Store brands in Hard Discounters: The psychological processes underpinning consumer evaluation.

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Abstract

This thesis examines the evaluation of grocery store brands from a consumer perspective, with a particular focus on the value end of the market and Hard Discounters (HDs), with an investigation of the psychological processes leading to purchase preferences. Grocery store brands represent a rapidly evolving landscape and account for over half of all grocery sales in the UK and some other European markets. Recent share gains in the UK by HDs, Aldi and Lidl, have fuelled store brand growth, as they sell ranges which consist almost entirely of their own brands. HD products are popular and well-liked by consumers but are distinct from other store brands as they are 'copycats' of leading national brands and do not carry the name of the parent store. Although store brands are well-researched, only a handful of recent studies have included HDs, and little is known about how consumers appraise the own-brand products they sell. The purpose of this research is to establish the underpinning psychological processes of store brand evaluation, extending the investigation to HDs through a series of three interrelated studies.

A review of marketing literature specifically looking at grocery store brands (GSBs). revealed the importance of extrinsic cues in GSB evaluation, including the image of the parent store, the price, and the packaging. Furthermore, characteristic psychological traits of some consumers lead to increased likelihood of store band purchasing, known as store brand proneness. Using the Persuasion Knowledge Model and self-construal as a theoretical basis, a conceptual framework was developed to examine store brand evaluation in three separate studies. The first study focussed on store image, investigating the effect of self-construal on implicit and explicit consumer perceptions, using an implicit association test (IAT). In the second study, price, and the similarity of GSB packaging to the national brand were interrogated. Again, the impact of self-construal on outcomes was reviewed on data collected from an online consumer panel. A further examination of packaging was undertaken in a final study which investigated the effect self-construal on how GSB packaging designs are visually assessed by consumers. Data were collected using remote eye tracking.

Findings from the three studies in this thesis make a contribution to knowledge regarding the psychological processes underpinning consumer GSB perceptions. In particular, the influence of self-construal on store brand evaluation is demonstrated across each of the studies. The first study highlights how social bias impacts upon store image preferences stated by individuals, acknowledging the importance of implicit measures in

future studies. The key contribution from the second study outlines a decision-making process for store brand evaluation, detailing the relationship between heuristics, persuasion knowledge and self-construal. Findings demonstrate that when self-construal is a dominant influence in making store brand choices, preferences made based on persuasion knowledge are reversed. The final study offers a first known insight into the impact of self-construal on patterns of visual attention. The characteristic cognitive processes aligned to interdependent self-construal lead to an increase in the visual attention being paid by individuals. This adds a new dimension for investigation to the emerging field of eye-tracking studies and visual attention domain.

For practitioners in the grocery retail industry, findings from this thesis enhance understanding of consumer store brand preferences and importantly the influence of self-construal. The opportunity to use primes for self-construal to amplify GSB interest presents itself. In addition to this, the use of implicit measures such as an IAT test or eye tracking to capture visual attention, enable deeper insights into shopper preferences to be collected which can be used for commercial advantage.

Keywords: Grocery store brands, hard discounters, Persuasion knowledge, self-construal, IAT test, eye tracking

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Chapter A: Introduction and Background to the Thesis

A1 Introduction and Background

A1.1 Aim and Scope of the Chapter

The purpose of this chapter is to provide a background to the research topic and present an overview of current research. The research context of discount retailers is given first, followed by a brief synopsis of extant literature on the subject matter. The overarching objective and aims of the thesis are then presented. These objectives are addressed in three empirical papers which are included in the thesis as Chapters E, F and G. Also included is a synopsis of each paper and a demonstration of how the research questions are answered, along with a discussion to highlight how the three papers are inter-related. A summary of the main contributions to knowledge made by this thesis is also given.

A1.2 Context for Research: The Rise of Hard Discounters

Hard Discounters (hereafter known as HDs) are a subset of niche retailers within the grocery industry known for very low prices and a limited range of products on offer (Mintel, 2016). In recent years, HDs have undergone rapid global expansion and in some markets account for up to 35% of total grocery (Hunneman, Verhoef and Sloot, 2021). In the UK, prototypical HDs Aldi and Lidl have grown from having less than 5% combined market share in 2011, to holding a joint share of more than 15% in 2021 (Kantar Worldpanel, 2021). During this decade all other UK market grocery chains have declined or remained stagnant. Furthermore, Lidl was recognised recently as the fastest growing retailer in the UK (Loebnitz, Zielke and Grunert, 2020). The well-documented success of HDs is inconsistent with how they are portrayed in comparison to traditional grocery retailers (Zielke, 2014; Geyskens, Keller, Dekimpe and de Jong, 2018; Gijsbrechts, Campo and Vroegrijk, 2018; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Consensus suggests HDs are basic stores operating a no-frills experience at the low-cost end of the market. This may explain why the focus of research attention in grocery retailing has given HDs scant consideration until recent share gains (e.g., Loebnitz et al, 2020; Hunneman et al., 2021). Specific studies investigating HDs are few in number, and little is known about consumer attitudes, preferences and decision making regarding them, despite the significant attention paid by researchers to the broader topic grocery retailing.

Against the backdrop of little HD interest and common consensus of a bargain basement image, two pivotal studies put forward a contrasting perspective: Kumar and

Steenkamp (2009) and Zielke (2014). Kumar and Steenkamp (2009) predicted the success of the HD format, noting that shoppers were choosing to shop there on account of quality and not just for the very low prices offered. Regular HD consumers were characterised as middle class, noted to be 'better off and better educated'. Zielke (2014) offers supporting empirical evidence with the finding that HD low prices are not considered by consumers to mean substandard products, but instead demonstrate an efficient business model. Although these studies highlight why HDs might be more than just low-cost grocery alternatives, further examination is needed to explain the rising popularity of HDs in the UK. Investigating this topic answers calls for additional knowledge of the HD phenomenon (Vroegrijk, Gijsbrechts and Campo, 2013; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Dekimpe and Geyskens (2019) highlight what they describe as a 'lacuna' between academic research and retail practice, specifically noting how HDs are 'under-studied'. Addressing this issue would as the authors suggest help to avoid retail research being 'leapfrogged' by practice. A starting point for investigation would be to address the long-held viewpoint that consumers have different perceptions of HDs in comparison to their shopping habits, as findings from literature and market data would suggest. As the HD format continues to grow and become part of the mainstream grocery sector, closing the knowledge gap that exists between the two is of significant interest to both practitioners and scholars.

A1.3 Research Domain and Scope: Hard Discounters and Grocery Store Brands

A prominent feature of the grocery retail landscape is the presence of retailer-owned private labels or grocery store brands (hereafter known as GSBs). Mainstream grocers sell a mix of leading national brands and GSBs, optimised according to increased profitability (e.g., Mills, 1995; Corstjens and Lal 2000; Ailawadi and Harlam, 2004) and improved store loyalty (e.g., Ailawadi, et al., 2008; Nies and Natter, 2010; Dawes and Nenycz-Thiel, 2013). Recent estimates state that GSBs account for 40-50% of grocery sales in some European countries (UK, Germany, Netherlands and Spain), and just under 20% in North America (Nielsen, 2019). However, HDs have built a global retail business almost entirely by selling their own brands. Over 90% of products sold in HDs are GSBs (Mintel, 2016; Gielens, Ma, Namin, Sethuraman, Smith, Bachtel and Jervis, 2021), highlighting fundamental business model differences separating HDs from mainstream grocers (Vroegrijk et al., 2016; Gielens et al., 2021). A range so heavily dominated by GSBs also places HDs as the leading sellers of private label products worldwide (Steenkamp, 2018; Gielens et al., 2021). Given the rich 30-year history of GSB studies within the domain of retail and marketing, the lack of information regarding HD GSBs remains an opportunity to be addressed.

Another key difference to mainstream grocers found in HDs is price. HD versions of GSBs are more than 50% cheaper than national brands despite being of comparable quality (Steenkamp and Kumar, 2009). In addition to very low prices, HD GSB show high levels of attribute similarity to national brands (Kumar and Steenkamp, 2007; Steenkamp and Sloot, 2018). Lai and Zaichkowsky (1999, pp. 180) used the term ‘copycat brands’ to identify a distinct type of GSB that is typically a 'product or service, though not identical, [which] is viewed as similar in substance, name, shape, form, meaning or intent to an acknowledged and widely known product or service currently in the marketplace'. Van Horen and Pieters (2012b, pp.83) expand the packaging similarity further, stating that copycat brands ‘imitate the name, logo, and/or package design of a leading national brand and take advantage of the latter's positive associations and marketing efforts’. Kelting, Duhachek and Whitler (2017) further differentiated copycat brands, proposing two defining characteristics; the deliberate design to look like a national brand and the use of a retailer specific family brand name (e.g., Lidl’s private label Tower Gate). The use of a retailer specific brand name is a key feature of HD GSBs and unlike mainstream GSBs, the name of the parent retailer is not incorporated into the packaging design. So successful has this strategy been for HDs, some mainstream grocers have started to trial similar new GSB formats, including leading UK grocery chain Tesco (McKevitt, 2017; Baker, Chari, Daryanto, Dzenkovska, Ifie, Lukas and Walsh, 2020).

To summarize, this section highlights how HD GSBs are different in nature to mainstream GSB versions. This includes very low prices, packaging that imitates leading national brands and does not display the parent store logo. Despite these differences, HDs sell more GSBs worldwide than any other retailer (Steenkamp, 2018; Gielens et al., 2021). As HDs continue to gain market share, the imperative to understand more about how consumers evaluate HD GSBs becomes increasingly pressing. Building on knowledge gained from the retail grocery literature and store brand evaluation offers a logical starting point to address this gap. In the following section, two theoretical underpinnings of GSB evaluation derived from a review of literature are presented. The Persuasion Knowledge Model (Friestad and Wright, 1994) offers a framework explaining the way in which consumers evaluate GSB packaging in order to protect themselves from making poor purchase decisions. The Persuasion Knowledge Model (PKM) is influenced by motivational factors aligned to the self-construal of an individual. Markus and Kitayama’s (1991) self-construal is the focus of the second theoretical underpinning presented, highlighting the similarity between characteristic traits of self-construal and shoppers who are prone to GSB purchasing.

A1.4 Theoretical Underpinning 1: Consumer Evaluation of Grocery Store Brands and the Persuasion Knowledge Model

When considering the purchase of GSBs, consumers seek to avoid social risk from the opinions of others and to mitigate the possibility of receiving a lower quality product than expected (e.g., Narasimhan and Wilcox, 1998; Batra and Sinha, 2000; Garretson, Fisher and Burton, 2002; Steenkamp, van Heerde and Geyskens, 2010). Risks are assessed using the extrinsic cues of price, store image and packaging (e.g., Dodds, Monroe and Grewal, 1991; Richardson, Dick and Jain, 1994; Batra and Sinha, 2000). However, studies have shown that some consumers are more prone to purchasing GSBs than others on account of individual psychological characteristics (Richardson, Dick and Jain, 1996; Ailawadi, Neslin and Gedenk, 2001; Garretson et al., 2002; Steenkamp et al. 2010; Manzur, Olavarrieta, Hildago, Farías and Oribe, 2011; Martos-Partal, González-Benito and Fustinoni-Venturini, 2015). Although no single defining characteristic or trait has been defined, consensus suggests GSB prone consumers do not see GSBs as a social risk, but as a way of satisfying desires to express themselves and stand out from others.

When assessing the risks involved in purchasing a GSB, consumers weigh up the cues presented along with any relevant personal motivations they have (e.g., Richardson et al., 1996; Ailawadi et al., 2001). The resulting evaluation will also depend upon what the individual thinks of the cues or marketing tactics being used. This is known as use of persuasion knowledge, described in Friestad and Wright's (1994) seminal persuasion knowledge model (PKM). In the PKM consumers reflect upon what they consumers knows about the tactics of persuasion used (price and packaging), what is known about the source of the persuasion (store image) and how familiar they are with the product and category (topic knowledge). Studies investigating packaging similarity have used the PKM as a theoretical basis to understand the impact of GSB imitation of leading brands on consumer perceptions (Warlop and Alba, 2004, Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b). The use of highly similar, lookalike or 'copycat' packaging to that of leading national brands is a well-known tactic deployed by HD GSBs (Steenkamp and Sloot, 2018). This suggests the PKM to also be a suitable theoretical underpinning for a study investigating HD GSBs. The PKM considers all the product cues by which consumers make decisions regarding GSBs, such as price, packaging and store image. However, GSB evaluation also depends upon individual consumer motivations denoting how prone consumers may be (or not) to purchasing GSBs (e.g., Ailawadi et al., 2001; Steenkamp et al. 2010; Martos-Partal et al., 2015). Friestad and Wright (1994) address this consideration by suggesting individuals are motivated differently in their use of the PKM according to differences in self-construal.

A1.5 Theoretical Underpinning 2: Self-construal and GSB Proneness

Markus and Kitayama (1991) developed the theory self-construal to describe how individuals are motivated to think and act differently according to how they consider themselves in relation to others. Two types of self-construal were highlighted: Independent Self-Construal (ISC) and Interdependent Self-Construal (INSC). ISC individuals consider themselves as separate entities from others and INSC think of themselves as connected to those around them. Developed as a theory to explain cultural differences between populations, self-construal has received considerable attention regarding consumer preferences in a consumption context (e.g., Escalas and Bettman, 2003; Ahluwalia, 2008; Lalwani and Shavitt, 2013; Millan and Reynolds, 2014; Lalwani and Forcum, 2016). However, to date no studies have investigated how self-construal might impact upon GSB evaluation. Within the grocery retail literature, GSB prone consumers are established as being motivated to stand out from others and be recognised as individuals. This is consistent with characteristics of those high in ISC and suggests self-construal to be an influential factor in how store brands are evaluated. Addressing this with a study investigating the impact of self-construal on GSB evaluation would be the first of its kind and extend existing knowledge of store brand and self-construal in an everyday consumption context

A1.6 Summary of Knowledge Gaps to be Addressed

Summarising the background to this thesis and underpinning theories, highlights gaps in existing knowledge which will be addressed by the research aims, presented in the following section. The first gap has been established in the development of the research context presented earlier in this chapter. Further gaps (2-4) will be developed and justified in the literature review, in Chapters B and C of this thesis.

Gap 1: The increasing popularity of HDs as a grocery retail format has been established on a global scale. As HDs continue to grow in Europe, North America and Asia, the prevailing view expressed in extant studies is one of poor-quality, bargain-basement shopping experiences, at odds with the commercial success observed. There is a disconnect between consumer perceptions of GSBs and the actual consumer responses recorded.

Gap 2: Consumer perceptions of GSBs are formed using established cues of price, packaging, and store image. However, HD GSBs are unlike GSBs and tend to be copycat versions of leading national brands sold without the parent store logo at less than 50% of the leading

brand price. Based on these differences, it is not known if the cues of GSB evaluation can be extended to include HDs

Gap 3: The PKM is known to underpin how copycat GSBs are evaluated in a comparative context, when consumers are aware of the tactics of persuasion being used by the retailer. In the context of HDs, retailer tactics are less obvious to consumers and the outcome of a persuasion attempt from a copycat GSB may be different, but this remains unexplored.

Gap 4: GSB evaluation is moderated by consumer traits known as GSB 'proneness'. Similarities between GSB prone characteristics and consumer self-construal are highlighted, suggesting self-construal may be an influencing factor in GSB evaluation. Furthermore, the PKM is also likely to be affected by self-construal. This suggests self-construal to be an important but as yet unexplored factor in GSB evaluation.

A2 Research Aims

The research aims for this thesis are based on the theoretical evaluations and gaps within the literature presented in brief, in the preceding section. The overall objective of this thesis is to investigate the psychological processes explaining how consumers evaluate GSBs from mainstream grocers and HDs. The specific research aims (hereafter RAs) are as follows.

RA1: To develop a theoretically grounded conceptual framework that proposes a logical sequence of procedures to determine how consumers perceive HD GSBs

RA2: To determine if the image perceptions consumers have of HDs are reflected in their observed shopping habits

RA3: To investigate how consumers perceive HD GSBs using the established cues for GSB evaluation of price and packaging

RA4: To understand how self-construal impacts upon the evaluation of HDs and HD GSBs.

A3 Structure of the Thesis

This thesis is based on three studies that has been structured in the following way. The rest of Chapter A offers a summary of the following chapters, including a synopsis of the three studies and a discussion regarding how they are connected to one another.

Chapters B and C present a critical review of consumer evaluations of store brands from literature, focussing on the setting of retail grocery stores. The drivers of consumer grocery store brand evaluation are discussed in Chapter B. Chapter C focusses on the theoretical underpinnings leading into a review of persuasion theory and a discussion regarding the development and usage of the persuasion knowledge model (PKM), as well as a review of consumer self-construal and application in a consumption context. The literature review aims to highlight gaps in existing knowledge and serve as a foundation for the development of a conceptual framework which can be used to answer the research questions that have been set.

Chapter D presents the development of a conceptual model from the theoretical underpinnings highlighted in Chapters B and C. From this model, a series of 3 experimental research designs is developed and presented in Chapters E, F and G as individual studies. Justification is offered for the methodological and conceptual decisions made in order to empirically address the research aim and objectives of this thesis. The tools and techniques adopted in each study are discussed and the strengths and limitations of each are reviewed. The philosophical orientation of the researcher is presented along with the corresponding paradigm in which the research is conducted.

Chapters E, F and G present each of the three studies in succession as separate pieces of research. In combination, the three studies investigate how cues by which GSB are evaluate d GSBs (price, packaging and store image) are impacted by consumer self-construal. Chapter E and study 1 empirically investigates if there is a difference between expressed and implicit consumer preferences regarding store image and the associated effects of alternative processing mechanisms and motivations of ISC and INSC individuals. Motivational differences were revealed to be influential on implicit preferences, highlighting the importance of self-construal in store image evaluation. Chapter F (study 2) extends the use of self-construal as a moderating variable to investigate effects on other cues of GSB evaluation (price and packaging similarity). When levels of self-construal were high and different motivational states activated, evaluation outcomes were reversed in some instances. Drawing from the PKM, incorporating different motivational aspects of self-construal, a decision-

making process proposing how consumers evaluate GSBs was developed. Having established the effectiveness of self-construal on GSB cue evaluation, the final study (Chapter G) focusses on how consumers visually assess the cue of packaging. Findings confirm the different cognitive and motivational characteristics consistent with INSC consumers account for increased levels of visual attention.

Chapter H discusses the results obtained from each of the studies in relation to the research aims and objectives. The contributions made to knowledge by this thesis are discussed, stating how results from the three studies advance existing literature, along with suggestions for practitioner actions. Collectively, the three studies have shown self-construal to have a considerable influence on how consumers evaluate store brands. The overall process is complex and highlights that in the absence of familiarity and available heuristics, persuasion knowledge is activated and draws upon individual goals to aid decision making. When levels of self-construal are activated, different motivational mechanisms come into play which alter how GSBs are appraised. The key contributions are as follows:

Contribution 1 The anomaly between consumer preference for grocery stores of over HDs, and the popularity of HDs as a store format has been resolved. The importance of social bias in a grocery retail context is demonstrated, extending current knowledge of grocery store preferences.

Contribution 2 The PKM is extended to include the effects of self-construal and a decision-making process highlighting the relationship between heuristics, persuasion knowledge and self-construal is presented.

Contribution 3 The importance of self-construal as an influencing factor in consumption contexts has been extended to include grocery retailing, where it has been shown to be influential in GSB preferences.

Understanding the dominant self-construal of consumer segments will be beneficial to retailers and store brand managers when developing strategies to encourage increased consumption, particularly for less well-known product categories. This is also true for retailer brands interested in expansion into new markets. The final sub-sections of Chapter H reflect upon limitations and makes suggestions for future research. This concludes the thesis.

A4 Conclusion of the Chapter

In this chapter the aims and scope of the thesis have been stated. The research context brings to the fore recent success of HDs in the UK, despite a prevailing academic opinion of a poor experience compared to mainstream retailers. The predominance of own label products sold in HDs focusses the research scope to HDs and GSBs. Review of related literature revealed theoretical underpinnings of the PKM and self-construal. Existing knowledge of these theories can be extended through investigation into how they interact in a mass consumption setting. The stated research aims seek to address current knowledge limitations. An overview of how the research aims will be addressed was given in the final section of this chapter outlining the order and structure of the remaining chapters.

Chapter B: Literature Review of Store Brands in Marketing Research

B1 Introduction

This chapter critically reviews the marketing literature, focussing on grocery store brands (GSBs). First, a definition of store brands is offered to give clarity regarding the focal area of study for this thesis. This is followed with the literature search strategy, setting out the process by which materials are located, selected and analysed. Next, a critical review of extant store brand research is presented. The factors influencing consumer perceptions of GSBs are discussed, including the trilogy of product cues, source and consumer traits. A concluding section highlights the limitations of current research with respect to HD GSBs and underpinning theoretical mechanisms for further review are proposed.

B2 Store Brands in Marketing Research

B2.1 Introduction and Outline of the Chapter

Chapter A of this thesis highlighted a shift in the dynamics of the UK grocery market, giving rise to recent success of hard discounters, (HDs). HDs are strategically different from other grocery chains because they do not focus on selling national brands, offering predominantly their own very low-priced store brands with a high level of similarity to leading national brands (e.g., Kumar and Steenkamp, 2007; Steenkamp and Kumar, 2009; Vroegrijk, Gijsbrechts and Campo, 2013, 2016; Steenkamp 2018). Literature investigating grocery store brands represents a well-developed domain (e.g., Corstjens and Lal, 2000; Ailawadi, Neslin and Gedenk, 2001; Ailawadi and Keller, 2004; Steenkamp, van Heerde and Geyskens, 2010; Keller, Dekimpe and Geyskens, 2016, 2020; Wang, Torelli and Lalwani, 2020; Gielens, Ma, Namin, Sethuraman, Smith, Bachtel and Jervis, 2021) and given the dedication of HDs to selling store brands, the grocery store brand literature offers an important body of relevant knowledge from which key concepts can be drawn. Application of the key grocery store brand concepts to HDs will enable existing knowledge of how consumers evaluate store brands within HDs to be extended.

As previously noted, many scholars have contributed over the years to the large body of work investigating issues related to store brands within grocery retail stores. The multiple topics addressed fall into two different streams namely, why retailers sell their own private labels (grocery store brands, hereafter GSBs) alongside national brands (e.g., Corstjens and

Lal, 2000; Ailawadi and Harlam, 2004; Amaldoss and Shin, 2015; Sethuraman, 2009; Palmeira and Thomas, 2011) and the factors that influence how consumers evaluate GSBs when they are shopping. However, scholastic attention to HDs remains sparse and is limited to a few studies (e.g., Cleeren, Verboven and Dekimpe, 2010; Steenkamp and Kumar, 2009; Ter Braak et al., 2013; Vroegrijk et al., 2013, 2016; Zielke, 2014). A common thread to the above studies is the paucity of empirical evidence from a consumer perspective, despite the acknowledgement that HDs represent an important area of managerial and scholastic interest.

A framework for understanding how consumers evaluate GSBs was established by Richardson, Dick and Jain (1994) highlighting the importance of extrinsic product cues and store aesthetics. Subsequent studies have confirmed that consumers assess GSBs according to; 1) what is communicated via the price and packaging (Batra and Sinha, 2000; Garretson, Fisher and Burton, 2002; Warlop and Alba, 2004; Steenkamp et al., 2010) and 2) how the source of the GSB is perceived in studies investigating store image (Nies and Natter, 2010; Bao, Bao and Sheng, 2011; Keller et al., 2016). A third dimension to GSB evaluation was added by Ailawadi et al. (2001). The influence of characteristic psychological consumer traits were demonstrated, giving rise to the concept of a GSB prone consumer, with an increased tendency for GSB preference (e.g., Garretson et al., 2002; Baltas, 2003; Erdem, Zhao and Valenzuela, 2004; Hansen, Singh and Chintagunta, 2006; Collins, Cronin, Burt and George, 2015; Martos-Partal, González-Benito and Fustonini-Venturini, 2015). In summary, studies relating to GSB evaluation present a three-way interaction between how the product communicates, the product source and the consumer. This aligns to a classic message, source, recipient trichotomy as described by persuasion theory (Petty and Briñol, 2015). Further investigation of the theories of persuasion is given in the Chapter C, which argues for use of the persuasion knowledge model (Friestad and Wright, 1994) as an overarching framework upon which to base this thesis.

B2.2 Defining Store Brands

A large body of literature in marketing focuses on store brands (also known as ‘private label’ brands). Store brands do not bear the manufacturers name but instead carry the name of the store where they are sold, or another brand name created exclusively by that store (Kumar and Steenkamp, 2007). Store brands are ubiquitous across multiple categories, and can be found extensively in apparel, financial services and home furnishings as well as within consumer-packaged goods and grocery stores. To clarify the boundary of this thesis, the store brand literature under critical review relates specifically to consumer-packaged goods sold at grocery retail outlets and is referred to as grocery store brands (GSBs) throughout.

GSBs are segmented in to 4 main types by Kumar and Steenkamp (2007), value, copycat, premium and value innovator. A summary of each is given in table 1. Value, copycat and premium GSBs have been extensively investigated in existing literature (e.g., Corstjens and Lal, 2000; Sayman, Hoch and Raju, 2002; Choi and Coughlan, 2006; Vroegrijk et al., 2016). 'Value innovator' GSBs are sold in stores such as Aldi and Lidl, which are a distinct type of low-cost grocer known as 'hard discounters' (HD) (Kumar and Steenkamp, 2007). Few studies have investigated HD GSBs until recently, when Dekimpe and Geyskens (2019) stated in the *Journal of Retailing* that academic GSB insights had become 'leapfrogged by practice'. Subsequent studies into GSB branding have considered value innovators (e.g., Baker, Chari, Daryanto, Dzenkovska, Ifie, Lukas, and Walsh, 2020; Keller et a., 2020; Gielens et al., 2021) but to date no studies have specifically investigated HD GSBs.

Table B1. GSB classifications

	Value GSB	**Copycat GSB**	**Premium GSB**	**'value innovators'**
Examples	Tesco Everyday Value Sainsbury's Basics	Tesco's " " " " by Sainsbury's	Tesco's Finest Taste the Difference	Aldi and IKEA
Objective	• Low price customer option • Expand customer base	• Increase retailer share of category profits • Increase negotiating power with manufacturer	• Provide added-value • Store differentiation • Margin enhancement	• Best value • Build store loyalty • Generate word of mouth
Branding	First price label	Umbrella store brand	Store brand with sub-brand	Meaningless own-label
Pricing	Large discount below leader brand	Up to 50% below leader brand	Close or higher than brand leader	Large discount below leader brand
Packaging	Minimal basic design	Similar to brand leader	Unique and differentiated	Cost efficient
Quality in relation to brand leader	Poor quality	Quality close to branded manufacturer's	On a par / better or advertised as better than leading brand	On a par with brand leader

(Kumar and Steenkamp, 2007, pp. 27-28)

B3 Review of Research on Grocery Store Brands

For many years, multiple scholars have contributed to the topic of GSBs. Reviewed literature concurs that in addition to being of managerial interest, GSBs are also an important research topic. For this thesis, a semi-systematic literature review process was followed, which, according to Snyder (2019) is a suitable methodology to review a topic studied by different researcher groups using multiple approaches, theories, and definitions. A protocol was developed to ensure depth and rigour in the process (Palmatier, Houston and Hulland, 2018). The purpose of the review was to explore the theories, methodologies and frameworks relating to GSBs so that existing knowledge could be extended with application to HD GSBs. Associated keywords were selected to ensure the search was focussed on GSBs, using

different common terms of ‘private label’ and ‘store brand’. The characteristic high similarity of HD GSBs to leading national brands was also given focus with the keywords ‘copycat’, ‘brand imitation’, ‘lookalike’ and ‘knockoffs’. All terms were all derived from background reading around the topic as suggested by Hart (2014) who recommends the use of books (e.g., Kumar and Steenkamp, 2007) and secondary and managerial data sources (e.g., Mintel, 2016; McKevitt, 2017). ‘Hard Discounter’ and ‘Discount retailers’ were added in to capture literature relating to HDs.

