P. (2005). *The Written Language Bias in Linguistics: Its Nature, Origins and Transformations*. New York, NY: Routledge
- Malar, L., Krohmer, H., Hoyer, W.D., & Nyffenegger, B. (2011). Emotional Brand Attachment and Brand Personality: The Relative Importance of the Actual and the Ideal Self. *Journal of Marketing*, 75(4), 35-52.
- Malhotra, N., Hall, J., Shaw, M., & Oppenheim, P. (2006). *Marketing Research: An Applied Orientation*. Frenchs Forest, NSW: Pearson Education Australia.
- Martin, K.D., Borah, A., & Palmatier, R.W. (2017). Data Privacy: Effects on Customer and Firm Performance. *Journal of Marketing*, 81(1), 36-58.
- Meneses, G., & Palacio, A. (2007). The Response to the Commitment with Block-Leader Recycling Promotion Technique: A Longitudinal Approach. *Journal of Nonprofit and Public Sector Marketing*, 17(1), 83-102.
- Mikulincer, M., & Shaver, P.R. (2007). *Attachment in Adulthood: Structure, Dynamics, and Change*. New York, NY: Guildford Press.
- Milgrom, P., & Roberts, J. (1986). Price and Advertising Signals of Product Quality. *Journal of Political Economy*, 94(4), 796-821.
- Mishra B.K., & Prasad, A. (2004). Centralized Pricing Versus Delegating Pricing to the Salesforce Under Information Asymmetry. *Marketing Science*, 23(1), 1-172,
- Mishra, D.B., Heide, J.B., & Cort, S.G. (1998). Information Asymmetry and Levels of Agency Relationships. *Journal of Marketing Research*, 35(3), 277-295.
- Modenova, P. (2016, February 25). Study: Most Top100 retailers still don't recommend products based on customer browsing history. *InternetRetailing*. Retrieved from <http://internetretailing.net>
- Moon, Y. (2000). Intimate Exchanges: Using Computers to Elicit Self-Disclosure from Consumers. *Journal of Consumer Research*, 26(4), 323-339.
- Moon, Y., & Nass, C. (1996). How "real" are computer personalities? Psychological responses to personality types in human-computer interaction. *Communication Research*, 23(6), 651-674.
- Nass, C., & Moon, Y. (2000). Machines and Mindlessness: Social Responses to Computers. *Journal of Social Issues*, 56(1), 81-103.
- Nass, C., Moon, Y., Morkes, J.K.E., & Fogg, B. (1997). *Computers are Social Actors: Review of Current Research*. New York: NY, Cambridge University Press
- Nicholson, M., Clarke, I., & Blakemore, M. (2002). 'One brand, three ways to shop': situational variables and multichannel consumer behaviour. *The International Review of Retail, Distribution and Consumer Research*, 12(2), 131-148.
- Nunnally, J.C. (1967). *Psychometric theory* (1st ed.). New York, NY: McGraw-Hill

- Olshavsky, R.W., & Granbois, D.H. (1979). Consumer Decision Making – Fact or Fiction? *Journal of Consumer Research*, 6, 93-100.
- Packard, G., Gershoff, A.D., & Wooten, D.B. (2016). When Boastful Word of Mouth Helps versus Hurts Social Perceptions and Persuasion. *Journal of Consumer Research*, 43(1), 26-43.
- Park, C.W., & Lessig, V.P. (1981). Familiarity and Its Impact on Consumer Decision Biases and Heuristics. *Journal of Consumer Research*, 8(2), 223-230.
- Park, C.W., MacInnis, D.J., Priester, J., Eisingerich, A.B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of Marketing*, 74(6), 1-17.
- Parkinson, B., & Manstead, A.S.R. (1993). Making sense of emotion in stories and social life. *Cognition and Emotion*, 7, 295-323.
- Paulson, G.D., & Roloff, M.E. (1997). The Effect of Request Form and Content on Constructing Obstacles to Compliance. *Communication Research*, 24(3), 261-290.
- Pavlou, P.A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research*, 51(1), 37-59.