B3.1 Literature Search Methodology

A comprehensive search of 3, 4 and 4* ranked peer-reviewed marketing journals (according to the Chartered Association of Business Schools (CABS)) was conducted. This was a starting point for the literature review and designed to develop a body of knowledge regarding the topic and build insights into the theoretical underpinnings. The specific journal titles and article selection criteria are presented in table 2. The timeline for the initial search was from 2000 to 2017 and the search was repeated in 2021 (from 2017-2021) to ensure the body of literature was kept up to date. The first search yielded 78 articles and the subsequent search a further 8 (see appendix 1 for detailed search records). Thematic content analysis was used to synthesize and analyse findings, giving rise to different themes within the literature (Braun and Clarke, 2006). Articles were first sorted into chronological order, logged and summarised, recording details including the type of GSB investigated, the research objective, the unit of analysis, dependent variables and theoretical underpinnings, (adapted from Kelting, Duhachek and Whitler, 2017, pp. 570-571, see appendix 2 for an example). A version of the Anderson, Lees and Avery (2015) Thematic Analysis Grid (TAG) was used to record and identify key themes which became the foundations for sections within the literature review. Two initial observations emerge from this body of literature. First, only 5 articles (2 from snowballing articles from the original searches) address HDs (see table B3). Second, the majority of empirical studies use historic datasets of shopper behaviour to make inferences regarding consumer attitudes to GSBs. The underlying psychological drivers behind observed consumer behaviour with regard to GSBs, however, remains unexplored.

Table B2. Literature search protocol and outcomes, including keywords and criteria

Step in the Search Process	Detail for each step in the process	
Keyword selection	Private Label, Store Brand, Copycat, Brand imitation, Lookalike, knockoffs, Hard discounters, Discount retail	
Search criteria	CABS (2018) 3, 4, 4* Marketing Journals Journal of Consumer Psychology, Journal of Consumer Research, Journal of Marketing, Journal of Marketing Research, Marketing Science International Journal of Research in Marketing, Journal of Retailing, Journal of the Academy of Marketing Science, European Journal of Marketing Marketing Letters, Marketing Theory Psychology and Marketing, Journal of Business Research	
Timeline	Initial search 2000-2017, Subsequent search 2017-2021	
Selection criteria	**Selected for further review**	**Rejected**
	• Domain of grocery retailing and/or Hard Discounters • Consumer evaluation and preference of GSBs • Influencing factors on consumer evaluation of GSBs (consumer psychology, GSB characteristics	• Not in grocery retailing (luxury goods, apparel) • Not related to GSBs for example store location, layout and characteristics • Not related to consumer preference, for example strategic retail practices (such as promotional activities, inter-retailer competition)
Outcome	86 articles for further review and analysis	229 articles rejected

The second point regarding the literature investigating GSBs concerns the methodological and theoretical underpinnings. Referring again to the 86 empirical articles found through initial searching, over 54% (46 articles) use modelling of historic datasets applying game theory and utility theory as underlying principles. By comparison, only 22% of articles use data collection via survey and a further 19% via experiments. This suggests a heavy skew toward furthering knowledge of GSBs via the observation of past consumer behaviour, versus seeking to determine the psychological drivers behind such behaviour. A similar observation by Riboldazzi, Capriello and Martin (2021) was made in a published review of GSB literature. To summarise, despite many studies detailing *how* consumer have behaved, fewer studies seek to understand *why* consumers have acted thus. In support of this trend, only one study of those reviewed used a qualitative method of data collection (Verhoef, Nijssen and Sloot, 2002). The above gap represents the focus of the present thesis, that is, to empirically examine the psychological underpinnings of consumer evaluation of store brands and to include HDs in this appraisal. The main findings from the GSB literature are discussed in the following section.

Table B3. Summary of specific HD research

Author(s)	Key observations / findings	Limitations
Steenkamp and Kumar (2009)*	HD format is a global success HD shoppers are better educated and not the less well off HD GSBs are not inferior quality to national brands Consumers may be attracted to HDs because of price but return due to quality	Theoretical paper with no empirical evidence
Cleeren et al. (2010)	Competition from HDs causes supermarkets to reduce prices	Lack of empirical evidence from a consumer perspective
Ter Braak et al. (2013)	HDs are strategically different to other grocery retailers and not dependent on manufacturer power.	Lack of empirical evidence from a consumer perspective
Vroegrijk et al. (2013)	HDs appeal to GSB prone shoppers who are more likely to shop across multiple stores	Lack of empirical evidence from a consumer perspective
Zielke (2014)*	Intention to shop in HDs is motivated by emotions and attributions as well as value perceptions	Calls for further investigation and substantiation of insights
Vroegrijk et al. (2016)	Retailer strategy of offering value private labels to combat HDs is ineffective	Lack of empirical evidence from a consumer perspective
Baker et al. (2020)	• Value private labels are under threat from HDs • Launch of new value GSB format by retailers to complete with HDs	Focus of the study is on retailer value brands, despite acknowledging the threat posed by HDs

* Sourced using snowballing, not from the original search

B3.2 Main Findings from the Grocery Store Brand Literature

The main findings from within the GSB literature include factors that encourage retailers to sell their own private labels alongside national brands, as well as factors that influence consumer consumption patterns of GSBs. Topics such as increased retailer profitability (e.g., Corstjens and Lal 2000; Ailawadi and Harlam, 2004), improved store differentiation and store loyalty (e.g., Ailawadi, Pauwels and Steenkamp, 2008; Nies and Natter, 2010; Dawes and Nenycz-Thiel, 2013), and the impact of the economic climate (e.g., Lamey et al., 2007) have been considered. Although many scholars have contributed to extending understanding of strategic reasons for retailers sell their own brands (GSBs), these topics fall outside the boundaries of this thesis. The focus for this work is to investigate the consumer psychology underpinning GSB evaluation.

From a consumer evaluation perspective, prior studies examine factors that influence consumer quality perceptions of GSBs (e.g., Sayman et al., 2002; González-Mieres et al., 2006). Key factors are found to be price (e.g., Garretson et al., 2002; Steenkamp et al., 2010; Zielke, 2014), retailer reputation (image) of the store in which GSBs are sold (e.g., Bao et al., 2011; Nies and Natter, 2010) and the similarity between GSBs and national brands (e.g., Olsen, 2012; van Horen and Pieters, 2012a,b), as well as the demographic and psychographic characteristics of GSB consumers (e.g., Garretson, et al., 2002; Manzur et al., 2011), which will be discussed in detail in the following section.

B4 Characteristics of Grocery Store Brand Prone Consumers

Many scholars agree that some consumers are more inclined to purchase GSBs than others (e.g., Richardson, et al., 1994; Ailawadi, et al., 2001; Collins et al., 2015). Richardson et al.

(1994) proposed certain consumers to be more GSB 'prone'. According to Martos-Partal et al. (2015) research into the consumer characteristics defining GSB proneness has largely focussed on sociodemographic measures. However, Ailawadi and Keller (2004) express concerns regarding the empirical generalizability of studies. Generally, sociodemographic studies are considered to be of limited success in explaining GSB proneness (Ailawadi et al., 2001; Garretson et al., 2002; Erdem et al., 2004; Hansen et al., 2006). One exception to this can be seen in the work of Baltas (2003), who supports a link between sociodemographic factors and GSB proneness. Baltas (2003) proposed individuals of higher social status to be more GSB prone, suggesting that selecting lower priced products was deliberate strategy. These consumers are considered to be more knowledgeable than others about grocery stores and GSBs, giving them confidence to by non-branded items. The seminal study by Ailawadi et al. (2001) related psychological attributes of consumers to the benefits or costs associated with GSB purchase. A summary of the psychological attributes highlighted by scholars is given in table B4.

Table B4. Summary of the psychological characteristics displayed by GSB prone consumers

	Psychological Characteristics	
Study	**Utilitarian Benefits**	**Hedonic Benefits**
Ailawadi et al. (2001)	Price consciousness	Self-expression in the form of mavenism (weak)
Garretson et al. (2002)	Price consciousness Positive attitude to GSBs	Smart shopper self-perceptions (weak)
Baltas (2003)	Price consciousness	
Erdem et al. (2004)	Price consciousness	
Hansen et al. (2006)	Sensitivity to price	
Manzur et al. (2011)	Price consciousness	Smart shopper self-perceptions
Collins et al. (2015)	Price consciousness Value consciousness	
Martos-Partal et al. (2015)	Price consciousness Value consciousness	Self-expression Innovation

B4.1 Utilitarian Benefits of GSBs

There is clear agreement from the majority of scholars that utilitarian benefits manifested as concerns about price and value or 'price consciousness' and 'value consciousness' are associated to GSB proneness. Although closely related attitudinal constructs, price consciousness measures the extent to which consumers regard price, whereas value consciousness denotes consumer price-quality evaluations (Lichtenstein, Ridgeway and Netemeyer, 1993). Only later studies show the inclusion value consciousness to the perceived utilitarian benefits of GSBs (Collins et al., 2015; Martos-Partal et al., 2015). Commenting on the limitations of earlier research, both studies note that as GSBs have matured, perceptions

of quality have improved in particular in relation to multitier GSB portfolios. By offering multiple value propositions or tiers retailers may target multiple consumer segments in the same category (Kumar and Steenkamp, 2007; Geyskens, Gielens and Gijsbrechts, 2010). This practice attracts GSB shoppers who have concerns for both price and quality.

B4.2 Hedonic Benefits of GSBs

In addition to psychological characteristics giving rise to utilitarian benefits, hedonic benefits have also been associated with GSB prone shoppers. Although multiple studies have investigated hedonic benefits aligned to GSB purchasing, empirical evidence is inconclusive (table B4). Garretson et al. (2002) and Manzur et al. (2011) note the existence of 'smart shopper self-perceptions' (SSSP), suggesting GSBs satisfy an ego-driven need in consumers to get a good price. SSSP also provide the shopper with a sense of 'accomplishment' (Schindler, 1989) and increased self-esteem (Mano and Elliot, 1997). According to Mano and Elliot (1997), another known characteristic of smart shoppers is that they will be actively engaged in information search regarding price and promotional activity in order to achieve satisfaction.

Ailawadi et al. (2001) employed a consumer characteristic akin to that of SSSP termed 'mavenism'. Mavens enjoy the process of shopping, gaining satisfaction from their acknowledged expertise. Consequently, mavens are also (like smart shoppers) highly involved in the category and use media such as advertising to increase their knowledge (Higie, Feick and Price, 1978). Mavens are also known to place high importance on quality as well as price (Williams and Slama, 1995). Due to the common characteristics of the smart shopper and the maven, the two are considered to be the same by some scholars (e.g., Price, Feick and Guskey-Federouch, 1988). It follows that mavens are more likely to be attracted to high quality GSBs (Ailawadi et al., 2001) and implies a link between the hedonic benefits of SSSP and mavenism to low price and high quality of GSBs.

Martos-Partal et al. (2015) also note the satisfaction of hedonic benefits related to innovation and self-expression. The authors explicitly link these benefits to maturation of GSBs and the development of retailer GSB portfolios. By offering additional or novel benefits, retailers differentiate between the GSBs they offer in the same category and appeal to consumers with a desire for self-expression and/or innovation. In a more recent study, Quinones, Gómez-Suárez and Yagüe (2022) investigated the influence of cultural dimensions on SSSP when purchasing GSBs. Using Schwartz's (1992) theory of human values, the authors demonstrated that the values of smart shoppers were influenced by their cultural context, leading to differences in GSB perceptions between populations. This gave rise to a

call for further research investigating the impact of country of origin and associated values on attitudes to GSBs.

This section has reviewed literature relating to the psychological characteristics of GSB prone shoppers. Existing studies in this area acknowledge that GSB prone shoppers have evolved over time in line with the development and maturation of GSBs. To date extant literature depicts the GSB prone shopper as one who is concerned about quality in addition to price. In pursuit of these benefits, the GSB prone shopper exhibits high levels of engagement and cognition to satisfy ego-related desires to be recognised by others as 'smart'. However, despite the empirically demonstrated psychological traits of GSB prone consumers, no studies address why such traits emerge., with the exception of Quinones et al. (2022) who propose the influence of cultural values. The paucity of academic attention in this area suggests that further study investigating the psychology behind why GSB prone shoppers display the aforementioned traits would extend existing knowledge. This echoes calls from scholars for further research into GSB prone shopper psychology (Martos-Partal et al., 2015; Collins et al., 2015; Quinones et al., 2022).

B5 Factors Affecting Consumer Evaluation of Grocery Store Brands

In addition to consumer related traits, different factors affect the psychological evaluation of GSBs by consumers. This includes the importance of perceived quality when consumers assess GSBs, influenced by the price, image of the store image and the packaging. These three cues (price, store image and packaging) are considered to be the determining factors upon which GSB evaluations are made (Richardson et al., 1994,1996; Batra and Sinha, 2000; Garretson et al., 2002; Steenkamp et al., 2010).

B5.1 Perceived Quality of Grocery Store Brands

The perceived quality of a product can be defined as a measure of how the consumer judges the overall superiority or excellence of a product (Zeithaml, 1988). It has been well documented in literature that GSBs suffer from consumer perceptions of lower quality in comparison to national brands (e.g., Narasimhan and Wilcox, 1998; Batra and Sinha, 2000; Garretson et al., 2002; Steenkamp et al., 2010). Narasimhan and Wilcox (1998) and Batra and Sinha (2000) linked consumer preference for national brands to an increased purchase risk associated with GSBs. Batra and Sinha (2000) further defined the risk to consumers as being either social or related to perceived quality. They noted that any purchase that might expose an individual to negative peer group perceptions presents a social risk social risk and thus

inhibits GSB purchase (Livesey and Lennon, 1978). However, González Mieres, Díaz Martín and Trepalacios Gutiérrez (2006b) present an alternative perspective. The authors demonstrated that social risk had a *positive* effect on purchase intention of GSBs. This led to a proposal that individuals who purchase GSBs may be considered as smart buyers (this raising their social standing) by others because they are capitalising on the cheaper prices offered by GSBs. This is in keeping with related studies investigating the benefits of smart shopper perceptions and mavenism derived through GSB purchasing (e.g., Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011). In addition to the social risk involved in the purchase of GSBs, Batra and Sinha (2000) stated additional risk to be linked to the perceived quality of the product. Many scholars have since investigated the perceived quality 'gap' between GSBs and national brands (see table B5).

A basic tenet of studies seeking to determine how consumers assess GSB quality is the information asymmetry that exists between buyers and sellers (consumers and retailers) (Spence, 1973). Spence, (1973, pp. 355) terms the lack of knowledge equilibrium as '…an investment decision under uncertainty', which is mitigated through the sending and interpretation of signals. In order to signal product quality to consumers, manufacturers use multiple different cues (e.g., Cox, 1967; Olson and Jacoby, 1972; Olson, 1977; Dodds, Monroe and Grewal, 1991; Helm and Mark, 2007; Bodur, Tofighi and Grohmann, 2016). Cox (1967), Olson and Jacoby, (1972) and Helm and Mark (2007), agree cues can be either intrinsic to the product (judged through direct experience such as taste) or extrinsic such as price (Olson, 1977), retailer reputation /or store image and the image of the product portrayed by packaging (Dodds et al., 1991; Bodur et al., 2016; Konuk, 2018). In order to address the information asymmetry, consumers rely on extrinsic cues in the absence of other information, specifically when assessing GSB quality (Richardson et al., 1994, Batra and Sinha, 2000). The impact of extrinsic cues of price, store image and packaging (specifically in relation to the similarity of GSBs to national brands) on consumer evaluation of GSBs is critically discussed in the following sections.

Table B5. Key findings from studies investigating the perceived quality gap between GSBs and national brands.

Study	**Key Finding**
Richardson et al. (1994)	Consumer evaluation of the quality gap is based on extrinsic cues rather than intrinsic cues
Batra and Sinha (2000)	Consumers are more concerned about the experience quality of GSBs than the quality of ingredients

Garretson et al. (2002)	Value seeking consumers are not concerned with the quality gap
Verhoef et al. (2002)	National brands can combat GSBs by increasing the perceived quality gap with innovation and enhanced brand image
González-Mieres et al. (2006)	Perceived quality of the store is the most influential extrinsic cue in addressing the perceived quality gap
Steenkamp et al. (2010)	As GSBs mature, consumer perceptions of the quality gap diminish
Olson (2012)	Copycat packaging decreases the perceived quality gap
Kadirov (2015)	GBSs can use marketing tactics to close the quality gap and manufacturers should focus on authenticity
Bodur et al. (2016)	GSBs with ethical attributes are considered higher in quality in the presence of high-quality extrinsic cues (price and store image)
Konuk (2018)	Store image has a positive impact upon perceived quality for organic GSBs

B5.2 The Role of Price as a Cue of GSB Quality

It has been well documented in literature that GSB prone consumers are characteristically price conscious (e.g., Ailawadi et al., 2000; Collins et al., 2015, see table B4) and price is a quality cue which has received a great deal of scholastic attention (Miyazaki, Grewal and Goodstein, 2005). Many scholars also support the notion that lower prices of GSBs equate to lower perceived quality (e.g., Garretson et al., 2002; Steenkamp et al., 2010). Steenkamp et al. (2010) propose that consumers evoke a 'price-quality schema' (Peterson and Wilson, 1995) and use price as a short cut to assess the quality of a product to reduce cognitive expenditure. Alternatively, Garretson et al. (2002) employ attribution theory (Heider, 1958; Sawyer and Dickson, 1984) to account for the perceived quality gap between GSBs and national brands, whereby consumers attribute a lower price to an inherent problem with the product.

In addition to attributions of lower quality Zielke (2014) noted that low price also evoked positive attributions. The author demonstrated that low GSB prices were attributed to increased efficiency of the retailer's business model, which was of benefit to consumers. Beverland and Farrelly (2010) suggest that low priced brands are considered to be more 'authentic' by consumers because lower prices imply that rather than seeking profit, manufacturers (or in the case of GSBs, retailers) are demonstrating sincere regard for their customers. In support of this study, Kadirov (2015) proposed that lower priced GSBs were considered to be more authentic by consumers, in comparison to national brands. However, noting that low priced GSBs could be either positively or negatively evaluated by consumers,

Kadirov (2015) called for further investigation into the psychology of the GSB prone shopper to explain this phenomenon.

B5.3 The Role of Store Image as a Cue of GSB Quality

The highly cited work by Martineau (1958) suggested that in addition to practical traits (e.g., price), consumers also thought about the personality of retail stores when making purchase decisions '…store image refers to the definition of the store in the shoppers' mind that includes both functional and psychological attributes…' (pp.47). Many scholars have since contributed to the conceptualization of store image, stating it to be a definition of the overall impression of the store (Zimmer and Golden, 1988) and more recently as the impression of the retailer in the mind of the consumer (see Ailawadi and Keller, 2004 for a comprehensive review). In order to gauge a store's image, consumers refer to shopping experiences at the store or to external information relating to the retailer such as news, media or word of mouth (WOM) (Mazursky and Jacoby, 1986).

Store image has also been documented as a constituent of store brand equity (Ailawadi and Keller, 2004; Hartman and Spiro, 2005), which is an important consideration because consumers with a more favourable store image have an increased likelihood of store loyalty (Martineau, 1958). Consequently, store image has been shown to increase the utility of a store visit as well as the intention to visit (Sirohi, McLaughlin and Wittink, 1998; Baker, Parasuraman, Grewal and Vos, 2002;). In addition to this, store image impacts upon how consumers evaluate the goods sold by a retailer (Dodds et al., 1991). Of particular interest to his thesis is the influence of store image on the consumer evaluation of GSBs. Building upon an earlier study by Richardson et al. (1994), Semeijn, van Riel and Ambrosini (2004) empirically demonstrated that store image plays a key role as an indicator of perceived GSB quality.

The relationship between store image and GSBs has been further investigated in recent years (e.g., Bao et al., 2011; Nies and Natter, 2010; Keller et al., 2016). Confirming the impact of store image on perceptions of GSB quality, Bao et al. (2011) added that store image also served as a differentiator between GSBs from different retailers. Nies and Natter (2010) and Keller et al. (2016) focussed on the mutuality of the relationship between GSBs and store image. Nies and Natter (2010) proposed that GSBs also could impact upon store image, in reverse of previously accepted wisdom. The authors considered GSBs to be brand extensions of the retail store because they carry the store name. The image of the parent brand influences that of the extension (Völckner and Sattler, 2006) but there is also a reverse

spillover effect from extension to parent (Loken and Roedder John, 1993). Therefore, it also follows that store image influences GSBs and vice versa (Nies and Natter, 2010).

The influence of store image on GSBs was further investigated by Keller *et al.* (2016), in respect to the branding choices retailers adopt across their GSB portfolios. The authors noted that because store image indicated GSB quality, retailers promoting an upscale image typically employed a store branded approach for GSBs. According to Keller et al. (2016) the image of the store and the image of the GSB are acting as quality cues to the consumer. Based on cue consistency theory (Miyazaki et al., 2005), two consistent cues (as in this case) are more predictive of quality than inconsistent cues. Therefore, consumer quality perceptions may be enhanced. Keller et al. (2016) also note that stores with a more price-led or value image are less likely to adopt a store branded GSB strategy. However, as noted by the authors, the study did not include HDs due to a 'different role' played by GSBs in their stores, although further explanation of this role was not alluded to.

In conclusion, store image plays an important role in the consumer evaluation of GSBs because it serves as an indicator of GSB quality which can differentiate between retailers (Semeijn, et al., 2004; Bao et al., 2011; Keller et al., 2016). By considering GSBs as brand extensions (because they are predominantly store branded), not only does the image of the store brand influence the GSB, but vice versa (e.g., Völckner and Sattler, 2006; Nies and Natter, 2010). However, there is little clarity around the spillover of image from store to GSB and GSB to the parent store in cases where GSBs do not carry the store brand. Nies and Natter (2010) inferred spillover effects to still occur in the absence of store branding on GSBs, no supporting empirical evidence was offered. The study collected data from major retail formats but did not include HDs, which employ a deliberate strategy of non-store branded GSBs (Kumar and Steenkamp, 2007). Similarly, Keller et al. (2016) chose to not include HDs in their study of retailer branding choice because of the different GSB strategy used in these stores.

B5.4 The Role of Packaging as Cue of GSB Quality: The Phenomenon of Copycats.

The packaging (or trade dress) of GSBs, alongside price and store image, is an extrinsic cue used by consumers to assess product quality (Richardson et al., 1994, Batra and Sinha, 2000). It has long been recognised by scholars that packaging can enhance consumer quality perceptions of GSBs, in particular when similarity to leading national brands is displayed (e.g., Zaichkowsky and Simpson, 1996; Steenkamp and Geyskens, 2013). GSBs displaying high levels of similarity to national brands are known as copycats (Warlop and Alba, 2004) and represent a distinct sub-set of GSB literature.

The occurrence of ‘copycatting’ has been a topic of interest to scholars investigating GSBs and represents a subset of the GSB literature presented in table B5. A copycat (imitation or lookalike) can be defined as a 'product or service, though not identical, [which] is viewed as similar in substance, name, shape, form, meaning or intent to an acknowledged and widely known product or service currently in the marketplace' (Lai and Zaichkowsky, 1999, pp. 180). More specifically, the practice of copycatting is a common and deliberate retailer strategy, resulting in hundreds of own-label products designed to look like successful brands in order to create a ‘halo of resemblance’ causing consumers to perceive similarities in use, content and origin (Kapferer,1995). Balabanis and Craven (1997) define a copycat as 'a new generation of own-brand products that have similar packaging characteristics to leading brands products’ (p.299). Van Horen and Pieters (2012b, pp.83) expand the packaging similarity further, stating that copycats ‘imitate the name, logo, and/or package design of a leading national brand and take advantage of the latter's positive associations and marketing efforts’. Whist copycats can be very similar to originals, they are not exact copies and are distinct from counterfeit brands (Le Roux, Bobrie and Thébault, 2016), which are ‘illegal low-priced and often lower quality replicas of products that typically possess high brand value’ (Wilcox and Sen, 2009, pp. 259).

The practice of copycatting represents a growing research stream, reflecting that half of all GSBs have been identified as copycats (Steenkamp and Geyskens, 2013). An array of different topics have been investigated including; how consumers evaluate copycats (D’Astous and Gargouri, 2001; Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters; 2012b), the effect of different imitation strategies and (Olson, 2012; van Horen and Pieters; 2012a; van Horen and Pieters, 2017), how copycats impact upon the consumer shopping experience (Kelting et al., 2017) and suggestions for measuring the degree of imitation (Satomura, Wedel and Pieters, 2014).

Table B6. Summary of GSB research investigating copycats indicating the research objective and mode of copycat evaluation.

Study	Research objective	Comparative evaluation of copycats	Non-comparative evaluation of copycats
D'Astous and Gargouri (2001)	To investigate the impact of antecedent factors on copycat evaluation	x	x
Warlop and Alba (2004)	To investigate consumer preference for copycats relative to national brands	x	
Miceli and Pieters (2010)	To investigate the impact of consumer mind set on evaluation of different copycat strategies	x	
Olson (2012)	To investigate the effectiveness of copycat packaging to infer product origins	x	
van Horen and Pieters (2012a)	To investigate the effectiveness of different imitation strategies in copycats	x	
van Horen and Pieters (2012b)	To investigate the impact of comparative evaluation between copycats and national brands	x	x
Satomura, Wedel and Pieters (2014)	To develop a detection method and metric for copycat brands	x	
Kelting, Duhachek and Whitler (2017)	To investigate the impact of copycats on shopping experience	x	
van Horen and Pieters (2017)	To investigate the phenomenon of copycatting in different categories	x	

All of the studies reviewed to date consider copycats as GSBs, sold in grocery stores alongside national brands, offering consumers' choice at the point of purchase. In keeping with this assumption, each study employs a methodology involving the comparison of national brands to the copycats that imitate them. Evaluation by consumers may take place in a comparative or non-comparative way (Olsen, 2002). Different modes of comparison influence how the brand is evaluated and impact upon subsequent attitude and purchase intentions (Nowlis and Simonson, 1997; van Horen and Pieters, 2012b). Therefore, it may be expected that consumers evaluating copycat GSBs may evaluate them differently depending on the mode of the evaluation.

Only two studies (D'Astous and Gargouri, 2001 and van Horen and Pieters, 2012b) investigated how copycats were evaluated by participants in the absence of the national brand, in a non-comparative mode. Both studies offer evidence that copycats are evaluated differently when comparisons to the national brand cannot be made. In both cases, non-comparative evaluation led to a more positive outcome for the copycat. In the absence of the national brand, consumers make decisions based on their overall impression of the copycat (Olsen, 2002). According to van Horen and Pieters (2012b), this can lead to a more positive outcome for two reasons. First, any positive associations the consumer may already hold relating to the national brand are transferred to the copycat, enhancing the evaluation. This

process of assimilation takes place in situations where the target stimulus (the copycat) presents information that is accessible to the consumer (recipient) (van Horen and Pieters, 2012b). However, in situations where two items are compared (e.g., the copycat is compared to the national brand it has copied), the better known and hence more recognisable item (the national brand) becomes a comparison standard to which the other is compared (Sherif and Hovland, 1961). Once the contrast to the national brand is made, the consumer is aware that the information presented by the copycat is an attempt to influence them, causing a negative evaluation (van Horen and Pieters, 2012b).

In addition to the contrasting effects of comparative evaluation, van Horen and Pieters (2012b) note that negative evaluation of copycat brands can be induced when consumers evoke their naïve theories of persuasion. Naïve theories of persuasion are thoughts that consumers hold regarding the tactics marketers might use to persuade them (Tormala and Briñol, 2015). The persuasion knowledge model (PKM) (Friestad and Wright, 1994) proposes that consumers evaluate persuasion attempts (e.g., advertisements or packaging claims) based on the persuasion theories or knowledge they hold. Awareness of a blatant copycat highlights that the displayed similarity to the leading brand is a persuasion tactic and activates the consumer's persuasion knowledge (van Horen and Pieters, 2012b). Consumers judge the copycat to be unfair and thus it is evaluated negatively. Theories of persuasion and the PKM are critically review in the following chapter.

In this section, a review of the copycat GSB literature (focussing on packaging similarity to the leading national brand) has highlighted how the mode in which a copycat is evaluated (comparative versus non-comparative) is highly influential upon the outcome of that evaluation (van Horen and Pieters, 2012b). When products are encountered next to each other it is more likely that they will be evaluated comparatively than if they were displayed in isolation (Muthukrishnan and Ramaswami, 1999). Comparative evaluation between a GSB and the leading national brand may highlight the tactic of copying and evoke consumer persuasion knowledge, leading less positive GSB perceptions (Warlop and Alba, 2004; Miceli and Pieters, 2011; van Horen and Pieters, 2021b). It is common practice for retailers to present copycat GSBs and national brands side by side or within close proximity on the shelf (Kelting et al., 2017). This is likely to promote comparative evaluation. However, HDs are known to stock less than 10% of branded goods (Kumar and Steenkamp, 2007) and thus comparative evaluation between GSBs and national brands is unlikely. Only two studies D'Astous and Gargouri (2001) and van Horen and Pieters (2012b) have investigated copycat GSB evaluation in a non-comparative environment and neither included HD GSBs. This

highlights an area in which further research focussing on HD GSBs could extend existing knowledge of the evaluative processes of consumers in relation to GSBs.

B6 Conclusions from the Literature Review and Knowledge Gaps

In this chapter, a critical review of GSB research has been presented, investigating elements contributing to the growth of GSBs and the factors affecting how consumers evaluate GSBs. Despite the large body of extant GSB literature, there are a number of unanswered questions in relation to HDs, which are a relatively new and under researched phenomenon within grocery retailing. A concluding section summarising of these tensions is given below.

B6.1 Summary of the Literature Review Conclusions

Review of the GSB literature calls attention to a paucity of studies relating to HDs, highlighted in Chapter A as a current disruptive phenomenon impacting the grocery retail market. This has given rise to tension between observed HD growth and the portrayal of HDs in comparison to traditional grocery retailers (Zielke, 2014; Geyskens et al., 2018; Gijsbrechts, et al., 2018; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Although noted scholars (e.g., Steenkamp and Kumar, 2009) acknowledge the importance and difference of HDs scant scholastic attention has been paid to this emergent marketplace. Much of the existing GSB research advocates that the presence of national brands in grocery stores is fundamental to GSB success. However, this assumption fails to account for the success of HDs which do not sell national brands. This exposes an area in which existing theoretical explanations regarding the consumer purchase of GSBs are not applicable.

One focus of GSB literature is understanding the type of shopper who is more likely to purchase GSBs. Scholars offer a profile of the psychological characteristics that make a consumer more 'prone' to GSB purchasing. In short, the GSB prone consumer is conscious about price and quality, is highly engaged in the category and motivated to stand out and be recognised by others for their achievement (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). Although it remains highly likely that such characteristics will also play an important role in an HD environment, there are no existing studies to confirm this assumption.

GSB literature also portrays three well-researched and evidenced extrinsic cues of store brands upon which consumers make evaluations. These are the price of the GSB, the image of the store in which it is sold and the packaging, such as how similar the GSB looks to the leading national brand (e.g., Richardson et al., 1994; Garretson et al., 2002; Warlop and

Alba, 2004; Steenkamp et al., 2010; Nies and Natter, 2010; Zielke, 2014; Keller et al., 2016). Pricing of GSBs represents a large and well researched topic alone and is considered to be the dominant cue (Garretson et al., 2002; Steenkamp et al., 2010). Early researchers linked low prices to low quality, suggesting consumers use price as a quality heuristic when shopping. However, more recently, studies have noted the quality development of GSBs and suggested that a low price may also signal attributes other than quality (Zielke, 2014). This includes attributes such as a concern for the well-being of the consumer and an efficiently run business. Furthermore, the quality of GSBs sold by HDs is on a par or even higher than that of leading national brands (Steenkamp and Sloot, 2018). This has created tension between the acknowledged 'low price, low quality' assumption which dominates the GSB literature and the observed positive evaluation of very low priced GSBs in HDs. This tension remains unresolved, highlighting a gap in current literature.

In addition to price, store image is also considered as an important extrinsic cue for consumer GSB evaluation (e.g., Nies and Natter, 2010; Keller et al., 2016). It is widely accepted that GSBs are brand extensions of the store brand and benefit from positive spillover. However, studies to date have focussed upon store brands which are branded with the store name. There is no empirical evidence to suggest that the store image will have a similar positive effect on GSBs that are not store branded a (i.e., standalone brands) and bear no relation to the parent store. Therefore, the extrinsic cue of store image remains unexplored for standalone GSBs (such as those sold in HDs).

Finally, there is ample empirical evidence to suggest that consumers use packaging to assess GSB quality (e.g., Richardson et al., 1994; Zaichkowsky and Simpson, 1996; Batra and Sinha, 2000; Steenkamp et al., 2010). Extent research also suggests that consumer quality perceptions of GSBs are enhanced when the packaging displays visual similarity to national brands (e.g., Steenkamp et al., 2010). GSBs that deliberately look similar to national brands are known as copycat GSBs (Warlop and Alba, 2004, see table B6). When consumers are aware a GSB is deliberately copying a national brand, the copycat GSB is evaluated more negatively (e.g., van Horen and Pieters, 2012b). Prior research indicates that consumers become aware of copying as a marketing tactic on account of direct comparison between GSBs and national brands. Comparisons are most likely to occur in grocery stores, where GSBs are placed near or next to national brands (Kelting et al., 2017). However, HDs are known for predominantly selling GSBs (Steenkamp and Kumar, 2009), over half of which are copycats (Steenkamp and Geyskens, 2013). Therefore, consumers are likely to be aware that the products on sale are GSBs, despite the lack of opportunity to use national brands as a comparator. Evidence reporting on the success of HDs implies that consumers knowingly

evaluate copycat GSBs positively, however this issue remains unresolved empirically. A summary of the tensions in existing literature give rise to a considerable gap in knowledge which is highlighted below

B6.2 Statement of a Gap in Current Knowledge

In this chapter it has been demonstrated that HDs are under-researched in the GSB literature, despite calls for new studies (e.g., Vroegrijk et al., 2013, 2016). The documented success of HDs in the last decade is not explained with the inferior image portrayed of them in relation to mainstream grocery stores (Zielke, 2014; Geyskens et al., 2018; Gijsbrechts, et al., 2018; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Unlike grocer retailers, in HDs 90% of sales come from GSBs (Steenkamp and Kumar, 2009) yet the established cues of GSB evaluation (price, packaging, and store image) have not been explored in an HD setting. The same can be said of the identified consumer characteristics of GSB proneness. This highlights a gap in the GSB literature concerning the GSBs sold in HDs. Little is known about how consumers evaluate them and if the same product cues and individual characteristics developed in the mainstream grocery literature apply. This gap can be addressed by investigating how consumers evaluate GSBs in HDs, based on the established product cues (price, store image and packaging) and consumer characteristics. This will extend the GSB literature to include HDs.

Two potential mechanisms which may explain the tensions highlighted in the literature regarding HD GSBs are persuasion knowledge and self-construal. Persuasion knowledge describes the cognitive processes consumers use in order to help them make better purchase decisions when evaluating manufacturer tactics such as price and packaging of store brands (Friestad and Wright, 1994; van Horen and Pieters, 2012a,b). Self-construal (Markus and Kitayama, 1991) defines how consumers think of themselves, influencing thoughts, motivations and actions. Known to influence product choices, characteristics of self-construal are consistent with those of GSB prone consumers (table C8). Persuasion knowledge and self-construal are critically discussed in the following chapter.

Chapter C: Literature Review of the Conceptual Foundations Underpinning Grocery Store Brand Evaluation

C1 Introduction

This chapter builds upon findings from Chapter B and presents a critical review of literature for two conceptual foundations of GSB evaluation: persuasion theory and self-construal. First, persuasion theory (Part I) and specifically the persuasion knowledge model (PKM) are considered. Justification for use of persuasion theory is given by highlighting the overlap between the three constituent parts of persuasion theory (source, message, and recipient) and the cues by which GSBs are evaluated (store image, price and packaging). Focus on the PKM reveals how the self-construal of individuals impacts upon the model. This leads to further critical evaluation of self-construal as a theoretical construct, with focus on application withing the marketing literature and the context of consumption. Parallels are drawn between the psychological traits of GSB prone shoppers and characteristics consistent with self-construal. The chapter concludes by highlighting how the PKM and self-construal fit together as underpinning theoretical foundations of GSB evaluation. Current gaps knowledge concerning GSB evaluation, the PKM and self-construal are stated.

C2 Persuasion Theory and the Persuasion Knowledge Model in Grocery Store Brand Evaluation

Persuasion theory is proposed as an underpinning framework for the evaluation of store brands and use of persuasion knowledge, particularly when GSBs have highly similar packaging to the leading national brand is reviewed. This is followed by a summary of the key points made, the highlighted gaps in knowledge and conclusions.

C2.1 Introduction and Outline of the Chapter

Chapter B offered a critical review the GSB literature, highlighting the factors known to influence the consumer GSB evaluation, namely: the store image, the price and packaging of the product and individual consumer traits. Considering these three factors in turn highlights a link between GSB evaluation and the three elements of persuasion theory, stated by Petty and Briñol (2015) to be source, message and recipient.

First, considering store image, defined by Ailawadi and Keller (2004) as a summary of the knowledge consumers hold about the store in memory. When making purchase decisions, the image of the store is used to determine the quality of store brands sold (Richardson et al, 1994; Bao et al., 2011; Nies and Natter, 2010; Keller et al., 2016). Therefore, consumer knowledge regarding the seller (or source) of GSBs is known to influence evaluations and preferences. Second, when evaluating the price and packaging of GSBs, consumers are making an assessment on what is being communicated about the product on offer (Richardson et al., 1994, Batra and Sinha, 2000, Steenkamp et al., 2010). The advertised cost and packaging elements (brand name and design) are marketing tactics being conveyed by the seller or delivered as a message to the recipient (Friestad and Wright, 1994). Finally, individual consumer traits are known to influence GSB preference, with some consumers being more likely to purchase GSBs than others (Richardson, et al., 1996; Ailawadi, et al., 2001; Collins et al., 2015). Traits include sensitivity to price and quality as well as ego-driven motivations to stand out and be recognised as different, highlighting the influence of individual consumer or recipient characteristics.

To summarise, persuasion theory is concerned with understanding how consumer attitudes may be altered in the context of a persuasive message such as an advertisement or product messaging (Tormala and Briñol, 2015). The underlying premise of the theory considers the trichotomy of interactions between the source, the message and the recipient, which are closely related to the elements forming the basis of GSB evaluation (price, packaging, store image and consumer traits). This thesis proposes the use of persuasion theory and in particular the use of Friestad and Wright's (1994) Persuasion Knowledge Model (PKM) as a framework for investigating how consumers evaluate HD GSBs. This section offers a critical review of persuasion theory with particular focus on the PKM. This section begins with a critical review persuasion theory and the underlying principles on which the theory is based. This is followed with a discussion of literature relating to the three signature variables (source, message, recipient). Criticisms of persuasion theory are noted and the development of the PKM is presented. Attention is drawn to the impact of consumer motivation on the outcome of persuasion, highlighting self-construal theory an influencing factor. The application of the PKM to marketing contexts is discussed, with special focus given to the evaluation of copycat GSBs. Differences between expected and predicted results are highlighted, suggesting contextual or circumstantial factors give rise to a change in the outcomes of persuasion events. A final summary presents gaps in existing knowledge and highlights opportunities to extend current knowledge of the PKM within the domain of marketing and retail.

C2.1 Persuasion Theory: Key Constructs and Applications

Persuasion is a term that refers to 'any procedure with the potential to change someone's mind' (Briñol and Petty, 2009). Persuasion theory has roots in the social psychology literature and the early empirical studies of Hovland and Weiss (1952) and Hovland, Janis and Kelley (1953). Later work by Weinstein (1969) led to an early definition of persuasion, based on the authors premise that socially successful individuals possessed the ability to persuade others. Weinstein (1969) stated that the most important skills required were those that enabled individuals to 'get others to think, feel, or do, what they want them to' (p. 753). Based on this framework, persuasion research remains concerned with three distinct variables of source, message and recipient or *who* says *what* to *whom* (Tormala and Briñol, 2015). The following sections offer a critical discussion of each of the three aforementioned variables, which is followed in turn by a discussion highlighting the development of the Persuasion Knowledge Model (Friestad and Wright, 1994).

C2.1.1 Source Credibility

The source of a persuasive message is concerned with the entity (person, or organization) that delivers the persuasive message (see Briñol and Petty, 2009 for an extensive review). The most common and frequently studied factor is source credibility (SC) (Pornpitakpan, 2004). Early work by Hovland and Weiss (1952) demonstrated that the increased persuasiveness of messages was directly linked to the credibility of the message source. In other words, the characteristics of the message giver can have an impact on how the message is received (Dou, Walden, Lee and Lee, 2012). SC has been described as a 'classic variable' in persuasion research (Briñol, Petty and Tormala, 2004) and has been applied to various persuasion situations such as; advertising (e.g. Briñol et al., 2004; Barone and Jewell, 2010), consumer recommendations (Petersen and Hamilton, 2014), compliance to authority (Jung and Kellaris, 2006) and corporate and celebrity endorsement (Goldsmith, Lafferty and Newell, 2000). Persuasion commonly occurs when there is asymmetry of information between buyers and sellers (Spence, 1973). As discussed in section B2.6.5 the purchase of a GSB can be considered a persuasion attempt, where consumer rely upon extrinsic product cues such as price, packaging or store image to assess GSB quality (e.g., Dodds et al., 1991; Bodur et al., 2016). Other marketing mix elements such as advertising can be used by consumers as quality signals to address the information gap (Kirmani, 1990).

C2.2.2 Message Position, Strength and Volume

Many scholars note the importance of factors relating to the message in situations of persuasion (Sherif and Hovland, 1961; Petty and Cacioppo, 1984a; Petty and Cacioppo, 1986; Clark and Wegener, 2013; Tormala and Briñol, 2015). Notably message strength (or quality of the argument presented) and message volume (or how many arguments are presented) are considered. Tormala and Briñol (2015) note that message positioning is important because it may argue with or against the recipient's beliefs. This supports Sherif and Hovland's (1961) Social Judgement Theory, which postulates that messages congruent to the recipient will be more favourably evaluated because they are in keeping with his/her 'latitude of acceptance'. However, Clark and Wegener (2013) posit individuals process messages differently depending on their motivational state. Therefore, motivational state is an important consideration in understanding any attitude change as a result of positioning (Clark and Wegener, 2015). Research into message argument strength denotes high quality (strong) arguments to be more persuasive than weak arguments (Petty and Cacioppo, 1986). Characteristically, strong arguments encourage the recipient to think favourably about matters relating to the message. Tormala and Briñol (2015, pp. 34) give the example of a strong message advocating exercising. By focussing on the outcomes of exercise and making them seem desirable, relevant and attainable, the arguments appear more compelling and convincing to the recipient. Petty and Cacioppo (1984b) highlight how the volume of arguments may impact on the message outcome. Increasing the number of arguments gives rise to more thoughts the recipient has about the message, resulting in increased persuasion. However, in cases where the recipient does not think about the message, the authors propose that individuals may adopt a heuristic of 'the more arguments the better', which also leads to persuasion increases.

C2.2.3 The Impact of Recipient Characteristics on Persuasion

The characteristics of the persuasion recipient (or target audience) can affect the way individuals process persuasion attempts (Tormala and Briñol, 2015). According to Briñol, Petty and Barden (2007) emotions have been the subject of a research stream that spans multiple decades and are the dominant recipient characteristic to be studied (Petty and Briñol, 2015). According to the authors, early studies supported the notion that positive emotions, (such as happiness) were acknowledged to have a direct positive impact upon persuasion. However, other studies (e.g., Petty, Schuman, Richman and Stratham,1993) suggested that emotions play a more complex role in persuasion and can lead to multiple different effects. Development of the influence of contextual factors on persuasion gave rise to a framework by

with the impact of recipient emotions (and other characteristics) on persuasion can be better understood (Petty and Briñol, 2015).

C2.2.4 Criticisms of Persuasion Theory

The long tradition of persuasion research regarding the three variables of source, recipient and message has been criticised by many scholars due to what Kitchen, Kerr, Schultz, McColl and Pals (2014) describe as 'conceptual ambiguities' leading to lack of generalizable results. Specifically, the authors note literature relating to the topic fell into two camps, one where persuasion was achieved using heuristics and the other as a result of extended argument consideration. According to Petty and Cacioppo, (1984a, pp. 668) 'there is surprisingly little agreement concerning how and why the traditional variables affect attitude change'. The authors proposed that in the event of a persuasive message, the amount of cognitive effort an individual will give to process the message depends on factors relating to the situation and the individual themselves (the context). This led to the development of the elaboration likelihood model (Petty and Cacioppo, 1984a,1986) and the heuristic-systematic model (e.g., Chaiken, Liberman, and Eagly, 1989). Both models represent processing frameworks for understanding persuasion which add in the context to the variables of source, recipient and message (Kitchen, et al., 2014).

Further criticism of persuasion theory came from Wright (1986) who argued for a greater emphasis to be placed by scholars on the consumer or the 'target' of persuasion. Wright (1986) coined the phrase 'schemer schema' to denote the idea that consumers held innate knowledge about persuasion that they could use to interpret marketers' tactics. Jost, Kruglanski and Nelson (1998) later described Wright's (1986) schemer schema as way individuals can judge their own thinking or metacognition.

C2.2.5 Metacognition

The topic of metacognition encompasses developments within the domain of persuasion that refer to 'thinking about thinking' or how a person judges their own knowledge (Alba and Hutchinson, 2000; for a review see Briñol and DeMarree, 2012). A broader definition is offered by Jost, et al. (1998) who state that metacognition relates to 1) The beliefs individuals hold regarding their own and others mental states and processes, 2) The beliefs held by individuals about how the mind works / should work, 3) Naïve theories held by the individual.

Persuasion can be affected by features of metacognition in multiple ways (Briñol, et al., 2004). According to the authors, the sight of an attractive model on a product

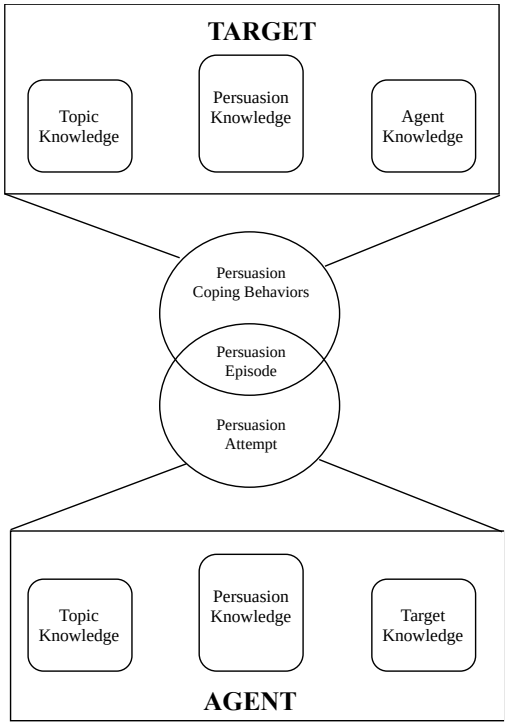
advertisement may cause certain individuals to think that their evaluation of the product might be positively affected as a result. Recognition of this attempt at bias could motivate some people to try and correct for it as they evaluate the product (Wegener and Petty, 1995), leading to persuasion resistance. Further development of the concept that when consumers think about their own thoughts or 'lay' or 'naïve' theories regarding persuasion led to the development of the persuasion knowledge model (PKM) by Friestad and Wright (1994) and Kirmani and Campbell (2004).

C2.3 The Persuasion Knowledge Model

The PKM (Friestad and Wright, 1994; Kirmani and Campbell, 2004) assumes consumers enter a persuasion event (for example viewing an advertisement) with knowledge about the topic, the agent (advertiser or brand owner) and the act of persuasion (how persuasion object is trying to influence them) (depicted in figure C1). In order to ensure they are not taken in by the persuasion attempt, the three types of knowledge the consumer has interact, to develop a defence strategy (Campbell and Kirmani, 2008). The defensive strategy or coping behaviour influences how each individual consumer will respond to the persuasion episode. As a result, consumers may see the agent as being less credible, more likely to deceive them and can also result in a behaviour change (e.g., Kirmani and Zhu, 2007; Campbell and Kirmani, 2008).

Friestad and Wright (1984) proposed that the PKM is not static and as consumers learn, over time they become more sophisticated in their approach to persuasion attempts. Campbell and Kirmani (2008) demonstrated that different age groups displayed different levels of persuasion knowledge, with adults being more sophisticated than children in coping with persuasion tactics. According to Panic, Cauberghe and De Pelsmacker (2013) children possess less critical processing than adults as they have not acquired the same level of knowledge about persuasion. There are three different types of knowledge depicted by the PKM (figure C1), namely persuasion knowledge, agent knowledge and topic knowledge. These three types of knowledge will be defined and critically discussed in the following paragraphs.

Figure C1. The Persuasion Knowledge Model



Source: Friestad and Wright (2004, pp. 2)

C2.3.1 Persuasion Knowledge

Campbell and Kirmani (2008, pp.554) note that persuasion knowledge refers to a persons' '…knowledge or beliefs about how persuasion 'works'…'. The authors include in this definition the knowledge consumers hold about the tactics used by an agent in an act of persuasion. Examples of persuasion tactics include guilt appeals (e.g., Cotte, Coulter and Moore.,2005), use of rhetorical questions (e.g., Ahluwalia and Burnkrant, 2004), price (e.g., Hardesty, Bearden and Carlson, 2007) and the deliberate use of highly similar (copycat) packaging (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b).

Despite the array of deliberate persuasion tactics, if consumers are not aware that they are being manipulated, they do not take any action (Friestad and Wright, 1994). The authors proposed the *change of meaning* principle to describe how consumer understanding of a marketer's tactic alters. Campbell and Kirmani (2008) note 'external influences' can elicit a change of meaning. Which, according to Aguirre-Rodriguez (2013) is when consumers learn about marketers' tactics via sources such as the media and their peers

Once made aware of the deployed tactic, consumers determine how appropriate (right or wrong) they perceive the tactic to be.

Friestad and Wright (1994) and latterly Kirmani and Campbell (2004) discuss how persuasion knowledge is aligned with the goals of an individual. In the original paper,

Friestad and Wright (1994) highlight how the overriding goal for consumers to evoke persuasion knowledge is to cope with persuasion attempts and exercise self-control. In addition to this, consumers are motivated to satisfy their own goals when in a persuasion situation. Campbell and Kirmani (2004) further investigated the influence of personal goals on persuasion and demonstrated how interaction with the persuasion agent was different according to the desired outcome of the persuasion attempt. Friestad and Wright (1994) also bring attention to different motivational elements that may impact upon how individuals develop or use persuasion knowledge. Specifically, the authors highlight cultural differences and call out Markus and Kitayama's (1991) self-construal theory as an example of an influential self-schema. Characteristic traits aligned to self-construal schemas are likely to impact upon how persuasion episodes are interpreted. A critical review of self-construal is presented in the following section C3 following the perspective that different outcomes of a persuasion attempt are observed according to the motivational dispositions of individuals.

C2.3.2 Agent Knowledge

Agent knowledge is defined as the beliefs a consumer holds of 'the traits, competencies and goals of the persuasion agent' (Friestad and Wright, 1994, pp.3). According to Campbell and Kirmani (2008) agent knowledge includes what consumers know about salespeople, companies or brands. The authors note that literature investigating source credibility (e.g., Dholakia and Sternthal, 1977) is informative of how consumers react to agent knowledge. As previously discussed, source credibility refers to how well the consumer perceives the source at providing accurate or truthful information (e.g., Tormala and Petty, 2004). Therefore, the characteristics of the persuader can influence the outcome of a persuasion attempt (Dou *et al.*, 2012).

C2.3.3 Topic Knowledge

Topic knowledge refers to the consumer's knowledge about the topic or content of the persuasion attempt (e.g., Campbell and Kirmani, 2008). The topic of a persuasion attempt can be a service, a social cause or a specific product or brand (Ham, Nelson and Das, 2015). Other scholars have linked the level of topic knowledge directly to consumer expertise (e.g., Ahluwalia and Burnkrant, 2004; Zhuang, Cui and Peng, 2018). In studies investigating online shopping context, Ahluwalia and Burnkrant (2004) demonstrated that consumers more adept at reading product reviews had a greater propensity to spot suspicious content. Similarly, Zhuang et al. (2018) noted that experienced consumers can tell if reviews have been 'faked'

or not. Thus, topic knowledge considers what consumers know about the topic as well as how much they know.

C2.4 Applications of the PKM in Marketing

There have been multiple applications of the PKM within the domain of marketing across a range of different persuasion contexts (for a review, see Ham *et al.,* 2015). Included are interactions with a salesperson (Campbell and Kirmani, 2000), pricing tactics (e.g., Hardesty *et al.,* 2007), charity advertising (Hibbert, Smith, Davies and Ireland, 2007) and product placement (Wei, Fischer and Main, 2008). More recently the PKM has been used to investigate the effectiveness of advergames (advertising in game format) to children (Panic et al.,2013).

Despite such a diversity of uses, Nelson and Ham (2012) report that scholars have mostly used the PKM to explore the rejection of persuasion tactics with little focus on cases where tactics are positively evaluated and accepted. However, Isaac and Grayson (2017) addressed Nelson and Ham's (2012) claim and proposed that activation of persuasion knowledge can also result in positive evaluation of the agent. The authors demonstrated that credible persuasion tactics (for example offering high quality and low price) may be trusted and believed by consumers. This finding reflects Friestad and Wright's (1994, pp.13) perspective that not all marketing tactics are deliberately negative, indeed '…some tactics are used when marketers understand and respect what people want to know about a type of product'. Therefore, activation of persuasion knowledge can lead to an increase in negativity or positivity of evaluation.

C2.5 Use of the PKM to Investigate GSBs

When the PKM has been used as a framework by which to investigate copycat brands, scholars have demonstrated the existence of a change of meaning, with either a positive or negative interpretation (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b, 2013). Warlop and Alba (2004), Miceli and Pieters (2010) and van Horen and Pieters (2012a,b) all demonstrate that when consumers are aware of the tactics employed by a copycat, activation of persuasion knowledge results in a negative evaluation. However, Warlop and Alba (2004) also noted that if copycat brands were not actively threatening the leader brand (positioned at lower price levels) then the tactic of similarity did not result in a negative coping strategy. Van Horen and Pieters (2013) support the positive evaluation of tactical similarity. The authors demonstrated that in cases where tactical similarity benefits the consumer, the change of meaning has a positive effect on evaluation.

Further investigation into the positive evaluation of blatant similarity has been called for by many scholars to extend understanding of conditions under which it is more likely to take place (Warlop and Alba, 2004; Campbell and Kirmani, 2008; van Horen and Pieters, 2013).

Specifically relating to copycat GSBs, the PKM has been used to explore consumer reactions to brand similarity (e.g., Warlop and Alba, 2004) and how different types of similarity and consumer mind-set influence consumer responses (e.g., Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b). In keeping with Nelson and Ham's (2012) perspective, the prevailing view offered in extant literature posits high similarity imitation to be perceived less favourably by consumers than low similarity or copying of themes rather than visual features (van Horen and Pieters, 2012b). However, Isaac and Grayson's (2017) alternative positive perspective (as discussed in the previous sub-section) is also supported (Campbell and Kirmani, 2008; van Horen and Pieters, 2013).

Campbell and Kirmani (2008) suggested that the outcome of a consumer evaluation may differ according to the circumstances under which the evaluation was made. The authors noted that under certain conditions, the judgements consumers make towards imitation brands may be reversed. Further support from van Horen and Pieters (2013) demonstrated preference reversal for imitation brands in consumers experiencing high levels of uncertainty. The authors established that even though consumers were aware the brands were imitations, recognisable characteristics were evaluated favourably (vs negatively) because they offered familiarity in an otherwise unfamiliar choice set. Van Horen and Pieters (2013) called for further research to establish conditions under which blatant similarity is positively evaluated by consumers.

In summary, persuasion theory and in particular the PKM suggests that consumers develop defensive strategies to avoid being persuaded (Campbell and Kirmani, 2008). The outcome of a persuasion attempt depends on knowledge held by the consumer (target) regarding the persuasion agent (source), the topic (e.g. the brand) and the tactics employed. For example, the prevailing negative perspective that GSBs are trying to 'fool' the consumer (Warlop and Alba, 2004), would support a defensive action, such as choosing to not purchase the GSB. However, it also follows that if GSBs were considered positively, as supporting the consumer (perhaps by offering additional benefits, e.g., similar quality at a lower price) no defensive strategy would be required. Therefore, although the PKM has previously been applied to explain why consumers perceive GSBs negatively, consideration of contextual information could cause perceptions to be reversed.