- Perdue, B.C., & Summers, J.O. (1986). Checking the success of manipulations in marketing experiments. *Journal of marketing research*, 23(4), 317-326.
- Petrocelli, J.V., Tormala, Z.L., & Rucker, D.D. (2007). Unpacking attitude certainty: Attitude clarity and attitude correctness. *Journal of Personality and Social Psychology*, 92(1), 30-41.
- Petty, R.E., Brinol, P., & Tormala, Z.L. (2002). Thought confidence as a determinant of persuasion: The self-validation hypothesis. *Journal of Personality and Social Psychology*, 82(5), 722-741.
- Petty, R.E., Wegener, D.T., & Fabrigar, L.R. (1997). Attitudes and Attitude Change. *Annual Review of Psychology*, 48, 607-647.
- Porat, T., & Tractinsky, N. (2012). It's a Pleasure Buying Here: The Effects of Web-Store Design on Consumers' Emotions and Attitudes. *Human-Computer Interaction*, 27, 235-276.
- Puccinelli, N.M., Goodstein, R.C., Grewal, D., Price, R., Raghurir, P., & Stewart, D. (2009). Customer Experience Management in Retailing: Understanding the Buying Process. *Journal of Retailing*, 85(1), 15-30.
- Quick, B.L., & Considine, J.R. (2008). Examining the Use of Forceful Language When Designing Exercise Persuasive Messages for Adults: A Test of Conceptualizing Reactance Arousal as a Two-Step Process. *Health Communication*, 23(5), 483-491.
- Quick, B.L., & Stephenson, M.T. (2007). Further Evidence That Psychological Reactance Can Be Modelled as a Combination of Anger and Negative Cognitions. *Communication Research*, 34(3), 255-276.
- Rao, A.R., & Monroe, B. (1989). The Effect of Price, Brand Name, and Store Name on Buyers Perceptions of Product Quality: An Integrative Review. *Journal of Marketing Research*, 26, 351-357.
- Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. New York, NY: Cambridge University Press

- Richards, K. (2016, May 18). Havas Teams Up with IBM's Watson to Help Brands Leverage Artificial Intelligence Data. *AdWeek*. Retrieved from <http://www.adweek.com>
- Robson, C. (2011). *Real world research: a resource for users of social research methods in applied settings*. Hoboken, NJ: Wiley-Blackwell.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: an empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rosen, D.L., & Olshavsky, R.W. (1987). A Protocol Analysis of Brand Choice Strategies Involving Recommendations. *Journal of Consumer Research*, 14, 440-444.
- Roy Morgan. (2015, December 2). *The state of Australia's \$37.8b online shopping landscape*. Retrieved from Roy Morgan website <http://www.roymorgan.com.au>
- Ryan, R.M., & Deci, E.L. (2006). Self-Regulation and the Problem of Human Autonomy: Does Psychology Need Choice, Self-Determination, and Will? *Journal of Personality*, 74(6), 1557-1585.
- Sanders, R.E., & Fitch, K.L. (2001). The Actual Practice of Compliance Seeking. *Communication Theory*, 11(3), 263-289.
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8(4), 350-353.
- Schouten, J.W., & McAlexander, J.H. (1995). Subcultures of consumption: An ethnography of the new bikers. *Journal of consumer research*, 22(1), 43-61.
- Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin
- Shankar, V., Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S., & Morrissey, S. (2016). Mobile Shopper Marketing: Key Issues, Current Insights, and Future Research Avenues. *Journal of Interactive Marketing*, 34, 37-48.
- Simonson, I., Carmon, Z., Dhar, R., Drolet, A., & Nowlis, S.M. (2001). Consumer Research: In Search of Identity. *Annual Review of Psychology*, 52(1), 249-275.
- Simonson, I., & Tversky, A. (1992). Choice in Context: Tradeoff Contrast and Extremeness Aversion. *Journal of Marketing Research*, 29(3), 281-295.