C2.6 Conclusions on Persuasion Theory and using the PKM for GSB evaluation

Persuasion theory relating to attitude change has been widely developed across many disciplines in psychology and marketing (e.g., Tormala and Petty, 2015). The underlying premise of the theory considers the relationship between three distinct variables, namely the source, the recipient and the message (or subject) of persuasion (Petty and Briñol, 2009; Tormala and Briñol, 2015).

Wright's (1986) criticism of persuasion theory led to increased emphasis on the consumer in persuasion situations. Friestad and Wright's (1994) seminal work proposed the PKM, a metacognitive persuasion theory including the thoughts consumers have about their knowledge of a persuasion attempt. Three distinct types of knowledge have become synonymous with the PKM; agent knowledge (the credibility or image of the source), knowledge of the persuasion or tactics (such as pricing and packaging) and knowledge of the topic (such as brand knowledge or expertise) (Campbell and Kirmani, 2008).

The PKM has been previously applied to the consumer evaluate copycat brands (Warlop and Alba, 1994, Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b, 2013). However, these studies do not concur on the outcome of the evaluation, exposing a limitation to current theoretical understanding (Warlop and Alba, 2004; van Horen and Pieters, 2013). Furthermore, calls from the aforementioned scholars to investigate this unresolved question have remained unanswered. In addition to persuasion knowledge, the importance of consumer goals and motivations on the outcome of persuasion attempts are fundamental to the PKM (Friestad and Wright 1994; Kirmani and Campbell, 2004). Friestad and Wright (1994) make specific mention of Markus and Kitayama's (1991) self-construal as an example of how consumer traits regarding motivation, information processing and resulting behaviour are likely impact how individuals use their persuasion knowledge. Investigating how consumer self-construal impacts the evaluation of copycat GSBs presents a novel extension to the PKM and the current GSB literature.

C3 Self-Construal in Marketing Research

C3.1 Introduction

The psychological characteristics of consumers have received interest from scholars in determining how individual traits might influence GSB evaluation. Studies have highlighted a sub-set of consumers who are by their nature more likely to purchase GSBs, described as being GSB 'prone' (Richardson et al.,1996; Ailawadi et al., 2001; Garretson, et al., 2002; Baltas, 2003; Erdem et al., 2004; Hansen et al., 2006; Steenkamp et al., 2010; Collins et al., 2015; Martos-Partal et al., 2015). Building on Richardson et al. (1996), Ailawadi et al. (2001)

initiated a stream of research linking the psychological characteristics of GSB prone consumers to the benefits associated with GSB purchasing (see B.2.5 for a review). This body of work depicts a store brand prone consumer who favours GSBs an account of concerns related to price and quality, is highly engaged in the category with an ego-driven desire to be perceived by others as 'smart'. Although these thoughts and actions are established, no studies to date have sought to examine why such traits are exhibited by GSB prone consumers.

Explanations for how a person might think or act can be found within the domain of social psychology, which has a has a long tradition of literature investigating the role of the self in informing cognition, motivation and behaviour (for a review, see Baumeister, 1998). Marcus and Kitayama's (1991) foundational study used the term self-construal to denote how individuals perceive themselves in relation to others. According to the authors an individual's self-construal determines how information is processed as well as influencing attitudes and behaviours. Self-construal theory (Markus and Kitayama, 1991) was developed to characterize observed cultural differences between Western and Asian perspectives highlighted in a body of research published in the 1980s and early 1990s (e.g., Hofstede, 1980; Triandis 1989; Schwartz and Bilksy, 1990). The characteristic collectivist nature of Eastern cultures and the individualisms seen in the West were a starting point for the development of self-construal theory. Latterly, self-construal has been applied to studies that are both across and within cultures (e.g., Zhu and Meyers-Levy, 2009; Chang, 2010; Cross, Hardin and Swing, 2011; Lalwani and Shavitt, 2013). The observed 'Western' and 'Asian' self-construals may also be found within individuals of all cultural backgrounds (Cross and Markus, 1991; Bhawuk and Brislin, 1992; Singelis, 1994). This has given rise to multiple applications of self-construal to demonstrate consumer reactions or preferences in marketing contexts (Ahluwalia, 2008; Lalwani and Shavitt, 2013; Millan and Reynolds, 2014; Hong and Chang, 2015; Lee and Pounders, 2019).

A critical analysis of the application of self-construal in marketing and specifically consumption contexts, draws out the influence of characteristic cognitive and motivational traits (Escalas and Bettman, 2005; Lee and Shavitt, 2006; Swaminathan, Page and Gürchan-Canli, 2007; Ahluwalia, 2008; Chen, 2009; Zhang and Shrum, 2009; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013; Ma, Yang and Mourali, 2014; Millan and Reynolds, 2014; Hong and Chang, 2015; Shavitt and Barnes, 2020). Cognitive processes associated with self-construal explain why some consumers may have different product perceptions according to the how they are branded, priced and displayed (Ahluwalia, 2008; Chen, 2009; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013). Self-construal also gives rise to a tendency

for some shoppers to seek hedonic benefits from the act of consumption (Millan and Reynolds, 2014; Hong and Chang, 2015). Also associated with self-construal are motivational characteristics, which encourage some consumers to use the purchase of products to stand out from others and be seen as individuals (Escalas and Bettman, 2005; Lee and Shavitt, 2006; Swaminathan et al., 2007; Zhang and Shrum, 2009; Ma et al., 2014; Shavitt and Barnes, 2020). A comparison of the observed traits associated with self-construal and those of GSB prone consumers made in section B2.5 is given, highlighting overlap between the two concepts.

C3.2 The Main Precepts of Self-Construal Theory

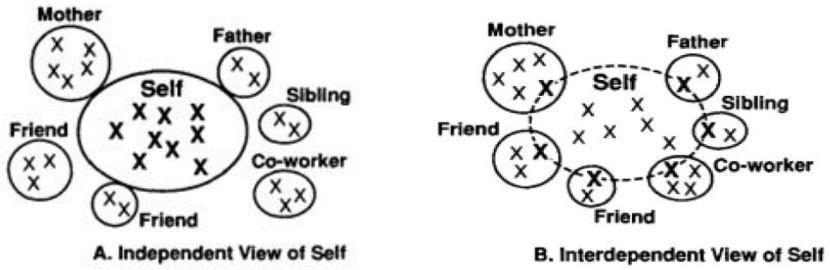
For many centuries there has been scholarly interest in determining and defining the existence of the human self. The topic can be traced back to 1890 and William James, whose work offered a theoretical distinction between the social, spiritual and material selves. The following century, Hallowell (1955) proposed that all individuals see themselves as 'physically distinct' from others. Subsequent scholars, in accord with the notion that social interactions shape the self, established the difference between the 'public' self on display to others and the 'private' unobservable inner self (e.g., Baumeister, 1986; Greenwald and Pratkanis, 1984).

Building on the work of Greenwald and Pratkanis (1984), Triandis (1989) posited cultural differences could account for different expressions of the public, private self and 'collective' self (aspects of the self that are shared with a social group). He argued that collectivist cultures nurtured individuals to develop thoughts, perceptions and intelligence that refer to a group (collective). Individualist cultures, on the other hand, encouraged individuals to develop cognitions based on their own traits. A seminal thesis by Markus and Kitayama (1991) endorsed the cross-cultural argument proposed by Triandis (1989). The authors' observed that individuals from Western (individualistic) and Asian (collectivist) cultures differed in the way they defined themselves. Using the term self-construal, Markus and Kitayama (1991) described how individuals perceived themselves in relation to others. Typically, Western cultures hold what the authors' termed an *independent self-construal* (hereafter ISC) and Asian cultures tend to display an *interdependent self-construal* (hereafter INSC).

Markus and Kitayama (1991, pp. 226) used a diagrammatic representation to explain the differences between those with an ISC versus an INSC (figure C2). The self and others are depicted by different sized circles. Each X represents different aspects of the self or others. **X**s in bold were termed by Markus and Kitayama (1991) as 'core concepts' or the first

representations that come to mind when thinking about the self. For the independent self (ICS) all Xs or aspects are held within unique circles, to demonstrate the distinct and individual nature of the self in relation to others. However, in the interdependent self (INSC) the boundaries between the self and others are blurred and the core concepts of an individual may be shared with others. This causes relationships to be with other people to characterize interdependent individuals (Hamaguchi, 1985).

Figure C2. Conceptual representations of the self



Source: Markus and Kitayama (1991, pp. 226)

C3.2.1 Relational Interdependent Self-Construal

The dichotomous nature of Markus and Kitayama's (1991) self-construal theory has been developed by scholars to include a third self-construal, known as 'relational self-construal' (e.g., Brewer and Gardner, 1996; Cross and Madson, 1997; Cross, Bacon and Morris, 2000; Agrawal and Maheswaran, 2005). Brewer and Gardner (1996) argued that self-construal was dependent on social situations and therefore relationships with others as well as larger groups or collectives were influential. In addition to INSC a relational self-construal must also be present. In subsequent studies Cross and Madson (1997) and Cross et al. (2000) proposed that relational self-construal could be accounted for by gender differences in Western cultures. The authors' stated that in Western cultures, women are more likely to develop a self-construal defined by relationships with others because of inherent societal gender bias. The dominant social influence for western women promotes deference to others over the self, leading to relational thinking, feeling and behaving (Cross and Madson, 1997).

Cross et al. (2000) defined relational self-construal as the degree to which individuals define themselves in terms of close relationships, making a clear distinction from Markus and Kitayama's (1991) collective definition of INSC. It has been widely accepted by scholars that INSC is represented by both collective and relational components (Agrawal and Maheswaran, 2005). However, as noted by Cross et al. (2011), despite the acknowledgement that INSC has

two components (one relational and one collective), most researchers consider INSC as a single construct. In keeping with the majority of self-construal studies, this thesis will give further consideration to INSC only.

C3.2.2 The Accessibility of ISC and INSC across all Populations

Markus and Kitayama (1991) developed self-construal theory as a direct result of observed differences between Western and Asian cultures. Self-construal theory has subsequently become widely developed and applied to within-cultural and cross-cultural studies (Zhu and Meyers-Levy, 2009). Many scholars have argued that both ISC and INSC coexist within individuals of all cultural backgrounds (e.g., Cross and Markus, 1991; Bhawuk and Brislin, 1992; Singelis, 1994). Cross and Markus (1991) observed that individuals from a collectivist cultural background had developed both ISC and INSC. The authors demonstrated that individuals with both self-construals were better able to cope with stresses caused by experiencing alien cultures. Singelis (1994) interprets this as an ability to switch between two cultural modes, drawing support from Bhawuk and Brislin (1992) who determined that certain individuals are able to modify their behaviour according to the cultural context. Building on these assumptions, Singelis (1994) demonstrated the co-existence of ISC and INSC in individuals within cultures and developed a widely accepted scale for their measurement.

The notion that ISC and INSC coexist within individuals, led other scholars to establish that an individual's self-construal can be altered through situational priming[1] and therefore accessible at that moment in time (e.g., Trafimow, Triandis and Goto, 1991; Gardner, Gabriel and Lee, 1999; Oyserman and Lee, 2008). Trafimow et al. (1991) theorised that because ISC and INSC were held in separate schemata in a person's memory, either could be primed in individuals from the same culture. In support of this thesis, the authors demonstrated that reading a text related to either schema could temporarily make that schema highly accessible. Consistent results were obtained in a study by Gardner et al. (1999) who employed a writing task to access both ISC and INSC related schemata. Further agreement can be found in Oyserman and Lee's (2008) study, adding that although individuals within different cultures hold both ICS and INCS, one schema will dominant or chronically accessible (always available) and will conform to societal norms.

Establishing that different self-construals could be primed in individuals (e.g., Trafimow et al., 1991; Gardner et al., 1999; Oyserman and Lee, 2008) has led to development

[1] Situational priming refers to the deliberate activation of representations held in the mind of a subject that will assist in the interpretation for the processing of subsequent information (Oyserman and Lee, 2008). Once a concept has been primed, other concepts that are associated with it in memory are also primed.

and application of self-construal theory to many marketing contexts. The following section offers a critical review of the application of self-construal theory to marketing contexts.

C3.3 The Influence of Self-Construal on Cognition, Motivation and Behaviour

Many scholars seeking to investigate how the cognition and motivation of individuals impacts upon behaviour have noted the importance of the self in processing information (see Baumeister, 1998 for a review). According to Cross, et al. (2011) one of the most important contributions of Markus and Kitayama's (1991) self-construal theory is that it offers an alternative (non-western) perspective to extant literature investigating the role of the self in determining the thoughts and actions of individuals. Markus and Kitayama (1991) proposed that the different self-construals (ISC or INSC) would lead to contrasting individual thought processes, motivations and behaviours (table C7). The rest of this section critically considers the impact of self-construal on cognition, motivation and behaviour of individuals.

Table C7. Summary of the key differences in cognition, motivation, and social behaviour between individuals of an ISC or INSC self-construal

Individual traits	Independent self-construal	Interdependent self-construal
Cognition	● Low contextual sensitivity ● Separation, differentiation, and contrast	● High contextual sensitivity ● Connection and assimilation
Motivation	● Values are individualistic ● Self-enhancement ● Promotions focus	● Values group harmony ● Self-criticism ● Prevention focus
Social behaviour	● Self-oriented ● Direct communication ● Willing to confront or use dominating strategies	● Group oriented, cooperative ● Indirect communication ● Avoids confrontation ● May imitate and seek proximity to others

Source: Adapted from Cross et al. (2011, pp. 15)

C3.3.1 The Impact of Self-Construal on Cognition

A key argument of Markus and Kitayama's (1991) study posits that high INSC individuals are more likely to think about others and consider the social context of interactions than high ISC individuals. It follows that high INSC individuals will develop much more complex thoughts about others and themselves in social contexts. According to Cross et al. (2011) this leads to two key differences in cognition between individuals with ISC and INSC, these are;

1) different levels of awareness of the context and interactions with others, and 2) different cognitive mechanisms for processing information.

C3.3.2 Self-Construal and Awareness of Context and Relationships

Self-construal related differences in context and social awareness have been investigated by multiple scholars (e.g., Markus and Kitayama 1991; Ahluwalia, 2008; Lewis, Goto and Kong, 2008; Chen, 2009; Lin and Han, 2009; Chang, 2010; Wu, Cutright and Fitzsimons, 2011; Lalwani and Shavitt, 2013)

In Markus and Kitayama's (1991, pp. 230) original work, the authors described ISC individuals as separate from social context and INSC individuals as connected to social context. Support for this statement can be found across contrasting empirical approaches adopted by Lewis et al. (2008), Chen (2009), Lin and Han (2009) and Chang (2010). Lewis et al. (2008) and Lin and Han (2009) demonstrated differences in attention given to the context and to target objects through measurement of neural activity. Results from both studies concur that differences in cognition are underpinned by self-construal.

Further empirical studies by Chen (2009) and Chang (2010) used situational primes to affect consumer responses. Chang (2010) observed that subjects primed to affect INSC were more inclined to think about themselves in the context of others and those primed for ISC focussed thoughts on themselves. Noting the self-focus of ISC individuals, Chen (2009) coined the phrase 'decontextualizing' to describe how subjects with primed ISC focus on themselves and their own thoughts especially when making decisions. The author demonstrated empirically that when evaluating prices, high ISC individuals made judgements based on their own knowledge. Conversely those of high INSC were more likely to make comparisons with other products or refer to other sources of information.

In addition to the differences between ISC and INSC individuals based on context awareness, Ahluwalia (2008) and Lalwani and Shavitt (2013) endorsed the relational awareness aspects highlighted by Cross et al. (2011). Building upon the notion that INSC individuals are driven by the relationships they have with others (Markus and Kitayama, 1991), Ahluwalia (2008) proposed that INSC individuals hold a wider definition of what a relationship is than ISC individuals. Describing this difference as an INSC 'relational processing advantage', the author posited that INSC individuals had a superior cognitive capability to appraise more connections and relationships between objects and individuals. Applying this assumption to consumer perceptions of brand extensions, Ahluwalia (2008) observed that INSC individuals are more likely to perceive brand extensions as a good fit because they are able to recognise more ways in which the parent and extension are related.

Further support for the importance of relational processing in consumer product evaluations is offered by Lalwani and Shavitt (2013). According to the authors INSC implies a tendency for individuals to make price-quality judgements. However, under certain conditions that encourage relational processing, both ISC and INSC make product judgements based on price and quality. One such condition is presented by symbolic products which enable consumers to express their identity to others (Escalas and Bettman, 2005) and therefore offer a broader set of attributes which stimulates increased relational processing (Lalwani and Shavitt, 2013). Similarly, when product quality is described broadly and abstractly, it is more inclusive bringing additional attributes to mind (Ones and Viswesvaran, 1996). Therefore, differences in self-construal can be mitigated by relational processing for products that are symbolic in nature or described using abstract (broad) measures of quality (Lalwani and Shavitt, 2013).

C3.3.3 The Impact of Self-Construal on Cognitive Processing.

In addition to the effect of self-construal on an individual's awareness of the context and interactions with others, *Cross et al.* (2011) also note that self-construal can impact the way in which individuals think (cognitive processing). According to Swaminathan et al. (2007) what a person thinks about will influence how they think. Because individuals of different self-construal hold different thoughts about themselves in relation to others (Markus and Kitayama, 1991) it follows that the way in which they think will differ too. Extending the earlier work of Markus and Kitayama (1991) Nisbett, Peng, Choi and Norenzayan (2001) determined two distinct ways of thinking according to the Western or Asian cultural background of an individual: *analytic* processing describes the cognitive framework characteristic of western (ISC) cultures and holistic processing denotes the thinking pattern of Asian (INSC) cultures. These two processing modes will be discussed further in the following sections.

C3.3.4 Analytic Processing

According to Nisbett et al. (2001, pp. 293) analytic processing 'involves a detachment of the object from its context, a tendency to focus on attributes of the object to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior'. The authors associated analytic processing with western cultures, described by Markus and Kitayama (1991) as possessing a predominantly ISC. Subsequent scholars have built upon the work of Markus and Kitayama (1991) and Nisbett et al. (2001),

investigating the analytic processing of ISC individuals (e.g., Nisbett, 2003; Monga and John, 2007; Zhu and Meyers-Levy, 2009; Hong and Chang, 2015).

According to Nesbitt (2003) ISC individuals regard themselves and all objects as separate entities. Building upon this notion, Monga and John (2007) and Zhu and Meyers-Levy (2009) propose that all pieces of data encountered by ISC individuals are therefore considered and processed individually (analytically). The authors draw upon Markus and Kitayama's (1991, pp. 226) original study, noting that ISC individuals consider target objects 'contrastively' against other objects and that when the focus is on a single target object, other entities are for purposes of comparison only. Monga and John (2007) noted that different thinking styles were aligned to distinct cultural backgrounds (e.g., Eastern vs Western). The authors empirically demonstrated Western (ISC) cultures to be analytic processors and therefore more likely to focus on object attributes. This led to the suggestion of cultural differences in brand evaluations, especially in relation to brand extensions (Monga and John, 2007).

Further evidence for differences in product evaluations was offered by Zhu and Meyers-Levy (2009) and Hong and Chang (2015). In both studies, the authors noted that because analytic processing involves the comparison of separate entities, contrast effects occur during product evaluation. Zhu and Meyers-Levy (2009) found analytic processors more likely to judge a product on its own merits (attributes) and not take into account the setting, such as fixtures or other display features. According to Hong and Chang (2015) contrastive processing by ISC individuals also implies reliance upon internal references (such as feelings or emotions) when making decisions. The authors note how emotions or moods can therefore influence how ISC individuals make product choices.

Linking a reliance on oneself in making judgments to affective feelings (e.g., Gorn, Pham and Sin, 2001), Hong and Chang (2015) proposed ISC decision making to be affect based (affective decision making). Drawing upon the predication of INSC individuals to constrain themselves according to what others do, think or feel (Markus and Kitayama, 1991), the authors proposed INSC decision making likely to be subject to evaluation. When decision making is subject to evaluation or held to account, it has been shown to be more elaborate, as justifications are considered (e.g., Tetlock and Boettger, 1994). Hong and Chang (2015) therefore described INSC decision making as cognitive decision making.

Prior research investigating the role of affect in product evaluations (e.g., Adaval, 2001) states that when the mood of an individual is consistent with the mood of the information presented, more importance is given to that information. According to Adaval (2001) the consistency of information and the mood of an individual are more likely to occur for

hedonic criteria. Due to the proposed difference in decision making of ISC and INSC individuals (affective vs cognitive), Hong and Chang (2015) suggest hedonic vs utilitarian products may be evaluated differently. The authors calling for further research to substantiate this claim.

C3.3.5 Holistic Processing

As outlined by Markus and Kitayama (1991), individuals of INSC view themselves as connected to others and defined by interpersonal relationships. INSC individuals place importance on belonging to a group, which informs the way they think known as holistic processing (Aaker, 1999; Cross et al., 2011). Holistic processing is fundamentally different to the analytic processing style of ISC individuals (e.g., Zhu and Meyers-Levy, 2009, see previous section). Extant research suggest that the cognitive styles of thinking employed by consumers is an important indicator of consumption behaviour (e.g., Nisbett et al., 2001; Nisbett, 2003; Monga and John, 2007; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013). This section outlines the underlying principles of holistic processing, giving examples of how consumer behaviour may be influenced.

Nisbett et al. (2001, pp. 293) define holistic processing as based upon 'attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships'. Nisbett (2003) supports the emphasis placed on the connection between objects and clarifies the term 'object' to include social relationships between the individual as well as others. However, later studies by Monga and John (2007), Zhu and Meyers-Levy (2009) and Lalwani and Shavitt (2013) investigate the influence of holistic processing on product evaluations. Monga and John (2007) highlighted how ISC individuals have a greater propensity to consider brand extensions to be of a good fit. Building upon Ahluwalia's (2008) relational processing advantage, Zhu and Meyers-Levy (2009) add that the cognitive impact of holistic processing blurs the boundaries between distinct objects and therefore product perceptions may assimilate with thoughts about the context. Similarly, Lalwani and Shavitt (2013) note how holistic thinkers see product attributes (quality) as 'inseparable' from contextual factors (price), making price-quality judgments more likely. However, prior studies indicate that the use of price to judge quality is common in Western societies (e.g., Rao and Monroe, 1989), which tend to exhibit an analytic processing style. Lalwani and Shavitt (2013) called for further investigation into how consumers of different self-construal use price to evaluate products when more product attributes are also considered.

C3.3.6 Summary of Cognitive Differences Between ISC and INSC Thinkers.

In this section evidence has been presented demonstrating how the self-construal of an individual can influence evaluation of brand extensions, based on the ability of INSC individuals to exercise relational processing (Ahluwalia, 2008; Lalwani and Shavitt, 2013). Further evidence has been presented to suggest that the way individuals evaluate a target product is influenced by mode of cognition, be it analytic or holistic (e.g., Nisbett, et al., 2001; Nisbett, 2003; Monga and John, 2007; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013; Hong and Chang, 2015). Holistic processors are able to blur the boundaries between individual objects and consider product attributes as connected to the surrounding context (Zhu and Meyers-Levy, 2008; Lalwani and Shavitt, 2013). However, despite the fact that many scholars believe GBSs to be brand extensions of the retail store brand (Völckner and Sattler, 2006; Nies and Natter, 2010) application of self-construal theory to GSB evaluation remains unexplored in extant literature. The impact of self-construal on relational and social awareness offers a promising lens through which to investigate the psychology underpinning the consumer evaluation of GSBs.

C3.4 The Impact of Motivational Traits of Self-Construals

In addition to shaping the cognitive processes of individuals, Markus and Kitayama (1991) also proposed that the self-construal of an individual impacts upon their motivations and behaviour (A critical discussion of behavioural traits is presented in section C3.5). As summarised by Cross et al. (2011, pp. 154) individuals of different self-construal display a number of contrasting motivational traits. This includes individualism and self-promotions vs group values and self-criticism (e.g., Schwartz, 1994; Lee and Shavitt, 2000; Aaker and Lee, 2001; Zhang and Shrum, 2009; Ma et al., 2014; Millan and Reynolds, 2014; Shavitt and Barnes, 2020). This section offers a critical discuss of how motivational aspects of self-construal impact upon consumer product evaluation.

C3.4.1 Individualism and Self-Enhancement Tendencies of ISC Consumers

Aaker and Lee (2001), Swaminathan et al., (2007) Zhang and Shrum (2009), Millan and Reynolds (2014) and Shavitt and Barnes (2020) give particular reference to individualistic (group harmony) values of ISC (INSC) individuals. Aaker and Lee (2001) and Swaminathan et al., (2007) proposed individualism can be expressed by individuals signalling their differences to others. In support of this notion, Escalas and Bettman (2005) and Millan and Reynolds (2014) posit that and ISC individuals show uniqueness to others through the products they choose to buy. The authors demonstrated that shoppers dominant in ISC were

more likely than high INSC shoppers to seek out symbolic products, which deliver additional benefits of status and uniqueness. Zhang and Shrum (2009) noted that another way ISC individuals differentiate themselves is by showing others how independent and autonomous they are. In an empirical study investigating impulsive consumption, ISC individuals were shown by the authors to be more impulsive consumers when in the presence of others. The same study noted that INSC individuals supressed impulsive motivations to preserve group harmony and not risk bringing the group into disrepute (Zhang and Shrum, 2009). The focus for INSC to promote group harmony was highlighted by Shavitt and Barnes (2020) to run across the whole customer journey and not be limited to just the moment of consumption. These studies highlight a tendency for ISC dominant individual to use consumption as a means to demonstrate individuality to others and stand out from the crowd. This bears a direct relationship with characteristics observed in studies relating to GSB prone shoppers, who likewise are motivated to differentiate themselves from others through their GSB purchases (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). Although similarities between GSB proneness and ISC traits are apparent, to date no studies have sought to investigate the impact of self-construal on the consumer evaluation of GSBs, highlighting a gap in current knowledge of this topic.

Further evidence suggesting a link between ISC individuals and GSB proneness can be found in studies investigating how ISC individuals are motivated by self-enhancement (e.g., Schwartz, 1994; Lee and Shavitt, 2000; Ma et al., 2014; Millan and Reynolds, 2014). Schwartz (1994) and Millan and Reynolds (2014) suggest ISC individuals are motivated by personal achievement, which according to Millan and Reynolds (2014) leads to greater self-esteem. However, Markus and Kitayama (1991) noted that for INSC individuals, self-esteem is increased through positive close relationships. In order to maintain positive relationships with others, INSC individuals tend to avoid status products when shopping as opposed to ISC individuals who place importance on brand and store image, and seek out status brands (Millan and Reynolds, 2014).

Lee and Shavitt (2000) demonstrated ISC individuals to be driven by achievement recognition and the opportunity to enhance themselves in comparison to others. In a study investigating the impact of self-construal on the consumer adoption of new products, Ma et al. (2014) identified the mechanism of *self-related distinctiveness needs* to describe the underlying motivation of ISC individuals to promote themselves and be set apart from others. The authors defined self-related distinctiveness needs as ‘the quest for a desirable balance between the need for differentiation and the countervailing need for affiliation’ (pp. 115).

According to Ma et al. (2014) self-related distinctiveness needs offer a dynamic approach to understanding the consumer adoption of innovation.

In addition to a motivation for individualism, ISC consumers also desire to be seen as better than others and distinguish themselves via personal achievement (e.g., Lee and Shavitt., 2000; Ma et al., 2014; Millan and Reynolds, 2014). This correlates to the ego driven satisfaction GSB prone consumers receive when they are recognised by others for their superior knowledge and expertise of the GSB category in question (e.g., Mano and Elliot, 1997; Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2015). Highlighting this similarity supports the notion mentioned in the first paragraph in this sub-section, bringing attention to the similarity between ISC traits and GSB characteristics. Current literature has not addressed this relationship and highlights an area in which knowledge can be extended through a study investigating how self-construal impacts upon GSB evaluation

C3.5 The Impact of the Behavioural Traits of Self-Construals on Consumption

This section offers a critical discussion of the how self-construal led behaviour of individuals manifests within marketing, specifically relating consumption contexts. The influence of group orientation on the feelings and mood of an individual are noted (e.g., Millan and Reynolds, 2014) and similarities to the traits associated with of GSB proneness are highlighted.

Scholars are in agreement that consideration of the self is highly influential in understanding how individuals process information which leads to behavioural outcomes (for a review see Baumeister, 1998). The behavioural traits of individuals according to their self-construal is summarised by Cross et al. (2011) in table C7) which has been a subject of some interest for scholars (e.g., Markus and Kitayama, 1991; Millan and Reynolds, 2014; Hong and Chang, 2015). According to Markus and Kitayama's (1991, pp. 226) definition, a person with a high ISC exhibits behaviour which is '…organized and made meaningful primarily by reference to one's own internal repertoire of thoughts, feelings, and actions, rather than by reference to the thoughts, feelings, and actions of others'. Millan and Reynolds (2014) propose ISC individuals to be autonomous by nature and naturally detached from social networks. A lack of attachment may lead to an emotional state of loneliness or isolation. To compensate for feelings of solitude, Millan and Reynolds (2014) proposed ISC consumers engaged in hedonic consumption on order to regulate their emotional state. Further evidence of hedonic satisfaction is demonstrated by Hong and Chang (2015) who note how ISC consumers are more likely to make unexpected or unusual product choices based on the enjoyment it delivers. Hedonic consumption gives rise to benefits such as stimulation and

emotional gratification (e.g., Holbrook and Hirschman, 1982; Kleine, Kleine and Allen, 1995) and is more likely in high ISC consumers (Millan and Reynolds, 2014; Hong and Chang, 2014). Millan and Reynolds (2014) called for further research to investigate the influence of self-construal on product preference across other (non-clothing) categories. To date, extant literature has not responded to this call.

The incidence of hedonic satisfaction derived from consumption choices adds further weight to the connection between ISC tendencies and GSB proneness. GSB prone consumers gain enjoyment from purchasing store brands, linked to feelings of making choices that are smarter than those made by others and setting themselves apart from others in the process (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). A summary of studies highlighting how self-construal impacts upon consumption choices and the implications of this for GSB evaluation is summarised in table C8. Supporting evidence for the similarity between ISC tendencies and characteristics of GSB prone shoppers is highlighted.

Table C8. A summary of how self-construal impacts upon product evaluation highlighting conceptual overlap with traits of GSB prone consumers.

Study	Impact of self-construal on product evaluation	Implication for GSB evaluation from store brand literature
Cognitive processes		
Ahluwalia (2008)	INSC individuals have a relational processing advantage and are more likely to prefer brand extensions.	Evidence to suggest a preference for GSBs that display the parent store name on the packaging
Chen (2009)	ISC consumers are more likely to rely upon their knowledge and thoughts when making decisions	Suggests a relationship between GSB prone consumers and increased ISC. GSB prone consumers rely upon superior category knowledge to seek recognition from others (e.g., Mano and Elliot, 1997; Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2015)
Lalwani and Shavitt (2013)	ISC shoppers are less likely to view low price as a sign of lower quality	Suggested a relationship between ISC tendencies and GSB proneness. GSB prone consumers are price and value conscious. They are more likely than other consumers to view low price positively (Collins et al., 2015; Martos-Partal et al., 2015).
Zhu and Meyers-Levy (2009)	ISC consumers judge a product on its merits and do not take into account influences from others.	Smart shopper self-perceptions mean that GSB prone consumers are engaged in information search about the products as opposed to reliance on opinions of others (Garretson et al., 2002; Manzur et al., 2011)
Seeking hedonic benefits		
Millan and Reynolds (2014)	Self-construal influences consumer shopping habits and high ISC consumers are more likely to make hedonic purchases than those high in INSC.	Link between GSB prone consumers and high ISC. GSB prone consumers achieve hedonic benefits by being smart shoppers or exhibiting maven-like behaviour (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015)
Hong and Chang (2015)	ISC consumers are more likely to gain satisfaction from idiosyncratic choices	Similar tendencies demonstrated by GSB prone consumers who gain enjoyment from standing out from others (Ailawadi et al, 2001; Manzur et al., 2011)
Motivated to stand out from others and be noticed		

Ma et al. (2014)	ISC are motivated to express themselves and stand out from others.	
Lee and Shavitt (2006)	ISC seek out status brands to be noticed.	
Escalas and Bettman (2005)	Symbolic products enable ISC consumers to express their identity	Suggests a relationship with GSB proneness because GSB prone consumers are motivated to stand out from others and express themselves (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015)
Swaminathan et al. (2007)	Brand preferences align to self-construal, ISC for individualism and INSC to align to the group	
Shavitt and Barnes (2020)	The focus for INSC is to maintain relationships with retailers and other consumers (and not stand out from the crowd)	
Zhang and Shrum (2009)	INSC are influenced by group harmony when shopping and suppress impulsive motivations. ISC more likely to show their independence via their purchases.	

C3.6 Conclusions on Self-Construal in Marketing Research

First, the impact of an individual's self-construal on cognition has been well documented in extant literature (e.g., Nisbett et al., 2001; Ahluwalia, 2008; Zhu and Meyers-Levy, 2009; Chang, 2010; Cross et al, 2011; Lalwani and Shavitt, 2013). According to Cross et al., (2011) cognitive differences can be characterized in two ways, by differences in relationship awareness (to others and the context) and via different mechanisms of cognitive processing. Considering differences in the awareness of relationships, scholars have shown INSC individuals to possess a 'relational processing advantage' (e.g., Ahluwalia, 2008). This advantage enables INSC individuals to make more connections between objects and individuals, leading to an increased acceptance of brand extensions (Ahluwalia, 2008). As noted in section B2.6.4, although many scholars consider GSBs as brand extensions (e.g., Völckner and Sattler, 2006; Nies and Natter, 2010), copycat GSBs sold in HDs are characterized as standalone brands and do not bear the name of the parent (store) (e.g., Kelting et al., 2017). This suggests it is unlikely that INSC individuals would evaluate copycat GSBs (of the standalone type) more positively than those with high ISC characteristics. However, to date there are no studies investigating the impact of self-construal on GSB purchasing with or without the presence of the store brand on pack.

In addition to the differences in relational processing, self-construal also impacts upon the cognitive processing of individuals (e.g., Nisbett et al., 2001; Zhu and Meyers-Levy, 2009; Chang, 2010; Lalwani and Shavitt, 2013). Mode of cognition influences how target products

are evaluated (Lalwani and Shavitt, 2013; Zhu and Meyers-Levy, 2009). The analytic processing of ISC individuals is characterized by a reliance on the self and judging a product on its own merits as opposed to influences from others (Zhu and Meyers-Levy, 2009). On the other hand, holistic processing by INSC individuals facilitates the assimilation of product and contextual attributes such as price and quality (e.g., Lalwani and Shavitt, 2013). Therefore, INSC individuals are more likely to use price as an indicator of quality. However, as noted by Lalwani and Shavitt (2013) extant price/quality evaluation studies have not taken other product attributes into account. Therefore, the impact of packaging similarity on price quality judgements according to self-construal remains unexplored.

A second conclusion stems from findings regarding the motivational traits aligned to different self-construals (e.g., Zhang and Shrum, 2009; Millan and Reynolds, 2014). Zhang and Shrum (2009) and Millan and Reynolds (2014) note that because ISC individuals are motivated to differentiate themselves from the group, they are more likely to purchase brands that make them stand out, demonstrate autonomy and superior achievement. The drive of ISC individuals to differentiate and demonstrate achievement, bears much resemblance to the traits exhibited by GSB prone shoppers as discussed in section B2.5. In addition to concerns regarding price and quality the GSB prone shopper also enjoys recognition from other that they are different and possess superior category knowledge (e.g., Garretson et al., 2002; Manzur et al., 2011). Therefore, it is logical to suggest that ISC traits are more likely to be exhibited in GSB prone shoppers. However, to date extant research has not investigated the relationship between GSB proneness and self-construal. Addressing this gap in knowledge will lead to increased understanding of why some consumers are GSB prone, as well as offering a novel extension to self-construal theory.

Finally, scholars have noted that ISC individuals are more likely to make hedonic purchases than INSC individuals (e.g., Millan and Reynolds, 2014). ISC behavioural traits are characterised by separation from others, which can, according to Millan and Reynolds (2013) lead to feelings of isolation and loneliness. The authors note that ISC individuals compensate for such feelings with emotional gratification from hedonic consumption. In section B2.5.2 of this thesis a hedonic element of GSB purchasing was highlighted. Specifically, the feeling of being a smart shopper when buying GSBs gives rise to pleasurable satisfaction (e.g., Ailawadi et al., 2001; Garretson, et al., 2002, Manzur et al., 2011). Shoppers who are more GSB prone are more likely to seek and derive this hedonic benefit. Overall, this section of literature reviewing self-construal in marketing has highlighted clear overlap between the acknowledged traits of GSB prone consumers and the established cognitive, motivational and behavioural characteristics of self-construal. Cognitively, ISC

and INSC individuals have different mechanisms (Ahluwalia, 2008; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013). Consequently, ISC individuals are 1) less open to influence from others, 2) unlikely to link quality with price and 3) not influenced by others when making product evaluations. With respect to motivation, ISC individuals seek to stand out from others and express individuality and through product choices (Escalas and Bettman, 2005; Lee and Shavitt, 2006; Swaminathan et al., 2007; Zhang and Shrum, 2009; Ma et al., 2014; Shavitt and Barnes, 2020). Behaviourally, ISC also from INSC, with increased likelihood of making hedonic purchases (Millan and Reynolds, 2014; Hong and Chang, 2015). Together, these highlighted characteristics show clear similarity to GSB prone shoppers who achieve satisfaction from standing out and being recognised as individuals for superior category knowledge (Ailawadi et al., 2001; Garretson, et al., 2002, Manzur et al., 2011; Martos-Partal et al., 2015). However, no studies to date have investigated the impact of self-construal upon GSB evaluation. This thesis seeks to address this gap and investigate the psychological processes underpinning the consumer evaluation of GSBs. To this end, the application of self-construal theory represents well-suited theoretical framework which also offers a novel extension to the GSB and self-construal literatures.

C4 Summary of Knowledge Gaps Highlighted in the Literature Review

This is the concluding section of Chapter C in which final justification for the use of the PKM and self-construal as underpinning theoretical foundations to investigate the consumer evaluation of GSBs is given. Gaps in knowledge that have come to light as a result of the literature review process are summarised leading to development of research aims which are stated in Chapter D of this thesis.

C4.1 The PKM and Self-Construal in GSB Evaluation

The relationship between the PKM and self-construal is established by looking at how these theoretical foundations support the evaluation of GSBs. Starting with the extrinsic cues of GSB evaluation, persuasion theory has been identified as a relevant theoretical framework in section C2 of this chapter. Persuasion theory focusses on three signature variables of source, the message, and the recipient (e.g., Tormala and Briñol, 2014). These variables align closely to the findings from Section B2.6.3 and the influential factors in consumer evaluation of GSBs, namely price and packaging (the message), store image (the source) and recipient (consumer characteristics). Friestad and Wright (1994) proposed a development of persuasion theory to take account of the knowledge an individual has about their own thoughts, giving

rise to a metacognitive interpretation of persuasion in the PKM. According to the PKM, consumers use what they know about the source and the message in order to protect themselves from being taken in by the tactics of marketers. This accounts for two of the three persuasion variables. Considering the influence of consumer characteristics (recipient), Friestad and Wright (1994) highlight how individual motivation affects persuasion assessment and suggest self-construal as a likely factor.

Self-construal influences motivation, cognition, and behaviour of consumers (e.g., Markus and Kitayama, 1991; Cross et al., 2011). Many studies have demonstrated the impact of self-construal on consumption choices consumers make (e.g., Ahluwalia, 2009; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013; Ma et al., 2014; Millan and Reynolds, 2014; Hong and Chang, 2015; Shavitt and Barnes, 2020). When ISC is the dominant self-construal, consumers are more likely to judge products on their own merits and place less importance on price and store image (e.g., Ahluwalia, 2008; Zhu and Meyers-Levy, 2009; Lalwani and Shavitt, 2013). Individuals for whom ISC dominates are also more likely to seek hedonic benefits from purchases (e.g., Millan and Reynolds, 2014; Hang and Chang, 2015) and choose products that enable self-expression and recognition (e.g., Ma et al., 2014; Shavitt and Barnes, 2020). Summarising the consumption characteristics associated with ISC highlights a high level of crossover with documented traits of GSB prone consumers (see sections B2.5 and C3, table C8). This suggests self-construal to be a likely influence upon consumer choices and preferences regarding GSBs. Together the PKM and self-construal cover the three elements of persuasion theory (source, message, and recipient) and correspond to the established factors of GSB evaluation, store image (source), price and packaging (message) and consumer characteristics (recipient). Based on these two theoretical foundations, a conceptual framework is developed in Chapter D in order to meet the research aims proposed as a result of gaps in knowledge highlighted in the literature review.

C4.2 Gap 1: Using the PKM in GSB Evaluation when Retailer Tactics are not Overt

Persuasion theory and specifically Friestad and Wright's (1994) PKM offers a theoretical basis for the coping actions of consumers when they are involved in a persuasion episode, such as making a purchase in a grocery store. Application of the PKM has been used to explain how consumers cope with packaging similarity in GSBs (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b). However, studies to date have only considered copycat GSBs from mainstream grocery retailers, based on the display of the parent store name on the packaging and the presence of the leading national brand as a

comparator for evaluation. These two elements represent important information upon which the persuasion tactics of the retailer are assessed in a persuasion event. Without the presence of either element, the outcome of a using the PKM to assess copycat GSBs is unknown. Recent growth of HDs has been highlighted as a topic of emerging interest within the GSB literature in Chapter B. HDs typically sell a range of goods which is predominantly copycat GSBs. Unlike mainstream grocers, HDs do not display the parent store name on the packaging of store brands. Another difference is that HDs do not offer consumers the opportunity to make a comparison to leading national brands at the point of purchase. Less than 10% of sales in HDs are from branded goods and thus it is unlikely that a contrasting evaluation can be made (Steenkamp and Kumar, 2009). This presents a gap in current knowledge regarding use of the PKM to underpin GSB evaluation and raises the question of how consumers evaluate copycat GSBs when retailer tactics are not available.

C4.3 Gap 2: The Influence of Self-Construal on GSB Evaluation

Self-construal theory has been proposed as a theoretical framework for explaining how consumer characteristics impact upon the psychological processes underpinning GSB evaluation. Critical evaluation of the main tenets of self-construal highlights the influence of characteristic cognitive, behavioural, and motivational traits demonstrated by consumers (e.g., Markus and Kitayama, 1991; Cross et al., 2011). Self-construal has been used in multiple consumption contexts to explain differences between sample population preferences (e.g., Escalas and Bettman, 2005; Lee and Shavitt, 2006; Swaminathan et al., 2017; Shavitt and Barnes, 2020). However, to date no studies have specifically investigated consumer preference for GSBs. An established influencing factor in GSB preference is related to the psychological characteristics of consumers, known as GSB 'proneness'. Consumers who are GSB prone are motivated to stand out and be recognised by others as smart, for their knowledge of the category and associated purchase decisions (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). Similarly, ISC consumers use purchase occasions to express themselves and highlight how they are individuals who make decisions based on their own knowledge (e.g., Lee and Shavitt, 2006; Ahluwalia, 2008, Lalwani and Shavitt, 2013; Millan and Reynolds, 2014). The overlap between GSB proneness and ISC traits suggest that self-construal will have an influence on how GSBs are evaluated. Despite a recent study linking cultural values and the smart shopper feelings of GSB consumers (Quinones et al., 2022), a gap in current knowledge remains. Investigating how self-construal impacts on the evaluation of GSBs will directly address this

gap and extend knowledge of self-construal in marketing contexts as well as furthering understanding of GSB prone consumers.

Chapter D: Development of the Conceptual Framework

D1 Introduction and Outline of the Chapter

The purpose of this chapter is to answer RA1 and develop a conceptual framework for conducting research. This chapter will also establish the philosophical foundations upon which the research is based and discuss guiding principles that have given rise to the methodological decisions made in each study. Specific methodological details will be covered in each of the individua studies, in Chapters E, F and G.

D2 Developing the Conceptual Framework

D2.1 Research Aims

The objective of this thesis, as stated in section A2 is to investigate how consumer self-construal influences perceptions of GSBs from mainstream grocers, and HDs. The individual RAs are stated again here for clarity.

RA1: To develop a theoretically grounded conceptual framework that proposes a logical sequence of procedures to determine how consumers perceive HD GSBs

RA2: To determine if the image perceptions consumers have of HDs are reflected in their observed shopping habits

RA3: To investigate how consumers perceive HD GSBs using the established cues for GSB evaluation of price and packaging

RA4: To understand how self-construal impacts upon the evaluation of HDs and HD GSBs.

In order to satisfy the first research aim, a conceptual framework upon which to base the subsequent studies is developed in this section of the thesis. RA2 seeks to investigate the divergence of opinion regarding perceived consumer attitudes to HDs with mention of both poor and positive perceptions with the GSB literature (e.*g.*, Kumar and Steenkamp, 2007; Steenkamp and Kumar, 2009; Vroegrijk et al., 2013; Hunneman et al., 2021). The established perspective that HDs have an image that they are ‘basic and limited’ stores contrasts with observed shopping behaviour and strong growth of HDs in recent years (Steenkamp and Sloot, 2018; Dekimpe and Geyskens, 2019). This suggests a difference between what

consumers might say when asked about HD store image perceptions and consumer behaviour regarding shopping habits. This question is addressed specifically in Chapter E and study 1.

RA3 seeks to determine if the consumers evaluate HD GSBs in the same way that they evaluate other GSBs. Consumers make purchase decisions regarding the quality and value of GSBs based on extrinsic product cues their own psychological traits (e.g., Richardson et al., 1994; 1996; Garretson et al., 2002; Martos-Partal et al., 2015). Study 2, presented in Chapter F, investigates the impact of product related extrinsic cues on GSB and HD GSB evaluation, specifically considering price and the similarity of the packaging to leading national brands. In Chapter 3, study 3 investigates packaging evaluation further, seeking to determine how different elements of GSB and HD GSB packaging design and branding, influence consumers.

RA4 states intent to understand the influence of consumer self-construal on (HD)GSB evaluation. In addition to the established product cues that influence how store brands are evaluated, individual psychological traits of consumers are also known to have impact (e.g., Richardson et al.,1996; Garretson et al., 2002; Martos-Partal et al., 2015). Typically, GSB prone consumers seek individuality and recognition for their topic knowledge (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). There are noted similarities with the characteristics of consumers who are dominant in ISC (e.g., Ahluwalia, 2008; Lalwani and Shavitt, 2013; Millan and Reynolds, 2014; Shavitt and Barnes, 2008 (see section C3.5 table C8 for a summary). ISC consumers are predisposed to relying on their own knowledge to make decisions (Ahluwalia, 2008; Lalwani and Shavitt, 2013) and use consumption choices to stand out from others and express their identity (Millan and Reynolds; Shavitt and Barnes, 2020). Based on the noted similarities between self-construal characteristics and those of GSB prone consumers, all three studies also investigate the effect of self-construal on store brand evaluation.

D2.2 Conceptual Framework Development

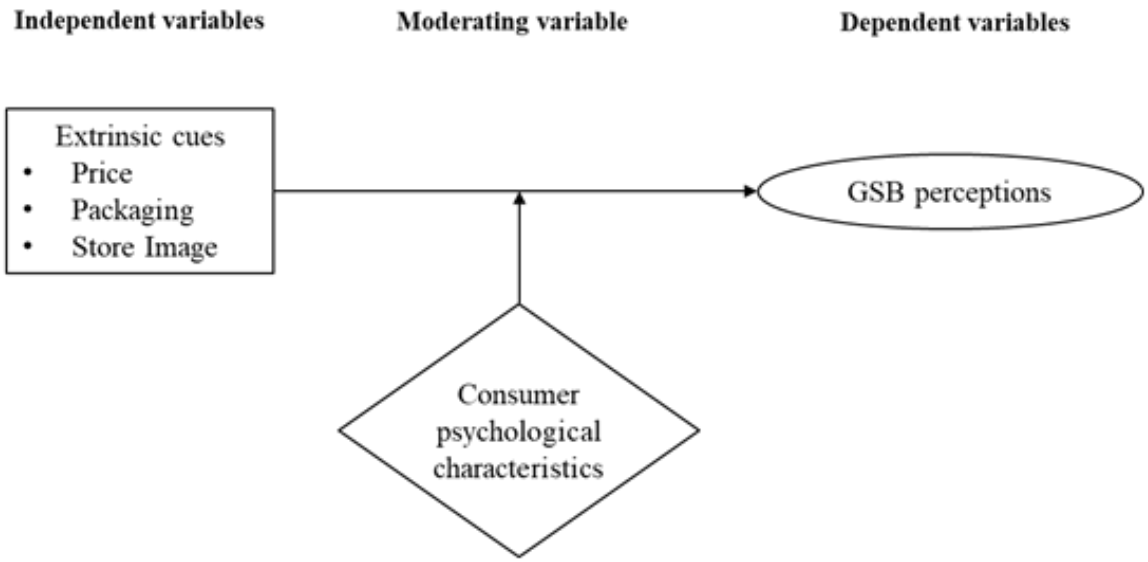
This section begins by summarising the variables identified in the literature review that are considered to be the basis of GSB evaluation. The relationship between these variables is outlined in a basic schematic (figure D1). This is followed by the introduction of two underpinning theories, Friestad and Wright's (1994) PKM and Marcus and Kitayama's (1991) theory of self-construal. Once the theoretical basis has been established, the full conceptual framework will be developed and presented.

D2.2.1 Outline of the Relationship Between Key Variables in GSB Evaluation

As demonstrated in Chapter B of this thesis, the purchase of GSBs is dependent on the perceptions consumers' hold of a GSB after it has been evaluated according to the extrinsic cues of price, packaging and store image (e.g., Richardson et al., 1994). The dependent variables in this instance are consumer perceptions of quality and value, and the independent variables are the extrinsic cues of price, packaging and store image. However, some consumers are more prone to buying GSBs than others (e.g., Frank and Boyd, 1965; Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015).

Frank and Boyd (1965) identified GSB proneness through elevated levels of spend on GSBs made by some consumers. Ailawadi et al. (2001) proposed a relationship between the individual psychological characteristics of consumers and the benefits or costs associated with GSB purchase. Certain consumers were identified as taking pleasure in purchasing GSBs in addition to satisfying functional needs regarding price and value for money (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011). Ailawadi et al. (2001) and Martos-Partal et al. (2015) noted that purchasing GSBs enabled some consumers to express themselves to others. Similarly, Garretson et al. (2002) and Martos-Partal et al. (2015) observed recognition from others as a psychological driver for GSB purchasing. Therefore, the individual characteristics some consumers possess such as self-expression pleasure seeking impact upon how they perceive GSBs. In other words, perceptions of GSB value and quality, based on evaluation of extrinsic cues, are moderated by individual consumer characteristics. This relationship is depicted in figure D1 and forms the basis of the theoretical framework which will be further developed in this chapter.

Figure D3. An outline of the relationship between GSB perceptions and their antecedents



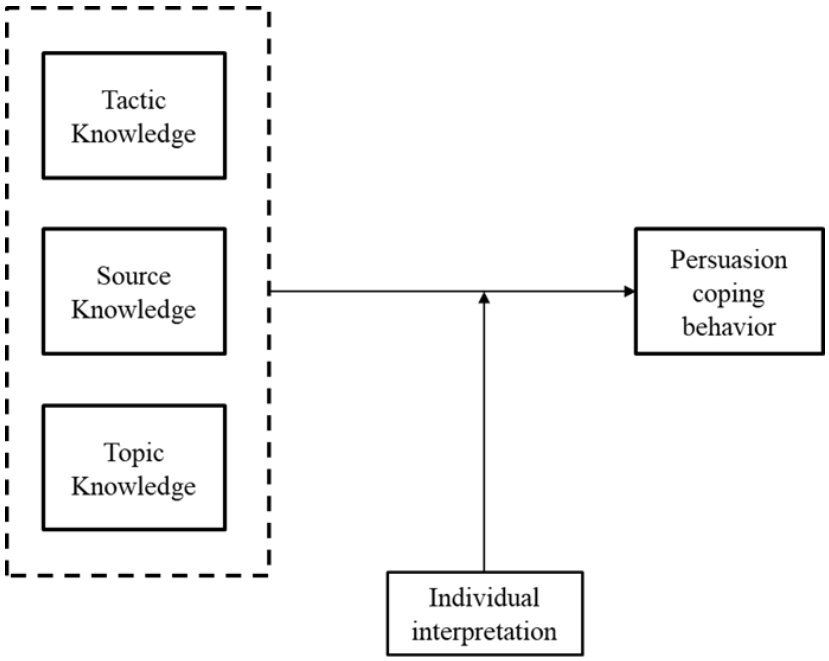
D2.2.2 How the PKM can be used to Underpin GSB Evaluation

A well-known theory used to explain how consumers evaluate the tactics of marketers in consumption settings can be found in Friestad and Wright's (1994) PKM. The PKM proposes that consumers use their own in-built knowledge of persuasion to avoid being taken in by marketers' attempts at encouraging them to buy their products. According to Campbell and Kirmani (2008) consumers enter into a persuasion event (such as viewing an advertisement or assessing a brand) with innate knowledge, known as persuasion knowledge (as previously discussed in in section C2.3).

Persuasion knowledge is defined as the sum of knowledge held by the individual regarding the topic, the persuasion agent and also the tactics employed by the agent (Friestad and Wright, 1994). In order to ensure protection from persuasive actions, individuals think about the knowledge they have in order to develop their persuasion coping behaviour. In other words, the way that individuals interpret what they know about a persuasive attempt impacts upon how they will act regarding that attempt. This relationship is shown in diagrammatic form in figure D2.

Considering each type of knowledge upon which the PKM is based, a clear overlap exists between the extrinsic cues consumers rely on for the evaluation of GSBs. Beginning with tactic knowledge. The following sections will highlight how the knowledge types of the PKM relate to extrinsic cues used by consumer to evaluate GSBs.

Figure D4. The PKM and Persuasion Coping Behaviour



(Source: Adapted from Friestad and Wright (1994 pp. 2))

Tactic knowledge describes the strategies employed by agents (marketers) in the act of persuasion (Campbell and Kirmani, 2008). With regard to advertising this includes actions such as guilt appeals (e.g., Cotte et al., 2005) and the use of rhetorical questions (e.g., Ahluwalia and Burnkrant, 2004). However, when considering products, price is a common tactic (e.g., Hardesty et al., 2007) along with packaging (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b). The packaging of a GSB can employ tactics such as deliberate similarity to leading brands, with the aim of capitalising on positive associations the brand has built up over time (e.g., van Horen and Pieters 2012a,b). In addition to this, by including the name of the retailer on the GSB packaging, branding can also be considered a deliberate packaging tactic. According to Ailawadi and Keller (2004) by making the brand name of the store clear on the GSB, positive associations connected to the retail brand name will spill over to the GSB. Therefore, with regard to GSBs, tactic knowledge can be thought of in terms knowledge regarding the tactics of the common extrinsic cues of price and packaging. Greater tactic knowledge has been associated with lower opinions of highly similar or deliberate copies of well-known brands (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b)

Source (agent) knowledge refers to thoughts consumers have regarding the 'skills, knowledge and goals' of the persuader or source of the persuasion (Friestad and Wright, 1994). This can be further defined as what individuals know about the brand, company or salesperson in question (Campbell and Kirmani, 2008). Specifically considering brands, Keller (1993) states that associations linked to the brand in consumer memory are known as the brand image. When the brand in question is a retailer, brand image can be defined as the impression or perceptions of the store in the mind of the consumer, or the store image (Ailawadi and Keller, 2004). Therefore, in a persuasion attempt where the source of the persuasion is a retail store, source knowledge (what the consumer thinks about the store in question) can be assessed by the consumers' store image perceptions.