- Sinaceur, M. & Tiedens, L.Z. (2005). Get mad and get more even: when and why anger expression is effective in negotiations. *Journal of Experimental Social Psychology*, 42, 314-322.
- Sinha, I., & Smith, M.F. (2000). Consumers' perceptions of promotional framing of price. *Psychology & Marketing*, 17(3), 257-275.
- Smith, S.M., Roster, C.A., Golden, L.L., & Albaum, G.S. (2016). A multi-group analysis of online survey respondent data quality: Comparing a regular USA consumer panel to MTurk samples. *Journal of Business Research*, 69(8), 3139-3148.
- Song, J.H., Kim, H.Y., Kim, S., Lee, S.W., & Lee, J.H. (2016). Effects of personalised e-mail messages on privacy risk: Moderating roles of control and intimacy. *Marketing Letters*, 27, 89-101.

- Spence, M. (1973). Job Market Signaling. *Quarterly Journal of Economics*, 87(3), 355-374.
- Sperber, D., & Wilson, D. (1995). *Relevance: Cognition and Communication: Revised Edition*. Oxford, UK: Basil Blackwell
- Srinivasan, S.S., Anderson, R., & Ponnnavolu, K. (2002). Customer loyalty in e-commerce: and exploration of its antecedents and consequences. *Journal of Retailing*, 78, 41-50.
- Summers, C.A., Smith, R.W., & Reczek, R.W. (2016). An Audience of One: Behaviourally Targeted Ads as Implied Social Labels. *Journal of Consumer Research*, 43, 156-178.
- Swant, M. (2015, November 2). 6 Ways Google's Artificial Intelligence Could Impact Search Engine Marketing. *AdWeek*. Retrieved from <http://www.adweek.com>
- Teas, R.K., & Agarwal, S. (2000). The Effects of Extrinsic Product Cues on Consumers' Perceptions of Quality, Sacrifice, and Value. *Journal of the Academy of Marketing Science*, 28(2), 278-290.
- Tellis, G.J., & Wernerfelt, B. (1987). Competitive price and quality under asymmetric information. *Marketing science*, 6(3), 240-253.
- Teo, T.S. (2002). Attitudes toward online shopping and the Internet. *Behaviour & Information Technology*, 21(4), 259-271.
- Thomson, M., MacInnis, D.J., & Park, C.W. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology*, 15(1), 77-91.
- Wallace, T. (2017). Ecommerce Trends: 139 States Revealing How Modern Customers Shop in 2017 [Web log post]. Retrieved from <https://www.bigcommerce.com/blog/>
- Webster, M., & Sell, J. (2007). Theory and Experimentation. In W. Outhwaite, & S. Turner (Eds.), *The SAGE Handbook of Social Science Methodology*, London, UK: Sage Publications
- Wedel, M., & Kannan, P.K. (2016). Marketing Analytics for Data-Rich Environments. *Journal of Marketing*, 80, 97-121.
- Weitzman, M.L. (1979). Optimal Search for the Best Alternative. *Econometrica*, 47(3), 641-654.
- White, T.B., Zahay, D.L., Thorjornsen, H., & Shavitt, S. (2008). Getting too personal: Reactance to highly personalized email solicitations. *Marketing Letters*, 19, 39-50.
- Wiener, J.L., & Doescher, T.A. (1991). A Framework for Promoting Cooperation. *Journal of Marketing*, 55(1), 38-47.
- Wilson, E.V. (2003). Perceived effectiveness of interpersonal persuasion strategies in computer-mediated communication. *Computers in Human Behaviour*, 19(5), 537-552.
- Wilson, A., Johns, R., Miller, K., & Pentecost, R. (2010). *Marketing Research: An Integrated Approach*. Frenchs Forest, NSW: Pearson
- Wolinsky, A. (1983). Prices as Signals of Product Quality. *Review of Economic Studies*, 50, 657-658.
- Wright, R. (2006). *Consumer Behaviour*. Boston, MA: Cengage Learning.

- Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1-14.
- Zikmund, W.G. (2007). *Marketing Research*. South Melbourne, VIC: Cengage Learning