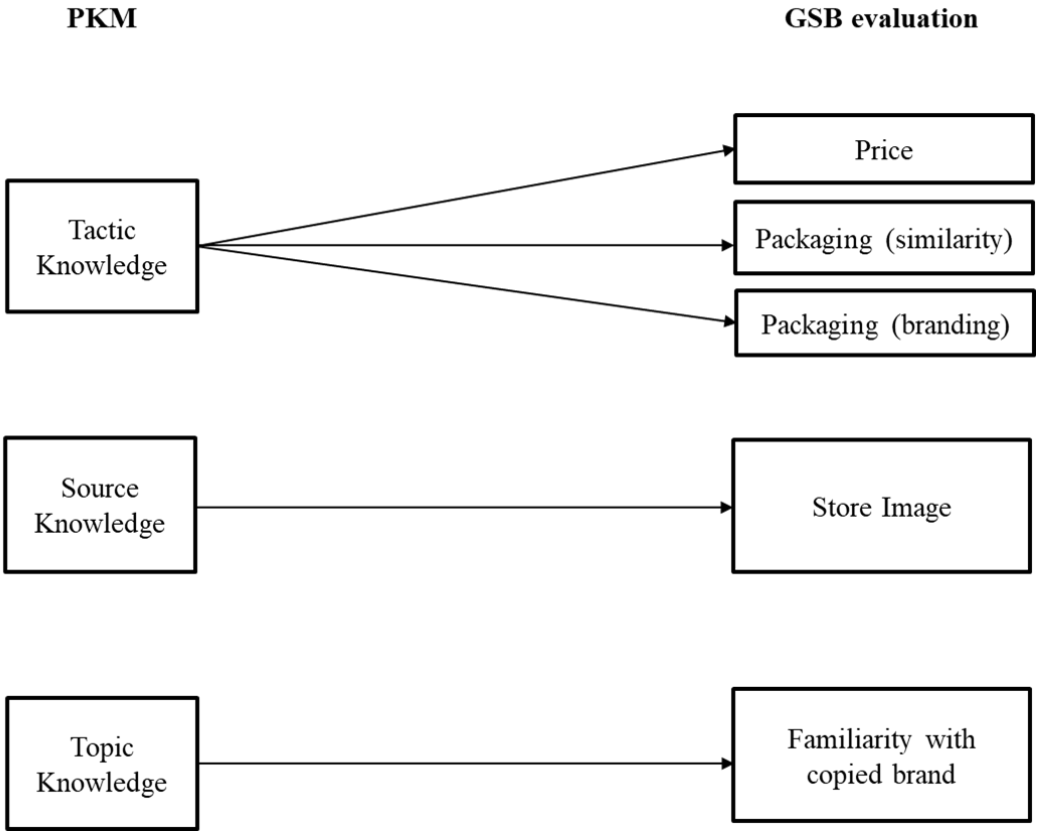
The final knowledge type included in the PKM is topic knowledge, which can be defined as what the consumer knows about the topic or content of the persuasion attempt (Friestad and Wright, 2004; Campbell and Kirmani, 2008). In the context of consumption, brands can be considered as the persuasion topic (Ham et al., 2015). Other scholars have linked consumer expertise to topic knowledge (e.g., Ahluwalia and Burnkrant, 2004; Zhuang, et al. 2018). Specifically studies investigating copycat brands have accounted for topic knowledge as familiarity with the copied brand (van Horen and Pieters, 2012a,b). According to the authors copycat brands rely upon consumer knowledge of the copied brand in order to

capitalise on its associations. Similarly, GSBs rely on consumer familiarity with national brands as a basis of their appeal (Kumar and Steenkamp, 2007). Therefore, topic knowledge in this thesis can be considered as familiarity with the national brands under investigation. The relationship between the knowledge types in the PKM and the extrinsic cues common to GSB evaluation is shown in figure D3.

D2.2.3 The Moderating Effect of Self-construal on the PKM and GSB Evaluation

As previously stated, the PKM accounts for how individuals react to persuasive attempts based on the beliefs they hold regarding their knowledge. Friestad and Wright (1994) draw attention to the likely impact of different self-schema in this consideration, (shown as 'individual interpretation' in D2). Specifically noting Marcus and Kitayama's (1991) theory of self-construal, the authors cite cultural differences as a reason for 'differences in people's motivations to develop and use persuasion knowledge' (Friestad and Wright, 1994, pp.23). Based on this proposal, the self-construal of an individual is likely to moderate the outcome of a persuasion event.

Figure D5. Depicting the relationship between knowledge type and cues of GSB evaluation

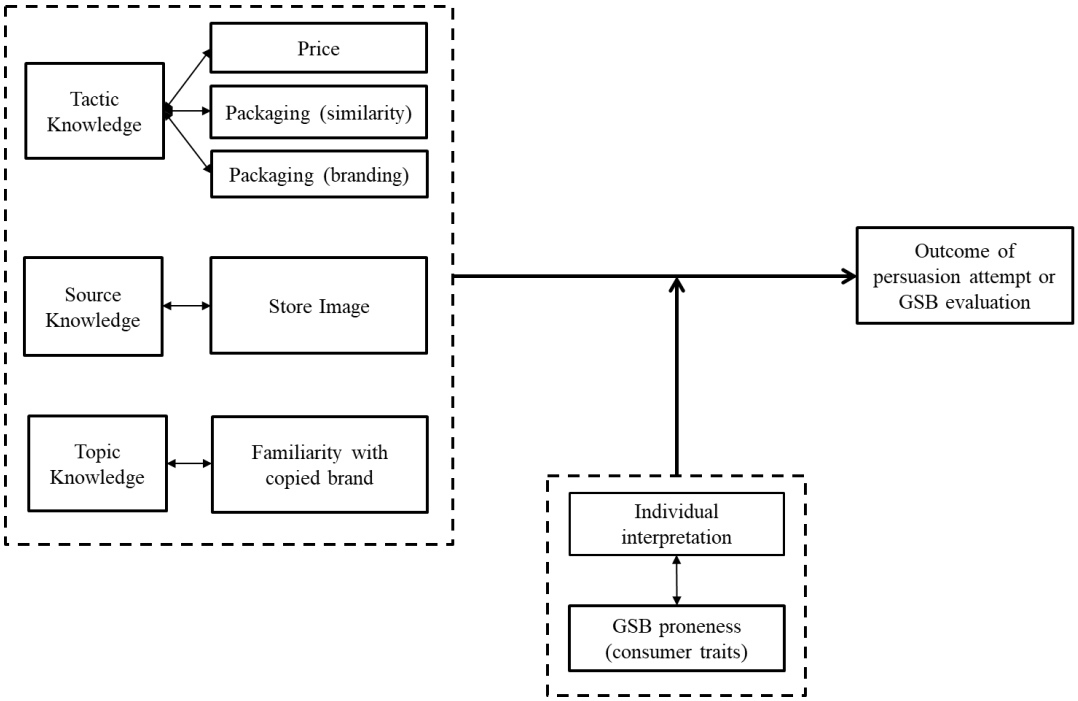


More evidence supporting the notion that of self-construal may moderate GSB evaluation can be found in specific studies (Lee and Shavitt, 2006; Ahluwalia, 2008; Lalwani and Shavitt, 2013). Each study demonstrates the dichotomous impact of self-construal on one the three extrinsic cues of price, packaging and store image. Lalwani and Shavitt (2013) demonstrate that INSC individuals are more likely to interpret price as a sign of low quality. Ahluwalia (2008) shows that brand extensions are more positively evaluate by INSC individuals, this implies that the packaging of store branded GSBs would be more favourably considered. Finally, Lee and Shavitt (2006) determine that the store image perceptions are more influential in making product judgements for INSC than ISC individuals.

In addition to demonstrating that self-construal may be a moderating factor in GSB evaluation, parallels can also be drawn between the characteristics of GSB prone consumers and characteristics shown by ISC individuals. GSB prone consumers characteristically find pleasure in GSB purchases driven by a desire to stand out from others and express themselves (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015) Similarly, ISC individuals seek pleasure, self-expression and distinctiveness when making brand purchases (e.g., Escalas and Bettman, 2005; Swaminathan, et al., 2007; Ma et al., 2014; Millan and Reynolds, 2014). According to Escalas and Bettman (2005) ISC individuals use brands to differentiate themselves from others. This is supported by Swaminathan et al. (2007) and Ma et al. (2014) who note that ISC individuals also use purchases as a way to stand out and be considered unique. Millan and Reynolds (2014) concur that differentiation via brand purchases is self-expressive and propose that it also leads ISC consumers to make choices which are hedonically driven.

Summarising the characteristic traits of GSB prone consumers highlight where there is overlap with identified traits of ISC individuals. This supports the suggestion made by Friestad and Wright (1994) that self-construal may moderate the outcome of the PKM. As the PKM is used as an overarching theoretical framework underpinning the evaluation of GSBs, in this instance, self-construal is proposed as a moderating factor in GSB evaluation. This is depicted in figure D4, which builds upon the schematic outline in figure D1.

Figure D6. Depicting the relationship between the PKM and the evaluation of GSBs



D2.3 Establishing the Dependant Variables

Figure D1 is used as a starting point for discussion regarding dependent variables. This sub-section concludes with a full presentation of the conceptual framework, presenting all of the dependent variables for measurement in subsequent studies.

D2.3.1 Value and Quality as Measures of GSB Perceptions

GSB literature has a long tradition of using perceived value and quality of GSB as a measure and predictor of consumer preference (e.g., Richardson et al., 1994; González Mieres et al., 2006; Bao et al., 2011). In recent years the GSB market has matured in the UK, giving rise to retailers developing a three-tiered GSB offering (Geyskens et al., 2010). Each tier delivers different levels of price and quality in order to appeal to different consumer segments (Kumar and Steenkamp, 2007). Retailers have adopted a portfolio approach to their store brands as GSBs are considered as brands in their own right (Keller et al., 2016). Developments in manufacturing have also led to improvements GSB quality, suggesting that differences between some GSBs and leading brands are negligible (Steenkamp and Kumar, 2009). If quality and value perceptions between GSBs are negligible, consumer preferences for one GSB or another may be motivated by other factors.

D2.3.2 Self-Brand Connection and Increased Brand Preference

Sirgy (1982) and Belk (1988) proposed that the self-concept or how individuals think of themselves, to be an important influencing factor in consumer consumption choices. Individuals are motivated to select products most aligned to the persona they wish to present. Studies by Escalas and Bettman (2003, 2005, 2009) and Escalas (2004) developed the notion that brands are used to enhance the self-image. According to Escalas and Bettman (2003) and Escalas (2004) the self-image of the individual becomes entwined with associations they have with the brand in question. This linkage is known as self-brand connections (SBC), which describe the level of overlap between the brand and the self (Escalas and Bettman, 2005, 2009).

Escalas (2004) noted that brands high in SBC mean more to the consumer as they have more self-image overlap. Furthermore, a strong SBC indicates an increased likelihood of positive brand attitude, preference and loyalty (Wilson, Giebelhausen and Brady, 2017). SBC has been used in many brand-related studies, investigating areas such as the influence of celebrity endorsements (Escalas and Bettman, 2009), conspicuous consumption (Ferraro, Kirmani and Matherly, 2013), consumer response to brand failure (Cheng, White and Chaplin, 2011), the impact of word of mouth on brand preferences (Wilson et al., 2017) and how consumers respond to changes to brand image (Gaustad, Samuelsen, Warlop, and Fitzsimons, 2019). By incorporating SBC into the evaluation of GSBs, the traditional constructs of value and quality are enhanced with a measure of how consumers consider GSBs to reflect their own selves. This extends existing knowledge of GSB preferences and offers the opportunity for additional understanding into the psychological drivers of GSB purchase.

D2.3.3 Store Image Perceptions

The image a consumer holds in their mind of a store, is known to influence how they perceive goods sold in that store (Martineau, 1958; Dodds et al.,1991). Specifically, a relationship has been established between GSB perceptions and store image (Collins-Dodd and Lindley, 2003; Bao et al., 2011; Nies and Natter, 2010; Keller et al., 2016). Nies and Natter (2010) proposed that GSBs were considered by consumers as brand extensions of the retail store and established spillover of image from the store to the GSB (and vice versa). This reinforces the perspective from Richardson et al. (1994) who highlighted how consumers used store image as a way of determining GSB quality. Dodds et al. (1991) developed a scale for the measurement of store image perceptions used by Collins-Dodd and Lindley (2003) to demonstrate the influence of store image upon store brands.

D2.3.4 Willingness to Purchase as an Indication of Consumer Preference

Willingness to purchase (WTP) can be found in many studies seeking to determine consumer preference for different types of GSBs and is used to demonstrate how successful store brands are (e.g., Richardson et al., 1994*;* Batra and Sinha, 2000). WTP is also common in studies which investigate the effects of GSB packaging similarity, to leading national brands (Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters, 2012a,b). According to Steenkamp and Kumar (2007) copying packaging elements from well-known brands is a common tactic used by retailers to encourage consumers to look favourably on store brands. Investigating the effect of packaging similarity on GSB evaluation can therefore be achieved through operationalising similarity and measuring consumer perceptions via WTP. A summary of the dependent measures and corresponding literature is presented in table D1.

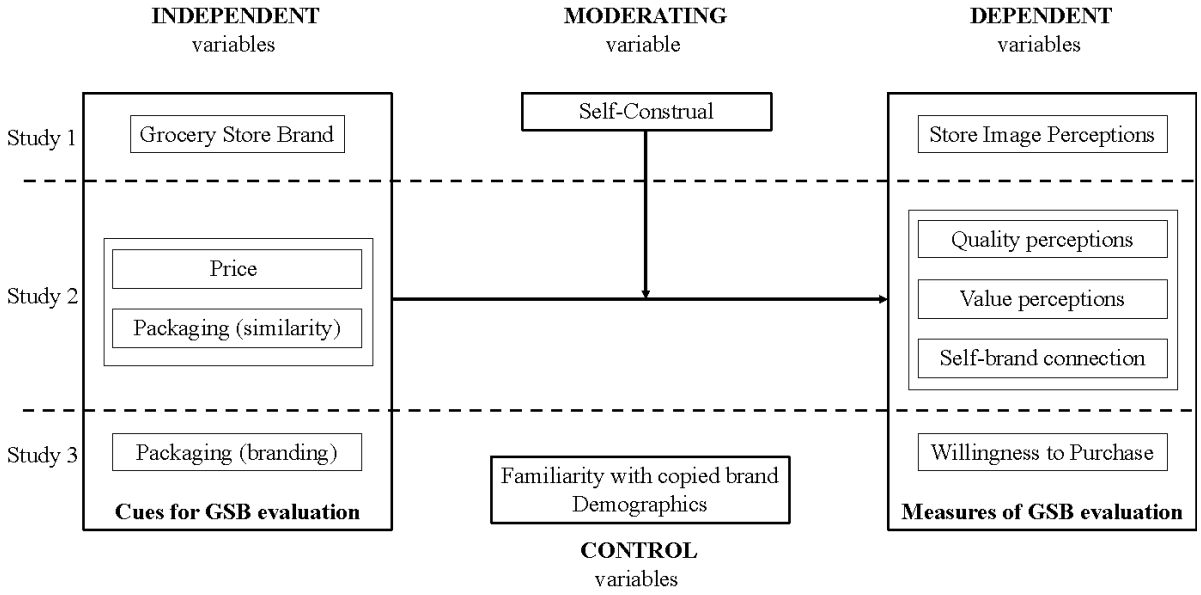
Table D9. Summary of origins and previous use of dependent measures

Dependent Measure	Origin and previous use of the scale
Store Image	Mazursky and Jacoby (1986) Hopkins and Alford (2001) Delgado-Ballester et al. (2014)
Quality perceptions	Dodds et al. (1991)
Value perceptions	Dodds et al. (1991)
Self-brand connection	Escalas (2004)
Willingness to purchase	Van Horen and Pieters (2012b)

D2.4 The Conceptual Framework

Building upon the schematic outlined in figure D4, a more descriptive version of the conceptual framework has been developed to include the independent variables and moderating factors discussed so far. Also included are the dependent variables which were given justification in the preceding sub-sections. From this model, a series of hypotheses across three proposed studies, will be developed upon which experimental procedures will be devised. The three studies were outlined in Chapter A of this thesis and will be presented in full in the subsequent chapter.

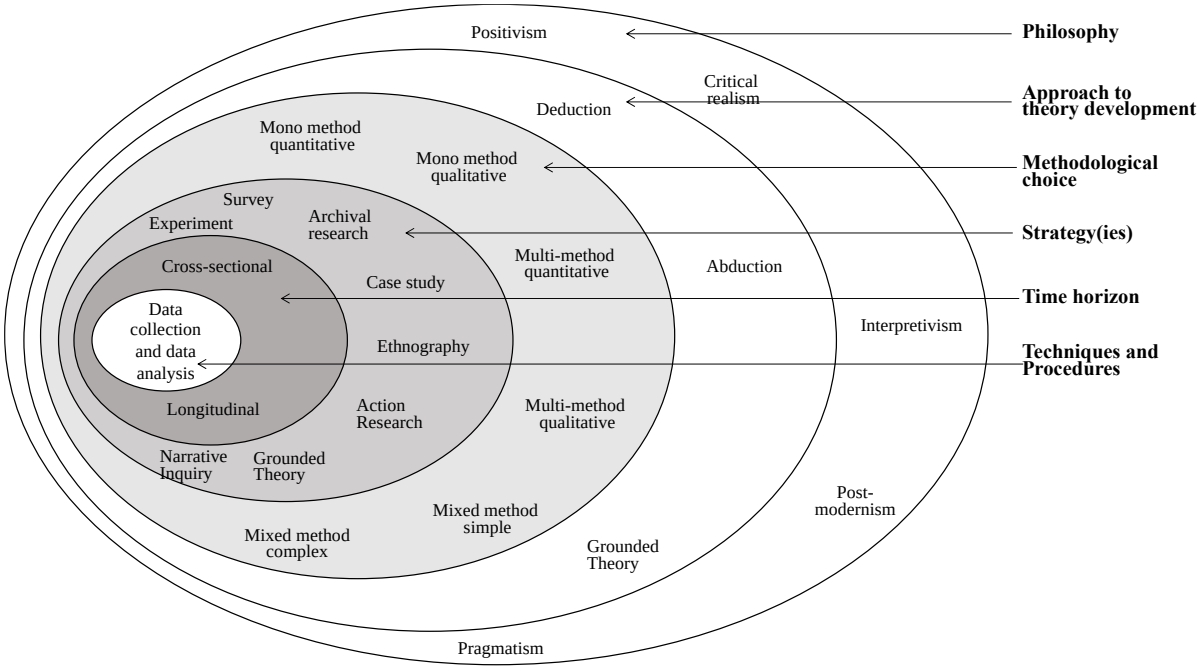
Figure D7. Outlining the relationship between independent, moderating and dependent variables



D3 The Research Process

The importance of following a structured and considered process prior to the development of data collection is important so that research findings can be justified and accessible to other researchers (Crotty, 1998). The approach followed will align to the 'Research Onion' developed by Saunders, Lewis and Thornhill (2016, pp. 124). Beginning with philosophical underpinnings, each step in the research onion model likens the process of determining the most suitable techniques for data collection and analysis techniques to 'peeling away the layers of an onion' (figure D8).

Figure D8. The research 'onion'



Source: Saunders, Lewis and Thornhill (2015, pp. 124)

D3.1 Research Philosophy

Research philosophy describes the underpinning beliefs and assumptions regarding the development of knowledge (Saunders et al., 2015). Philosophical considerations are important to researchers as a lack of consideration may lead to quality issues with the research outcomes (Easterby-Smith, Thorpe and Jackson, 2012). Throughout the research process, assumptions are made regarding the realities that are encountered in the research (ontological assumptions), about human knowledge (epistemological assumptions) and how the values of the researcher influence the overall process (Burrell and Morgan, 2016). Together these sets of assumptions inform the methodological choices by which knowledge is investigated and obtained.

D3.1.1 Ontological Assumptions

Ontology is concerned with understanding if reality is, by nature, objective or not (Bryman and Bell, 2015; Saunders et al., 2015). Ontological assumptions regarding a proposed area of study are important as they inform the way in which the researcher sees and interprets the objects under investigation (Saunders et al., 2015). This presents ontology as a framework by which research questions, theoretical underpinnings and methodological choices can be informed. According to Bryman and Bell (2015), there are two discrete ontological positions

of objectivism and constructionism. Objectivism considers social phenomena to be 'independent from social actors' (Bryman and Bell, 2015, pp. 32) meaning that they cannot be altered or influenced by individuals. The opposing perspective to this is given in constructionism, which considers social phenomena to be created and constantly adapted by social interactions (Bryman and Bell, 2015, pp, 33). In this thesis, the researcher follows ontology associated with objectivism, which has an ontological position aligned to the development of quantitative research methods (Bryman and Bell, 2015).

D3.1.2 Epistemological Assumptions

Epistemology is concerned with assumptions about the nature of knowledge (Saunders et al., 2015). Burrell and Morgan (2016) further define epistemology as consideration regarding what knowledge is acceptable, valid and legitimate and also how knowledge is communicated to others. The central argument within epistemology relates to the social world, and if it can be studied in a way akin to the processes, principles, and ethos associated with natural sciences (Bryman and Bell, 2015). An alignment to a natural scientific approach describes the epistemological position known as positivism and will more likely lead to the choice of quantitative research methods (Saunders et al., 2015). In contrast to a positivist approach, Bryman and Bell (2015) highlight the opposing orthodoxy of interpretivism. An interpretivist epistemology considers humans to be different from physical phenomena because they are involved in the creation of meaning. Therefore, the social world that humans inhabit and human beings themselves, must be studied in a different way from natural sciences (Saunders et al., 2015).

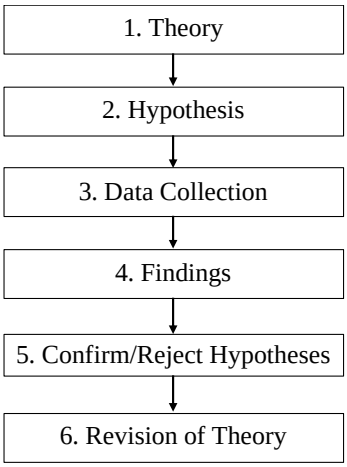
D3.1.3 Research Paradigm

The research paradigm reflects the ontological and epistemological assumptions made by the researcher (Bryman and Bell, 2015). Bryman (1988, pp. 4) states that the research paradigm influences '…what should be studied, how research should be done, how results should be interpreted'. Thus, the methodological choices made by the researcher are also directly informed. This is supported by Guba and Lincoln (1994), stating research paradigms answer the three fundamental questions regarding 1) ontology, 2) epistemology and 3) methodology. In keeping with the objectivist ontology and positivist epistemology outlined in the previous sun-sections, a quantitative research methodology is further supported for this thesis.

D3.2 The Relationship Between Theory and Research

In addition to the consideration of philosophical assumptions, more informed decisions regarding research design can be answered by addressing the relationship between theory and research as perceived by the researcher (Bryman and Bell, 2015). Saunders et al. (2015) state that a deductive approach is most likely to follow from a positivist research philosophy. This approach is characterised by an intention to explain causal relationships between variables, the development of testable hypotheses and the collection of quantified data which may lead to generalisation. The steps of a deductive procedure are stated in figure D9 and serve as a guiding framework for this thesis.

Figure D9. The process of deduction



Source: Bryman and Bell (2015, pp. 23)

D3.3 Research Purpose

The research purpose allows for classification of the research design (Saunders et al., 2015; Malhotra, Nunan and Birks, 2017). Malhotra et al. (2017) propose two distinct categories of research design to be *exploratory research* and *conclusive research.* In this definition, exploratory designs can be either qualitative or quantitative in nature with the primary objective of providing insights and understanding. This contrasts with conclusive designs, which according to the authors seek to test specific hypotheses and examine causal relationships. Saunders et al. (2015) also consider exploratory research as a classification, but propose three other possible designs of *descriptive*, *explanatory*, or *evaluative.* The authors note that descriptive studies are often extensions of exploratory work and seek to provide information regarding the phenomenon under exploration. Evaluative studies are different in nature and distinguished by the emphasis placed on judgement, typically used to evaluate organizational practices (Kushner, 2016). Similar to the conclusive study designs described

by Malhotra et al. (2017), Saunders et al. (2015) outline explanatory studies as those which seek to establish causal relationships between variables.

As stated in subsection D3.2 the philosophical approach of the researcher and the deductive nature of the relationship between theory and research are in keeping with an intention to determine the causal relationships between variables under investigation. Thus, the research purpose of this thesis is conclusive (Malhotra et al., 2017) and explanatory (Saunders et al., 2015).

D3.4 Research Strategy

The research strategy can be defined as a plan which indicates how the research question will be answered (Saunders et al., 2015). In developing a research strategy, a bridge between the philosophical stance of the researcher and subsequent methods of data collection and analysis is formed (Denzin and Lincoln, 2011). In subsections D3.1 and D3.2 the case for quantitative research design is justified with the alignment of the philosophical position of the researcher and deductive approach to the development of theory. Quantitative research designs are principally linked with two research strategies of experiment and survey (Saunders et al., 2015). For this thesis, three experimental designs are presented in line with the research questions. Bryman and Bell (2015) draw attention to the importance of pragmatism when developing a research design, including consideration of time, available resources, and access to participants. Study 3 took place during the COVID-19 global pandemic. This influenced the research design to enable data collection when the UK was under lockdown conditions. Further discussion regarding the individual methodological choices for each study are presented and justified in Chapters E, F and G of this thesis.

D3.5 Experimental Design

Experimental designs are common in social science and psychological research (Saunders et al., 2015). The process of experimentation is to determine how a change in one variable (the independent variable) causes another (the dependent variable) to change (Field and Hole, 2010). Changes of this nature may also be determined through the process of observation, however as noted by Field and Hole (2010, pp. 5) experimentation uniquely involves the deliberate manipulation variables. Typically, experiments predict the changes likely to occur in a dependent variable through the development of theoretically derived predictions, known as hypotheses (Saunders et al., 2015). Specific hypotheses for each study in this thesis are presented in Chapters E, F and G.

D3.6 Time Horizon

The research time horizon considers temporal dimensions, giving rise to two distinct study types known as *cross-sectional* or *longitudinal* (Saunders et al., 2015; Malhotra et al, 2017). Malhotra et al. (2017, pp.74) define a cross-sectional study in which 'the collection of information [occurs] only once from any given sample population'. The authors note this type of study is common to the field of marketing and is the approach taken in this thesis. In contrast, longitudinal designs involve studies in which the same sample or samples are studied over time. Saunders et al. (2015) describe this as a 'diary' approach suited to the study of change and development of phenomena over time.

D3.7 Techniques and Procedures

Techniques and procedures are the tactical elements of a research design which comprise the centre of the Saunders et al., (2015) research onion as shown in figure D6. Considerations for the researcher in this stage are primarily concerned with ensuring the quality of the data collected. In addition to the techniques for data collection, the importance of ethical concerns must be considered along with the role of the researcher in the research process, and how the research sample is selected. The role of this subsection is to address each of these considerations and justify the techniques and procedures followed for the collection of data.

D3.7.1 Research Ethics

Consideration of ethics are critical to any research design (Saunders et al., 2015). In this thesis, three individual studies were developed to answer the research questions set. For each study, a separate assessment and research protocol were created, including consideration of ethical concerns. In each case informed consent was sought and collected from all respondents prior to taking part. Participation was voluntary and removal of consent to use any data collected post the study was established, with a clear procedure should such an instance arise. Respondents remained anonymous throughout the process and all data were used only for the research purposes outlined to participants. Data were stored in a secure manner in accordance with the Data Protection Act (2018). For each study the researcher received approval from the Kingston University Research Ethics Committee. Supporting documents for the approvals process, including participant consent and forms and data anonymisation protocol can be found in appendix 3.

D3.7.2 Research Quality

Consideration of research quality is the process by which the researcher seeks to minimise the possibility of incorrectly answering the research question that has been set (Saunders et al., 2015). Two criteria upon which to assess research quality are *reliability* and *validity* (Field and Hole, 2010; Bryman and Bell, 2015; Saunders et al., 2015). Field and Hole (2010, pp. 47) describe reliability as '…the ability to produce the same results under the same conditions.'. As such, reliable research can be repeated by the researcher or others in order to confirm or reproduce the findings. Saunders et al. (2015) distinguish between *internal reliability* and *external reliability.* Internal reliability is linked to the researcher and consistency of the research approach, external reliability concerns the techniques and procedures applied during the study. Often errors and bias can cause threats to reliability and need to be minimised during the research design. A summary of threats to reliability is given in table D12.

Table D10. A summary of factors which may threaten reliability.

	Threat	**Definition**
Internal reliability	Participant error	Factors altering participant performance, e.g., asking participants when they are pressurized or distracted may lead to hurried answers and inaccuracies
	Participant bias	Factors which induce a false response, e.g., as respondent may not feel as though their answers and anonymous as they could be seen / heard by others
External reliability	Researcher error	Factors altering researcher interpretation, e.g., researcher may be unprepared and misunderstand some of the data collected
	Researcher bias	Factors inducing bias in the researcher may be their subjective view in interpretation of results

Source: Adapted from Saunders et al. (2015, pp.203)

Although the reliability of research is a fundamental consideration for researchers, Bryman and Bell (2015) consider research validity to be of greater importance as it concerns the integrity of the research findings. Saunders et al., (2015) state that validity is concerned with how appropriate the measures being used are, how accurate the analysis is and how generalisable the findings are. The authors discuss two types of validity, *internal validity* and *external validity.* Internal validity can be established when a causal relationship can be accurately demonstrated between two variables. For example, in an experimental procedure where measurements were not caused by the variables under observation but by other factors, the procedure would lack internal validity (Field and Hole, 2010). Based on the link between internal validity and causal relationships, it is associated with positivist and quantitative

approaches (Saunders et al., 2015). Therefore, internal validity will be under consideration in this thesis. A summary of common threats to internal validity is given in table D13.

Consideration of external validity concerns generalisation of findings to groups other than the study participants (Bryman and Bell, 2015). One way to enhance generality is through representative samples, ensuring research participants are typical of the population under observation (Filed and Hole, 2010). Field and Hole (2010) highlight the use of stratified samples, where the research sample mirrors the characteristics of the population, to increase generality.

Table D11. A summary of common threats to internal validity.

Threat	**Definition**
Historic events	A past event which is unrelated to the study may influence perceptions participants have.
Testing	Taking part in a study may have an impact upon participant's views or actions which are unrelated to the study itself.
Instrumentation	Research instruments need to be consistent on order for comparisons to be made
Mortality	Participants may withdraw from the study which may have an effect on the results unrelated to the variable under observation
Maturation	Participants may change on account of personal development, unconnected to the research. This may be confused with the effect of a variable under observation
Ambiguity regarding causal direction	Lack of clarity regarding causal effect.

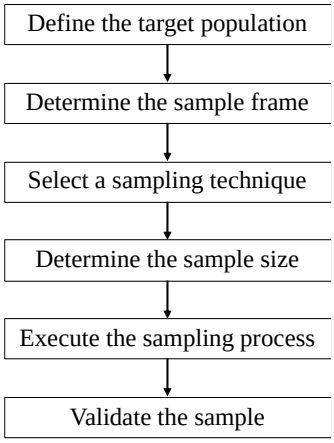
Source: Adapted from Saunders et al. (2015, pp.204) and Field and Hole (2010, pp. 58-59)

Bryman and Bell (2015) also highlight the importance of *ecological validity* in the consideration of research quality. Ecological validity is concerned with how experimental findings might be applicable to the daily lives of individuals. This includes seeking to replicate realistic settings and conditions for participants, such as the use of real products or images as stimulus, as opposed to those developed solely for the purpose of the experiment.

D3.7.3 Sample Selection

Sampling is an essential consideration in the research process as collecting data from an entire population is impractical and likely to be subject to constraints with respect to budget and time (Saunders et al., 2015). Malhotra et al. (2017) recommends a sequential six step process should be followed and integrated into the research design process (figure D10).

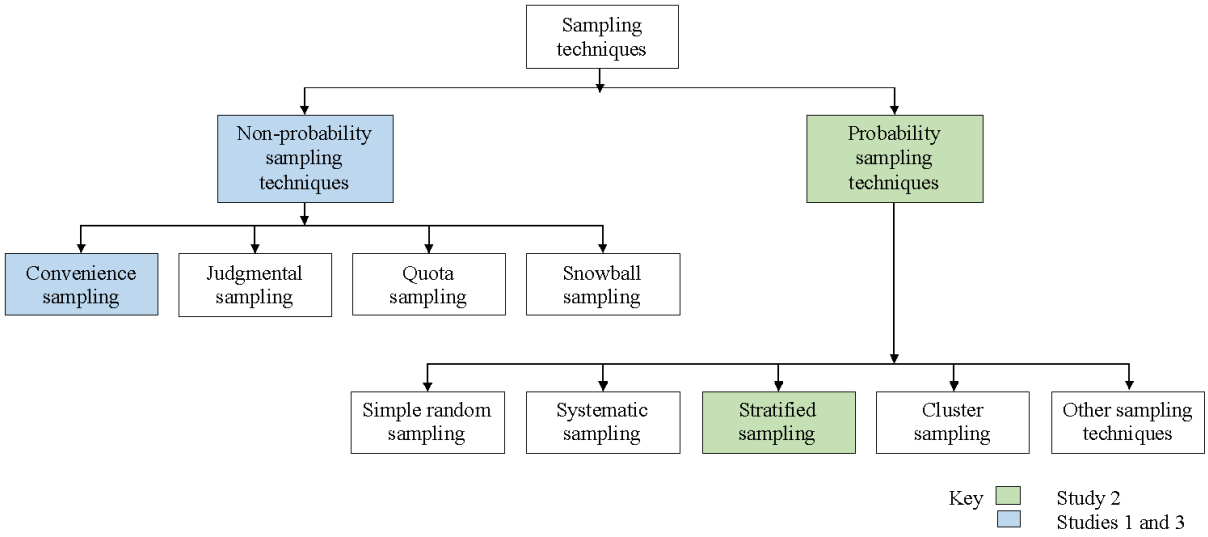
Figure D10. The sampling design process.



Source: Malhotra et al. (2017, pp. 414)

The target population refers to the population that is the focus of the research and contains the elements (e.g., individuals) who hold the desired information (Saunders et al., 2015; Malhotra et al., 2017). In this thesis, the target population are adults who shop in grocery stores in the UK, as familiarity with grocery shopping is the desired information required from each element. To identify a target population researchers may use a sampling frame such as a list or a directory (Malhotra et al., 2017). In Chapter F of this thesis, a research panel from a professional provider was used as a sampling frame, which according to Malhotra et al. (2017) is a common in marketing research. The sampling technique used was one of stratified sampling, based upon a probability technique (figure D11). Probability sampling techniques are associated with research strategies seeking to make inferences regarding the population under investigation (Saunders et al., 2015). Subjects are selected at random, which generates are sample without bias. For stratified sampling, the population is first partitioned into sub-populations and elements selected randomly form each stratum (Malhotra et al., 2017). According to Malhotra et al. (2017) specification of an overall number of % from different strata allows for increase precision in replication the overall population without increasing the cost. Chapter F opted for stratified probability sampling with the aim of replicating the demographic profile of UK grocery consumers aged 18-65.

Figure D11. A classification of sampling techniques, highlighting those used for this thesis.



Source: Malhotra et al. (2017, pp. 420)

In Chapters E and G, the use of a commercial sample frame was not possible, leading to the use of convenience sampling (figure D11). The use of a convenience sample is known to be advantageous in terms of cost and access, however, the likelihood of a representative sample is low (Saunders et al., 2015). This is endorsed by Malhotra et al. (2017) who suggest that a convenience sample, such as the use of student samples, is not recommended for causal research. Peterson and Merunka (2014, pp. 1035) describe the debate surrounding the use of convenience samples in as 'one of the most contentious issues in consumer behaviour research'. According to Peterson (2001) 86% of empirical research subjects in volume 26 of the *Journal of Consumer Research* deployed convenience samples. Arguments in support of this technique, state that for studies of psychological processes or testing theories regarding consumer behaviour, convenience samples are appropriate (Kardes, 1996; Lucas, 2003). These arguments can be traced back to Berkowitz and Donnerstein (1982) who propose that the way a person behaves in a certain situation is more relevant for the generalization of results than how representative the sample demographics are. Furthermore, Mook (1983) suggests representativeness is only of importance for survey research and is of little consequence if the focus of the work is theoretical.

Many researchers have adopted the use of convenience samples, particularly in the field of marketing. Peterson and Merunka (2014, pp. 1040) note '…marketing and consumer behaviour researchers frequently violate the canon that statistical inferences should be limited to the populations from which samples are drawn' (pp.1040). The authors recommend in such cases that theoretical and 'real world' relevance of the subjects chosen to test the related

hypotheses must be justified. Chapters E and G in this thesis use convenience samples and individual elements or research participants were selected in keeping with Peterson and Merunka's (2014) principles. In Chapter E, the data collection was scheduled to take place in a specialist behavioural sciences facility located in Kingston Business School. In order to avoid an exclusively student sample, data collection took place during university open day events in the business school atrium. This allowed for a diverse and random selection of adults aged 18-64 who were regular UK grocery shoppers, in keeping with the research objectives. Using specially designed posters, potential participants were invited to the Behavioural Sciences Laboratory to express their interest and find out more about the study. Examples of the materials designed and used for recruitment can be found in appendix 3

Data collection for Chapter G took place during COVID-19 lockdown and face to face-to-face recruitment was not possible. Casler, Bickel and Hackett (2013) suggest that for studies relating to consumer behaviour, online social media sites are superior to professional panels and face to face recruitment. According to Semmelmann and Weigelt (2018) social media recruitment is also more cost effective than professional methods as there are lower rates of drop-out and non-completion. Direction for selection a social media can be found in Quinton and Wilson (2016) and Chang, Liu and Shen (2017). Both studies support the use of professional networking platform LinkedIn over Facebook. Quinton and Wilson (2016) cite increased social influence associated with Facebook as a reason whereas Chang et al. (2017) highlight improved effort from LinkedIn recruits to complete tasks set. The decision to use a convenience sample based on the researcher's own LinkedIn connections as a research frame was made on this basis. A stratified approach was developed to achieve a sample population which followed that of the overall population of UK grocery shoppers. Samples of LinkedIn communications can be found in appendix 10. A summary of the sampling methods for each study is given in table D12.

Use of a stratified approach to sample selection requires that the sample is checked or validated to ensure required specifications are met, in order to minimise sampling errors. (Malhotra et al, 2015). Age and gender variables for studies in Chapters F and G were validated to ensure alignment to the overall UK population.

Table D12. A summary of the sampling methods used for each study.

	Study 1	Study 2	Study 2
Target population	UK grocery shoppers aged 18-65		
Sample frame	Attendees at Business School Open Day	Qualtrics UK panel	Researcher's LinkedIn network (n=600)
Sample technique	Convenience	Probability, stratified	Convenience, stratified
Sample size	42	316	64
Sampling process	Face to Face	Commercial panel	Online, via LinkedIn
Validation		Aligned to UK overall population	Aligned to UK population

D3.7.4 Calculating the Sample Size

Sample size is important to researchers in order to ensure accurate and reliable of answers to research questions are obtained (Saunders et al., 2015). Determining the size of the sample to be used is a balance between several factors including the nature of the research, the sample size from similar studies, considerations regarding resources available and the avoidance of type II errors. (Field, 2015; Malhotra et al., 2017). Field (2015) describes type II errors as those which occur when effects in the population are there but not detected. Cohen (1992) proposes the maximum acceptable probability for Type II errors to be 20% (0.2), known as the, known as the β-level. Avoiding type II errors can be achieved by ensuring the test used has enough *statistical power*, defined by Field (2015, pp. 69) as '…the probability that a given test will find an effect assuming one exists in the population'. Therefore, the expression for the statistical power of a test is 1-β, based on Cohen (1992) this would be 1- 0.2, giving rise to a probability of 0.8 (80%). In keeping with this calculation, Field (2015) suggests that researchers should aim to achieve a power of 0.8. Furthermore, a power of 0.8 should be used as a way to determine the required sample size. For each study in this thesis the G*Power 3.1 software was used to determine the required sample sizes, based on a power of 0.8. Resulting ideal sample sizes are shown in table D4 and a summary of each G*Power 3.2 calculation is given in appendix 14.

D3.8 Conclusion

The philosophical assumptions, paradigm consideration and approach to the theory / research relationship, as interpreted by the researcher have been outlined in this section. Together these elements inform the development of a suitable research design and methods in order to

answer the research aims of this thesis outlined in D.2.1. Consideration has been given to research quality and appropriate sampling techniques and sizes across three different studies. Detail relating to data collection and analysis for each individual study is justified and presented in Chapters E, F and G.

D4 Summary of the Chapter

This chapter has met the first research aim of this thesis and developed a theoretically grounded conceptual framework in order to determine how consumers perceive GSBs. The foundational step was to outline the relationship between extrinsic cues consumers use to evaluate GSBs, highlighted by Richardson et al. (1994), and their subsequent perceptions. The influence of psychological consumer traits on this relationship was also stated (e.g., Ailawadi et al., 2001; figure D3). Based on this framework, a parallel was drawn with Friestad and Wright's (1994) model of persuasion knowledge (figure D4). The three types of knowledge from the PKM (tactic knowledge, source knowledge and topic knowledge) were aligned to different cues of GSB evaluation (figure D5). Similarly, the influence of consumer traits on GSB evaluation was shown to be analogous with Markus and Kitayama's (1991) self-construal, which Friestad and Wright (1994) cite as an influencing factor on the outcome of a persuasion attempt. Once the relationship between the PKM and the consumer evaluation of GSBs was established (figure D6), suitable dependent variables were confirmed from relevant studies reviewed as part the literature review (Chapter B). The outcome of this final step was to present a fully formed conceptual framework from which hypotheses can be developed and tested in a series of three studies (figure D7).

The subsequent part of this chapter gave focus to developing a research design to test the conceptual model that has been proposed. Consideration was given to the philosophical underpinnings and assumptions of the researcher in order to guide the development of methodological choices and study design. Justification was given for the development of experimental procedures to test theoretically derived hypotheses, along with proposed sample methods and sizes.

In the following chapters (E, F and G), 3 separate experimental studies will be outlined, each beginning with the development of testable hypotheses derived from theory. Methodological strategies will be presented and justified, including the tools and techniques for data, consideration of collection best suited to answer the theoretically derived hypotheses.

The focus of study 1 (Chapter E) is to determine how store image perceptions of HDs and grocery stores are influenced by self-construal in order to address RA2 and RA4. Study 2 (Chapter F) seeks to answer RA3 and RA4 by investigating the impact of self-construal on how consumers evaluate the price and packaging similarity for GSBs and HD GSBs. Study 3 (Chapter G) also addresses RA3 and RA4 be examining how self-construal influences the visual evaluation of store brand packaging. The following sections if this introductory chapter offer an overview of the structure of the thesis. This is followed by a summary of each of the three studies highlighting how the RAs are answered, giving insight into the methodologies used, key findings and conclusions.

Chapter E: The Growing Popularity of Hard Discounters: What Consumers Say and What They Mean Depends on how They See Themselves

E1 Abstract

Purpose - This study aims to investigate how self-construal impacts upon implicit and explicit grocery store preferences and influences consumer choice with particular interest in leading UK retailer Tesco and discount store Lidl.

Design/methodology/approach - The authors compared data from direct and indirect measures of data collection including consumer survey and an implicit association test (IAT)

Findings - This study demonstrates that when preference is determined using explicit measures, Tesco is preferred to Lidl. However, when implicit measures are used, the opposite is shown for consumers, depending on their self-construal.

Research limitations/implications - This was a laboratory-based experiment with self-construal measurement diverging slightly from UK population expectations (ISC expected to be higher, INSC lower). Replicating this experiment with a large online sample may offer increased self-construal variation which was not possible for this study.

Practical implications - Acknowledging that hard discounters (e.g., Aldi and Lidl) are the fastest growing retail format in the world, insights into consumer preferences based on implicit measures (in addition to those which are self-reported) can offer increased practical understanding and lead to increased accuracy in predictions of consumer preference and behaviour.

Originality/value - This study is the first of its kind to use implicit measures to investigate the apparent difference between reported and behavioural preferences for hard discounters and mainstream grocery stores in the UK. In addition to this, the significance of self-construal as an influencing factor in store preference has been identified.

Keywords - grocery stores, discount stores, Tesco, IAT, Lidl, self-construal

E2 Introduction

Hard discounters (HD) are a rapidly expanding global retail format (of which Aldi and Lidl are exemplars), with up to 35% share in some markets (Hunneman et al., 2021). In the UK, HDs account for 15% of total grocery market share (Kantar Worldpanel, 2021) and Lidl has recently been recognised as the fastest growing grocery retailer (Loebnitz et al., 2020). Despite rapid growth in popularity, HDs are considered to have an inferior image in comparison to mainstream grocers (Geyskens et al., 2018; Gijsbrechts et al., 2018; Loebnitz et al., 2020) and the underlying reasons driving this popularity are unclear. This has given rise to several calls for new studies to investigate further into the factors underpinning consumer evaluation of HDs (e.g., Vroegrijk et al., 2013; Dekimpe and Geyskens, 2019). A focal point for further study is perhaps the unfavourable and basic image of HDs (Zielke, 2014; Geyskens et al., 2018; Gijsbrechts et al., 2018), which appears to be at odds with the global success and growth observed in recent years. This alludes to a lack of consistency between reported consumer perceptions of store image and observed shopping behaviour, where HDs are concerned. It may be that there is a difference between what consumers explicitly report when asked about their HD shopping habits, and how they might implicitly think and ultimately act.

One way to determine implicit consumer perceptions is to use indirect measurement techniques, often deployed to avoid common biases of social desirability, lack of self-insight and self-deception (Gregg, Klymowsky, Owens and Perryman, 2013; Penn, 2015). Methodologies designed to make implicit measures include semantic priming and response latency (Penn, 2015). Semantic priming involves showing participants prompts in the form of stimuli similar to that of the target under investigation. This technique has been used to determine deep feelings consumers have regarding brands such as MTV (Calvert, Fulcher, Fulcher, Foster and Rose, 2015) as well as latent attitudes to food (Rivière, Cuny, Allain and Vereijken, 2013). An alternative indirect or implicit method is the use of response latency which measures the time take by participants to respond to stimuli (Gregg et al., 2013). Studies investigating participant response times have adopted the Implicit Association Test (IAT) as a market research tool. The IAT is a computer-based test which records time taken for respondents to complete a fast-paced sorting task. Multiple applications include distinguishing between competing brands (e.g., Priluck and Till, 2010), investigating intangible brand preferences (Friese, Wänke and Plessner, 2006) and to aid consumer segmentation (Brunel, Tietje and Greenwald, 2004). Goode (2019) supports use of the reaction time studies as a way of demonstrating consistency between implicit and explicit measures. However, there are situations in which individuals may not acknowledge or choose

to withhold reporting their feelings. This suggests that an IAT test would be an appropriate measure to highlight differences between direct and indirect preferences for grocery stores and HDs.

When assessing the overall image of a retail outlet, consumers are known to consider the personality of the store in question, in addition to more practical aspects such as price (Martineau, 1958). E.g., '…store image refers to the definition of the store in the shoppers' mind that includes both functional and psychological attributes…' (p.47). Functional attributes might be previous shopping experiences or external information relating to the retailer such as news, media, or word of mouth (Mazursky and Jacoby, 1986). Psychologically, consumers may consider how the store might reflect their social status, influence over others, or level of service to expect (Mitchell, 2001). When the image the person has of themselves and the image they perceive of the store match, a state of self-congruity is achieved (Sirgy, 1982). Self-congruity between the store image and the self-concept of the consumer leads to increased loyalty and satisfaction (Sirgy, 1985; He and Mukherjee, 2007).

A definition of the self-concept of an individual and how one might define oneself, can be found in Markus and Kitayama's (1991) self-construal theory. Self-construal states that individuals think of themselves according to the relationships they have with other people. Independent self-construal (ISC) denotes those who consider the self and others to be distinct and separate entities. In contrast, interdependent self-construal (INSC) implies blurring of the boundaries between individuals, characterising a person on the basis of their relationships with others. A person's self-construal has a significant influence on their cognition, emotion, and motivation (Markus and Kitayama, 1991; see Cross et al., 2011 for a review). According to Cross et al. (2011) the influence self-construal has also extended into the consumption context and there is a growing body of research investigating how self-construal influences consumer behaviour (e.g., Lee and Shavitt, 2006; Ahluwalia, 2008; Lalwani and Shavitt, 2013). Lee and Shavitt (2006) demonstrate differences between ISC and INSC consumers in how they make product judgements based on store image evaluations. Similarly, Ahluwalia (2008) shows brand extensions to be more positively evaluated by shoppers with higher INSC than ISC. Looking specifically at price as a product cue, Lalwani and Shavitt (2013) show that INSC individuals are more likely than ISC individuals to interpret low price as a sign of low quality. Based on this, it is likely that self-construal will influence consumer perceptions of store image.

In summary, there are two research questions to be investigated in this study. The first pertains to the difference between recorded and observed preferences of grocery stores and

HDs in the UK. Investigating reported grocery store preferences as well as undertaking an implicit behavioural measurement on the same topic will address this question. A second line of inquiry would be to explore how self-construal impacts upon the grocery store preferences of consumers.

E3 Conceptual Background and Hypothesis Development

E3.1 Diverging Store Image Perceptions and Observed Consumer Behaviour

As noted previously, there is a contrast between the observed and expected behaviour of consumers with regard to HDs. When seeking to further understand consumer attitudes, many scholars suggest that actual behaviour can be better explained by combining explicit (conscious or expressed) consumer judgements with those that are implicit (unconscious or unexpressed) (e.g., Greenwald and Banaji, 1995; Greenwald, Poehlman, Uhlmann and Banaji, 2009; Gregg and Klymowsky, 2013; Goode 2019). According to Gregg and Klymowsky (2013) explicit attitudes expressed by consumers are commonly recorded using self-report measures such as questionnaires.

By contrast, implicit measures seek to identify the attitudes that consumers have but do not express (Greenwald and Banaji, 1995). It has been long recognised that there are two different systems operating within the human mind (e.g., Chaiken and Trope, 1999, Kahneman, 2003, 2011). Chaiken and Trope (1999) describe systematic versus heuristic processing mechanisms and Kahneman (2003, 2011) considers processing that is either fast or slow. Gregg and Klymowsky (2013) use the terms ‘foreground’ and ‘background’ to describe the two different processing systems. The foreground is described as slow, deliberate, rational and intended. By comparison the background is spontaneous, intuitive, unintended and fast. Although the systems complement each other, they are independent and therefore the resulting consumer attitudes may not always be aligned (Gregg and Klymowsky, 2013). It is possible that when asked, consumers (explicitly) express a preference for grocery stores over HDs yet have a more positive implicit attitude which accounts for their shopping behaviour. This gives rise to the following propositions:

P$_1$ Consumers will explicitly express greater positive perceptions for grocery stores than HDs.

P$_2$ There will be no implicit preference for grocery stores over HDs

E3.2 Explicit Perceptions and Self-construal

The self-construal of a person can have a significant effect on how they think, feel and are motivated (Markus and Kitayama, 1991) A key argument of Markus and Kitayama's (1991) study posits that high INSC individuals are more likely to think about others and consider the social context of interactions than high ISC individuals. It follows that high INSC individuals will develop much more complex thoughts about others and themselves in social contexts. Cross et al. (2011) propose that this leads to differences in cognition between ISC and INSC. These can be described as, 1) different levels of contextual awareness, and 2) different cognitive mechanisms for processing information.

Increased contextual awareness has been considered as a trait of INSC (Markus and Kitayama 1991; Ahluwalia, 2008; Chen, 2009). According to Markus and Kitayama (1991) ISC individuals tend separate themselves from the social context, versus the more socially connected INSC individuals. Looking specifically at evaluation in a consumption context, Chen (2009) noted INSC individuals were more likely to consider multiple options or refer to other sources of information to aid decision making. Ahluwalia (2008) considered the inclusive nature of INSC evaluations a demonstration of superior cognitive capability. This enables INSC individuals to recognise more ways in which separate entities are connected. Based on this assertion, INSC individuals are more accepting of brand extensions because more relationships between the parent and extension can be recognised (Ahluwalia, 2008).

In addition to the heightened contextual awareness aligned to INSC individuals, different cognitive mechanisms for processing information between ISC and INSC have also been suggested (Nisbett et al., 2001; Monga and John, 2007; Zhu and Meyers-Levy, 2009; Hong and Chang, 2015). ISC individuals are known as 'analytic processors' whilst INSC individuals are 'holistic processors'. Analytic processors regard all things as separate entities (Nisbett et al., 2001). Therefore, according to Monga and John (2007) and Zhu and Meyers-Levy (2009), all pieces of data encountered by ISC individuals are considered and processed individually (analytically). By contrast, the INSC holistic processing trait is based upon 'attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships' (Nisbett et al., 2001, p. 293). According to Zhu and Meyers-Levy (2009) holistic processing blurs the boundaries between distinct objects and therefore product perceptions may assimilate with thoughts about the context. Lalwani and Shavitt (2013) note that holistic thinkers see product quality as 'inseparable' from contextual factors (price), making price-quality judgments more likely. Another well-established contextual factor consumers use to make product quality judgements is store image (Richardson et al., 1994, 1996). Based on the tendency of INSC

individuals to process holistically, it is likely that the image of a store will also reflect consumer perceptions of quality. Grocery stores are considered to have a more favourable image than HDs (Kumar and Steenkamp, 2007). Therefore, it is feasible to expect that INSC consumers will perceive grocery stores to be of higher quality than HDs, the following proposition is expressed as:

P_3 Consumers with a greater INSC tendency are more likely to have more favourable explicit perceptions for grocery stores over HDs.

E2.3 Implicit Attitudes and the Influence of Self-construal.

Implicit attitudes are synonymous with unconscious thinking and are considered to be effective in predicting behaviour that is impulsive or not deliberately controlled (Friese et al., 2006). The degree to which individuals exercise control over behaviour can be influenced by many factors. For example, how hungry we are may influence how and what we eat and how time pressured we are may affect how we do our grocery shopping. The level to which consumers deliberate over decisions depends on how much opportunity they have as well as how motivated they are to do so (Fazio, 1990).

Motivation can be influenced by self-construal (Markus and Kitayama, 1991). ISC individuals have goals aligned to standing out and individualism, whereas INSC are prompted to achieve and maintain group harmony (Markus and Kitayama, 1991; Cross et al., 2011). One way in which ISC individuals can satisfy desires to stand out, is through the products that they buy (Lee and Shavitt, 2006; Zhang and Shrum, 2006; Millan and Reynolds, 2014). According to Millan and Reynolds (2014) ISC consumers show a greater tendency to make purchases that symbolise their individuality. In contrast, Zhang and Shrum (2006) focus on the INSC motivation to maintain harmony with the wider group and not act in a way that could reflect badly upon it. Noting the importance of social identity concerns to INSC individuals, Lee and Shavitt (2006) proposed that fitting in with the group also means that the opinion of others is an important consideration. Not only do INSC individuals not want to standout, but they do not wish to be ill thought of by the group either. Taking HDs as an example, INSC consumers might be motivated not to patronise them on account of how the overall basic image might be considered by others. This gives rise to the final proposition:

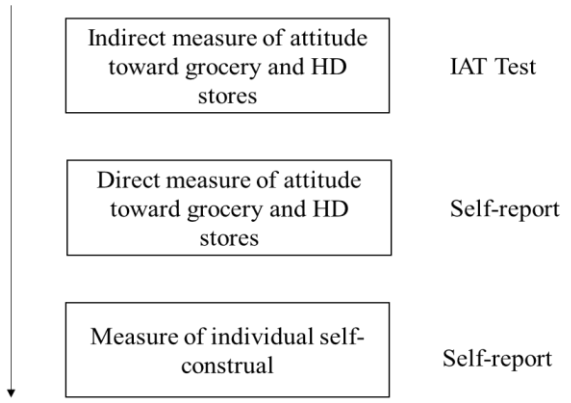
P_4 Consumers with a greater INSC tendency are more likely to show a favourable implicit preference for grocery stores over HDs

E4 Methodology

E4.1 Research Design and Procedure

A study examining implicit and explicit preferences for HDs and grocery stores was developed, measuring consumer self-construal to account for any affect. To ensure control over the variables and the attention of participants was maximised, the study took place in a University Behavioural Science laboratory.

Figure E12. Proposed experimental procedure



The research design comprised of three elements (figure E12). All elements took place whilst participants were seated at a computer screen in an individual booth for privacy and to minimise distractions. The order of the measures was considered because it may be possible that individual performance in the IAT test could be affected (Nosek, Greenwald and Banaji, 2005, 2007). It is standard practice in IAT studies to collect implicit measures before any direct measures (e.g., Hofmann, Gawronski, Gschwendner, Le and Schmitt, 2005). This alleviates the potential for increased accessibility of existing association which would improve IAT performance (Fazio, 1995).

Typically, an IAT test indirectly measures the association strength between different categories (Nosek et al., 2005). For example, association strengths between categories of *male* and *female* and the attributes of *good* and *bad* might be assessed (as per Nosek et al., 2007). Participants are shown items representing each of the four variables and asked to respond by pressing an assigned key on the computer keyboard when certain combinations are shown. One response will be required for *women* and *bad*, whilst another response will be requested for *men* and *good.* If participants have a stronger positive association of men over women, they will find sorting *men* and *good* easier than *women* and *bad.* Responses that are easier take less reaction time and are therefore faster than responses with less strong associations.

The IAT test was conducted in keeping with Greenwald, McGhee and Schwartz (1998), who demonstrated the use of 5 pieces of stimulus per category to be as effective as 25. Other adjustments were made as follows. The category names were *Tesco, Lidl, positive* and *negative.* Tesco and Lidl were chosen as typical category exemplars. Tesco is the leading grocery retailer the UK (Kantar Worldpanel, 2021). Lidl, although smaller in size than Aldi at the time of the study Aldi was undergoing changes to the brand logo (Dawood, 2017) which may have interfered with results (examples of images chosen as stimulus can be found in appendix 4).

Table E13 presents a summary of the proposed IAT procedure for the assessment of association strengths between the categories and attributes in this study. The IAT is made up of seven stages known as blocks. Each block represents either a practice task designed to familiarise participants with the stimulus and the sorting process, or a test, known as a critical task. Column 3 of table E13 shows the number of 'trials'. Each trial captures the time it takes for a participant to categorise the stimulus from the moment it appears on the screen. Instructions are given at the beginning of each block indicating how to assign the words and images that will be shown. For example, in Block 3 an instruction was given as follows;

'*When you see a word or image appear in the centre of the screen that corresponds as 'Positive' or 'Tesco' press 'Q' on the keyboard. When you see a word or image appear that corresponds to 'Negative' or Lidl' press 'P' on the keyboard'*.

When participants make an error, the error must be corrected (by the participant) prior to continuation of the test (Nosek et al., 2007). The trial numbers are in keeping with previous studies (e.g., Greenwald, Nosek and Banaji, 2003, Nosek et al., 2005, 2007). Examples of the screen as seen by each participant during the IAT test can be found in appendix 5.

Table E13. Summary of the IAT procedure, showing each block

Block	Function	Number of trials	Left Key Assignment	Right Key Assignment
1	Practice	20	Positive associations	Negative associations
2	Practice	20	Tesco stimulus	Lidl stimulus
3	Practice	20	Positive + Tesco stimulus	Negative + Lidl stimulus
4	Test	40	Positive + Tesco stimulus	Negative + Lidl stimulus
5	Practice	40	Negative associations	Positive associations
6	Practice	20	Negative + Tesco stimulus	Positive + Lidl stimulus
7	Test	40	Negative + Tesco stimulus	Positive + Lidl stimulus

The second part of the experiment directly measured attitudes to grocery stores and HDs using a self-report questionnaire. The proposed scale measured store image as used by previous studies (Mazursky and Jacoby, 1986; Hopkins and Alford, 2001; Delgado-Ballester et al., 2014). This includes a total of 7 items relating to merchandise, quality, pricing, product assortment, general service, personnel, convenience and atmosphere. Measures for all constructs are made up of multiple items on a scale ranging from 0 to 10, where 0 = do not agree at all and 10 = completely agree. In addition to this demographic data were collected, including age and gender, although participants were informed that responses are not required (see appendix 6 for examples of scales used)

The third and final step of the experiment was to record the self-construal of participants. The Singelis (1994) scale for ISC and INSC is the most widely used. Scale and was adopted for this experiment. The scale comprises of 12 items for each construal and participants are asked to give an indication of their level of agreement with each item on a 7-point Likert scale (1= strongly disagree and 7 = strongly agree). The Singelis (1994) scale was designed for use within universities with student participants. As a non-student population is used, the scale items were scrutinized to ensure the content was relevant a broader population. Three questions were removed as they were less relevant for a non-student sample (see appendix 7 for the full list of items).

E4.2 Participants

Forty-one participants were invited to take part in the study by the researcher. Participants were recruited via a convenience sample, dictated primarily by the requirement of proximity to the study site. Age groups of under 18 were excluded as unlikely to have responsibility for grocery shopping. Those over 65 were also excluded on account of concerns over the validity of IAT test due age-related to slowing of reaction times (Greenwald et al., 2003).
Recruitment for this study took place over a weekend during which a university open day was taking place. This ensured access to a concentrated non-student population of attendees, to draw upon for participants. Specially designed posters and fliers were created and displayed during the open-day and prospective participants were also directly approached by the researcher (examples of materials for recruitment, information, consent and debrief can be found in appendix 3). On arrival at the behavioural sciences lab, a full briefing was given, and consent was taken from each participant. In order to take part in the experiment, booths were randomly allocated to each individual.

E5 Results

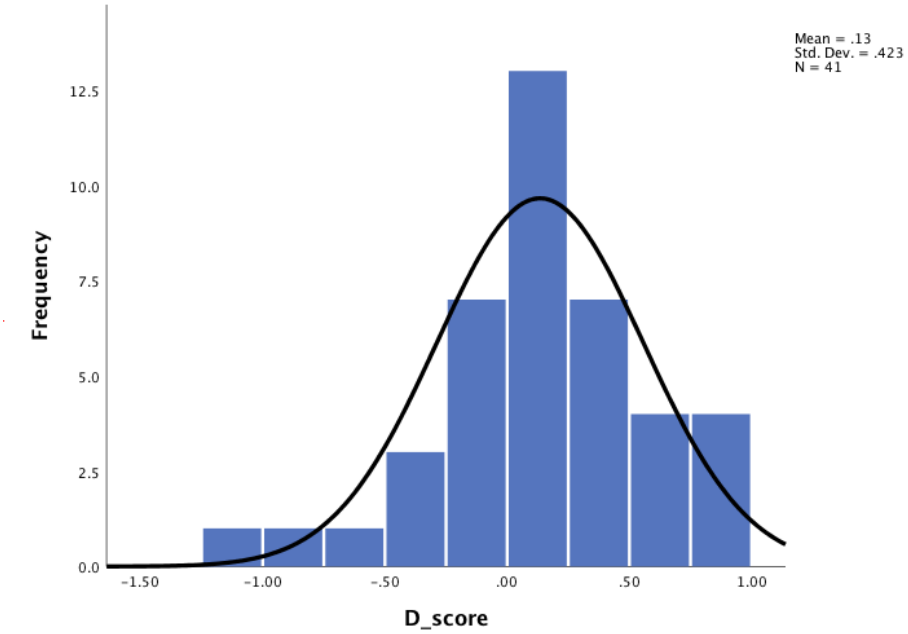
Data were obtained from 41 participants, none of whom were removed from the dataset on account extreme high or low response times (as per Greenwald et al., 2003). Based on Greenwald et al. (2003), implicit measures were interpreted using the absolute *D* score, which is the difference between individual *D* scores calculated for each target stimulus (in this case Tesco and Lidl). Results can be interpreted as follows; a positive *D* score implies an association of 'Tesco' and 'positive' ('Lidl' and 'negative'). Conversely, a negative *D* score gives the opposite indication of 'Lidl' and 'positive' ('Tesco' and 'negative').

E5.1 Explicit and Implicit Measures of Store Image

For explicit measures, a measure of reliability (Cronbach's alpha) and means were calculated for Store Image with the following results: Tesco $\alpha = 0.98$ and Lidl $\alpha = 0.85$ means were 7.06 and 6.21 respectively. Although both means indicate positive Store Image perceptions, Tesco scores higher. To determine if this difference is significant, a paired samples t-test was performed (one-tailed) ($t=3.476$, $df=40$, $p=0.001$). Results clearly indicated a significantly greater Store Image for Tesco over Lidl and thus the first proposition, P_1 can be accepted.

In order to test P_2 a one-sample t-test was performed comparing *D* score mean of 0.13 to zero ($t=2.04$, $df=40$, $p=0.048$). A mean *D* score of 0.13 indicates a small but significant implicit preference for grocery stores over HDs. However, a review of the *D* score histogram revealed a spread of data that are normally distributed around the mean (figure E13). *D* scores ranged from -1.02 to 0.88 ($SD = 0.42$, $N = 41$). Although no formal classification for *D* scores has been developed, the use of 0.15 for 'slight', 0.35 for 'moderate' and 0.65 for 'strong' have been adopted following the work of Greenwald, Nosek and Banaji for Project Implicit at Harvard University (https://www.projectimplicit.net/). The difference between the *D* score mean (0.13) and zero is small and might be expected to show a slight implicit preference to Tesco on account of spill over effects due to the size and familiarity of the Tesco brand in the UK.

Figure E13. Histogram plot of *D* scores showing normality curve

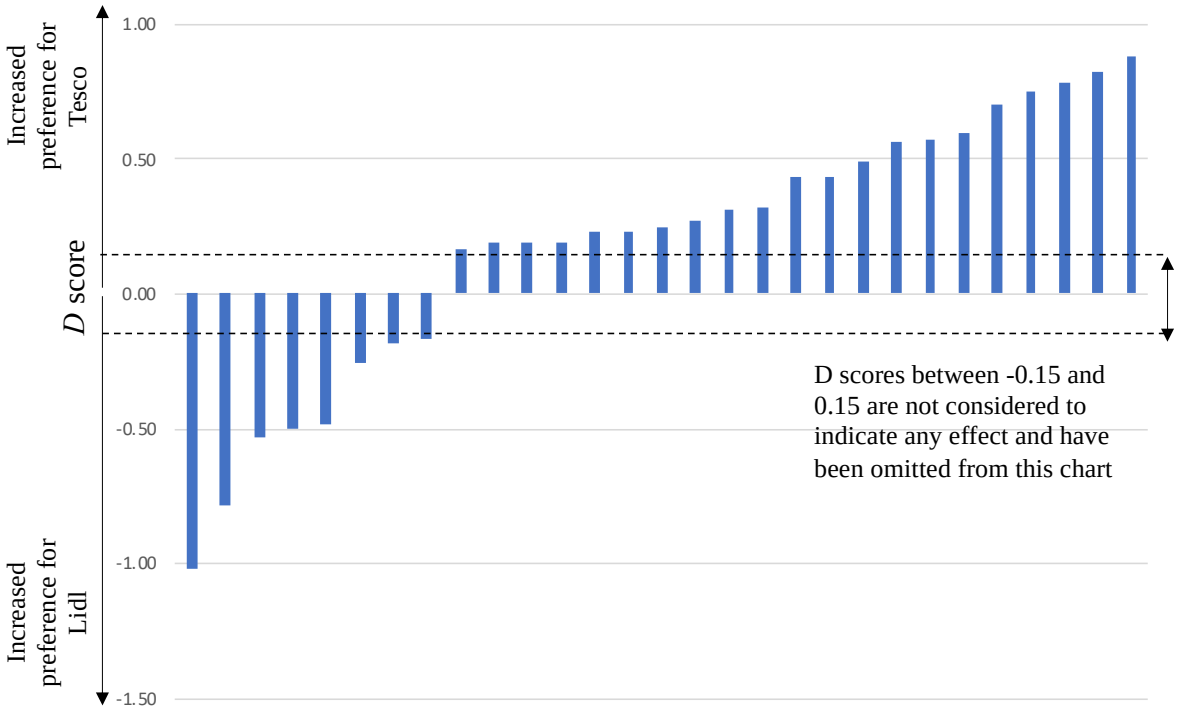


E5.2 The Impact of Self-construal on Implicit and Explicit Attitudes to HDs and Grocery Stores

Figure E14 shows the *D* scores recorded showing a preference for Tesco or Lidl. Negative *D* scores on the left-hand side of the graph, indicate an association to HD and 'positive'. This can be interpreted as preference for HD over grocery stores, or in this case Lidl over Tesco. An implicit preference for Lidl over Tesco deviates from the prevailing view that consumers deem grocery stores to be preferential to HDs and also differs to the significant explicit preference of store image perceptions expressed for grocery stores (Tesco) over HDs (Lidl). In order to explain the range of *D* scores found, correlations between the *D* score and levels if individual self–construal were investigated.

Self-construal (SC) was measured using the Singelis (1994) scale. Reliabilities for INSC and ISC were $\alpha = 0.57$and $\alpha = 0.54$ respectively and average scores 5.10 and 5.00 respectively. An examination of the literature suggests that low reliabilities are not atypical for the Singelis scale (e.g., Vohs and Heatherton, 2002; Grace and Cramer, 2003; Bresnahan, Levine, Morinaga, Shearman, Lee, Park and Kiyomiya, 2005). According to Markus and Kitayama (1991) all individuals possess both INSC and ISC characteristics, with one being the preferred default. Singelis (1994) notes that when using the scale, both dimensions should be considered individually and not used to create overall difference score.

Figure E14. Plot of slight or greater *D* scores for the grocery store/HD IAT ranked in ascending order

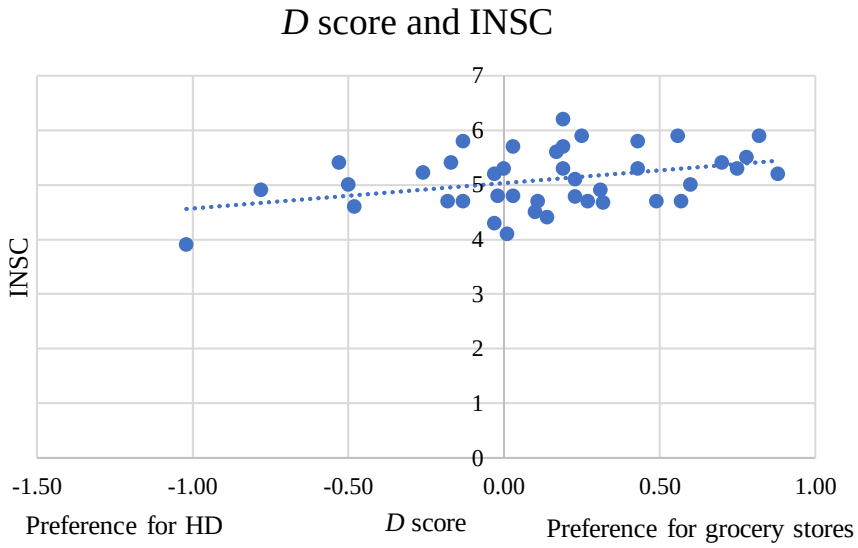


Individual participants showing slight or greater *D* scores

To test $P_{3,}$ correlation analysis was performed between INSC and (directly measured) Tesco store image (r=0.046, p>0.05, as well as INSC and Lidl store image (r=-0.038, p>0.05). No significant correlations were found. An alternative test of P_3 was performed by computing the difference between Tesco store image and Lidl store image (Tesco_Lidl_diff). This was done in order to offer a measure of explicit preference comparable to the implicit preference indicated by the *D* score. Again, the correlation is non-significant (*r*=0.08, p>.05) so P_3 cannot be supported; self-construal does not influence explicit perceptions of grocery stores or HDs.

Correlation analyses between *D* score and ISC and *D* score and INSC were undertaken to test $P_{4.}$ The relationship between *D* score and ISC was not significant (r=-0.11, p>0.05) but figure E15 shows a significant positive correlation between *D* score and INSC (r=0.369, p=0.018). As INSC increases, the *D* score increases, indicating a preference for grocery stores also increases. This implies that individuals with a higher INSC tendency have a greater positive implicit attitude to grocery stores and thus P_4 is supported.

Figure E15. Plot of the correlation between *D* score and INSC



E6 General Discussion

The human mind houses two different operating systems that work independently from each other. Foreground processing is slow, rational and considered, whilst the background processing is more spontaneous and intuitive (e.g., Chaiken and Trope, 1999; Kahneman, 2003; Gregg and Klymowsky, 2013). When individuals are asked questions explicitly, they are aware of what information is being sought and can rationally consider their answer. This allows for control or bias to be exercised, be it deliberate, accidental or by mistake (Gregg and Klymowsky, 2013). Researchers can avoid such biases through the use of implicit research techniques, such as the IAT.

When consumers were explicitly asked about their store image perceptions, grocery stores were acknowledged as superior to HDs. However, consumers implicit preferences were normally distributed around a mean which showed only a slight grocery store preference, with a clear proportion of the sample indicating an implicit HD preference. Friese et al. (2006) noted that when explicit and implicit preferences diverge, explicit preferences cannot be relied upon to be predictive of behaviour. This offers a potential explanation for the mismatch between the image of HDs and their growing popularity in the UK today.

The consumption choices we make as individuals are influenced by a desire to project the right image to others (Belk, 1988). Thus, a direct question regarding grocery store preference based on image of the stores might be expected to be subject to bias. Without consideration of the non-conscious mind or background thoughts of the consumer, inferences regarding anticipated behaviour may be under question. For researchers, this means that

investigating what consumers do not say, particularly with regard to preferences or attitudes, may be equally or perhaps more important as what they do say when explicitly asked.

In addition to demonstrating the importance of implicit consumer preferences, this study has also extended knowledge of self-construal in a retail context. An individual's self-construal impacts upon their cognition, emotion and motivations (Markus and Kitayama, 1991). Considering the cognitive processing differences between ISC and INSC individuals, P_3 proposed that INSC individuals would show an explicit preference for grocery stores. The superior cognitive awareness and processing associated with INSC, enables connections to be made between different contextual factors such as quality and store image. However, in this study, no correlation was found between INSC and a preference for grocery stores, leading to a lack of supporting evidence for P_3. An explanation for this could lie in the explicit way in which store image perceptions were obtained. Regardless of self-construal, the desire to project a positive image to others may have resulted in biased answers regarding store image perceptions. This aligns to the earlier discussion suggesting the importance of excluding bias when investigating consumer attitudes.

As proposed by P_4, results demonstrated consumers higher in INSC to be more likely to exhibit an implicit preference for grocery stores over HDs. Grocery stores are perceived to have a more positive store image than HDs. INSC individuals are motivated to preserve their own image, as well as enhance that of the group (Markus and Kitayama, 1991). Overt alignment to a store with a lower image may threaten the self or group image and hence INSC individuals are motivated to defer automatically to grocery stores.

E6.1 Limitations and Further Research

A limitation of this study concerns the measurement of self-construal. The Singelis (1994) scale was used as it is the most commonly adopted measure, although it is known to have low α values (e.g., Vohs and Heatherton, 2002; Grace and Cramer, 2003; Bresnahan et al., 2005; Cross et al., 2011). Cross et al. (2011) gives a comprehensive review of alternative measures for self-construal and conclude that additional research is required for the development of new more 'psychologically sound' scales. In addition to this, the ISC and INSC scores obtained diverged slightly from UK population expectations (ISC expected to be higher, INSC lower). Replicating this experiment with a large online sample offers the possibility that a greater natural variation of self-construal would be observed, allowing for further analysis of the impact of self-construal on store preferences to take place.

E6.2 Theoretical and Practical Implications

The current findings deliver a theoretical contribution to prior research by offering an explanation for the divergence between observed and expressed consumer attitudes towards HDs. Consumers are subject to bias in answering direct questions regarding their grocery shopping preferences, and a more accurate depiction of how they actually intend to shop can only be gained from unbiased implicit techniques. In addition to this the established influence of self-construal on implicit preferences offers an extension to current literature regarding use of self-construal in a consumption setting.

With regard to practice, this study shows the impact of bias in attitudinal investigations. Research practitioners may wish to consider the deployment of implicit methodologies in addition to overt techniques, especially when seeking to further understanding of or make predictions regarding consumer behavior. This may be especially recommended in cases of unexplained phenomena such as rapid or unexpected sales growth. HDs are a relatively new phenomenon in the US and to date the success seen the UK has not been replicated (Loebnitz et al., 2020).

This study also brings to the fore the use of consumer self-construal to explain and predict consumer preference in a retail setting, answering calls for further understanding of this topic (e.g., Vroegrijk et al., 2013; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Knowledge of the level of ISC / INSC for target consumer segments, combined with implicit preferences may give brand owners increased accuracy in predicting sales and also enable advertising messages to me tailored accordingly with increased effectiveness.

Chapter F: Thinking about the Self means Thinking Differently about Store Brands: How Does Self-Construal Impact Store Brand Choice?

F1 Abstract

Hard discounters (e.g., Aldi and Lidl) are a global retail phenomenon with well documented success in Western markets. Unlike regular grocers, over 90% of products sold are private labels (store brands). In the UK, growth has been rapid in the last decade, featuring very low-priced products with high levels of similarity to leading national brands. By looking at the impact of self-construal on store brand evaluation, this study highlights how preferences change when self-construal levels are high and how this change has the opposite effect on discounter store brands in comparison to those from a traditional grocer. Individuals with a high dominance of either self-construal are subject to additional motivations and cognitive styles aligned to that construal. Activating additional processing alters how store brands are perceived and understanding the impact of consumer self-construal in the purchase of grocery store brands has considerable implications for brand owners and retail practitioners.

Keywords: Store Brands, Self-construal, Hard Discounters, Private Label

F2 Introduction

Aldi and Lidl are biggest sellers of grocery store brands (GSBs), also known as private labels, worldwide (Gielens et al, 2021). This endorses the notion that the so-called hard discounters (HDs) 'no longer operate at the fringes of retailing' but should be considered part of the mainstream (Hunneman et al., 2021, pp.1). Loebnitz et al. (2020) cite Lidl as the fastest growing retailer in UK and call for research into the emerging GSB landscape on account of rapid global HD growth. Since 2011, Aldi and Lidl have grown from a base of less than 5% UK share to a combined total of just over 14% (Kantar Worldpanel, 2021). A characteristic of HDs is to sell goods at prices below levels that may previously have been considered as not economically viable for the retailer (Hunneman et al., 2021). HD GSBs cost less than 50% of the equivalent manufacturer brands but maintain quality standards (Gielens et al., 2021). These savings are attractive to consumers who are tempted to try HDs because of price, but subsequent repeat purchases are made on account of the quality of the products sold

(Hunneman et al., 2021). HDs are therefore considered as a 'smart' choice on account of the additional value for money offered.

In addition to very low prices, HDs Aldi and Lidl have other strategic differences from mainstream grocers, including the range of goods stocked and how GSBs are branded. Over 90% of products sold in HDs are GSBs, creating a store environment in which there are very few national brands (Gielens et al., 2021; Mintel, 2016). This is an important point because much of the literature investigating how consumers evaluate GSBs assumes comparative evaluation with the leading national brand takes place (e.g., Kumar and Steenkamp, 2007; Geyskens, et al., 2010; Olson, 2012; Collins et al., 2015; Kelting, et al, 2017; Keller et al, 2020). Opportunities for direct comparison are unlikely, but national brands may still be in mind when HD GSBs are considered. Based on the share of national brands stocked by HDs in the UK, this is an unlikely occurrence. The branding literature for GSBs documents a three-tier approach adopted by mainstream grocers, including a low-priced economy GSB, a standard GSB and a premium GSB (e.g., ter Braak et al., 2013; Collins et al., 2015; Keller et al, 2016; Keller et al., 2020; Gielens et al., 2021). In the UK, each tier typically carries the store brand e.g., Tesco Value (economy), Tesco (standard) and Tesco Finest (premium) (Keller et al., 2016).

Economy GSBs are sold at very low prices and display basic ‘no frills’ packaging, in keeping with the purpose of competing directly with HDs (Geyskens et al., 2010; ter Braak et al., 2013; Zielke, 2014). In contrast, HD GSBs are not branded with the store name and many bear a striking resemblance to the leading national brand, earning the description of ‘copycat’ GSBs (Steenkamp and Sloot, 2018). Furthermore, economy GSB quality is low in comparison to the brand leader (Kumar and Steenkamp, 2007) whereas HD GSBs are known to outperform other store brands in terms of consumer quality perceptions (Loebnitz et al., 2020). Based on the continued growth of HDs and 90% dominance of GSBs within them, it is not surprising that there are calls for more research into how HD GSBs impact upon GSBs in other retailers (Gielens et al., 2021).

It is estimated that over half of all store brands are copycats of some form (Steenkamp and Geyskens, 2013). A discrete subset of the GSB literature focusses upon copycat evaluation and investigates how consumers assess packaging similarity (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; van Horen and Pieters; 2012a,b). In these studies, Friestad and Wright’s (1994) persuasion knowledge model (PKM) is used to explain how under different circumstances highly similar packaging can be perceived as positive or negative. In a persuasion episode, such as the purchase of a product, consumers call upon existing persuasion knowledge (knowledge of marketers’ tactics) in order to not be taken in

(Tormala and Briñol, 2015). Similarity to a leading brand is a well-known strategy used by manufacturers to indicate increased quality (Zaichkowsky, 2006). When the deliberative use of similarity is apparent to consumers, for example when the leader brand is present as a comparator, activation of persuasion knowledge increases the likelihood of a negative consumer evaluation (van Horen and Pieters, 2012a,b). Less than 10% of the products sold in HDs are leading national brands, highlighting the importance of investigating how HD GSBs are evaluated in a non-comparative environment.

Although many studies document the rise and popularity of HDs, there are some circumstances in which HD GSBs are not preferred to leading brands or other GSBs (Loebnitz et al., 2020; Gielens et al., 2021). Loebnitz et al. (2020) highlight the social risk attached when consumers purchase HD GSBs. When buying for oneself, HD GSBs are selected, but when shopping for others, national brands are preferred. Social risk relates to the perceived loss of self-image or ego when brand choices are made in public (Zielke and Dobbelstein, 2007). This suggests that consideration of how one is perceived by others might influence HD GSB preferences. Further support for this can be found in Hunneman et al. (2021) with evidence of the impact of cultural differences on GSB evaluation. Different cultures have different ways of considering their self-image, known as self-construal (Markus and Kitayama, 1991). Therefore, in this study, in addition to investigating the effects of price and similarity to leading national brands, the impact of self-construal on GSB evaluation is also investigated.

F3 Literature Review and Hypothesis Development

F3.1 How Price and Packaging Similarity Impact upon Consumer Perceptions

According to Zeithaml (1988) consumers rely on perceptions of quality to determine how good or superior a product will be. Quality perceptions of GSBs tend not be as good as those of national brands (e.g., Batra and Sinha, 2000; Garretson et al., 2002; Narasimhan and Wilcox, 1998; Steenkamp et al., 2010). The perceived lower quality of GSBs makes the purchase more of a risk to the consumer, both in terms of acquiring a product of lesser (or unknown) quality and the social risk of negative peer group perceptions (Batra and Sinha, 2000; Narasimhan and Wilcox, 1998).

In order to mitigate the risk of GSB purchase, consumers rely upon assessment of the extrinsic product cues of price, packaging and store image (González-Mieres et al., 2006b; Olson, 2012; Richardson et al., 1996). Considering first price, it is a well-established assertion that for GSBs lower prices are an indication of lower quality (Garretson et al., 2002;

Steenkamp et al., 2010). According to Garretson et al. (2002) lower prices are attributed by the consumer to flaws in the product. Steenkamp et al. (2010) suggests that in order to minimise cognitive effort, consumers use (low) price as a short cut for (low) quality. This suggest that as GSB price increases, so do perceptions of quality, however price is not the only cue consumers use to assess GSB quality.

The packaging of a product can elevate GSB quality perceptions, particularly when close similarity to the leading national brand is shown (Zaichkowsky, 2006). So successful is the practice of brand imitation that the prevalence of copycats is rife in GSBs (Steenkamp and Geyskens, 2013). Several studies have investigated GSB copycats and report contrasting perspectives regarding the outcome (positive or negative) of packaging similarity on GSB evaluation (e.g., Warlop and Alba, 2004, D'Astous and Gargouri, 2001; van Horen and Pieters, 2012b). According to the PKM, in cases of comparative evaluation, where the imitated brand is present, consumers consider both products, highlighting the overt tactic of similarity being used. This leads to less favourable evaluation (van Horen and Pieters, 2012b; Warlop and Alba, 2004). However, D'Astous and Gargouri (2001) and van Horen and Pieters (2012b) note that in the absence of a comparator, high levels of similarity are perceived favourably by consumers. In this study, GSBs will be evaluated in isolation without the presence of a comparator. This suggests that high levels of similarity are more likely to be positively considered and leads to the first hypothesis:

H_1 When price and similarity to a national brand are both high, consumers will have the most favourable perceptions of quality of an HD product

Turning now to the impact of price and similarity on consumer value perceptions of GSBs. A definition of value is given by Zeithaml (1988, p.14), stating that consumer value perceptions are based on a trade-off between the benefit the consumer derives (e.g., quality perceptions) and sacrifices made to achieve that benefit, such as the price paid. This suggests that increasing value can be derived from a GSB as the cost decreases. However, as noted previously price and quality of GSBs are intrinsically linked and as the price decreases so do perceptions of quality (Garretson et al., 2002; Steenkamp et al., 2010).

High levels of packaging similarity can enhance or diminish consumer evaluations according to the evaluation mode employed (D'Astous and Gargouri, 2001; van Horen and Pieters, 2012b, 2013; Warlop and Alba, 2004). However, Warlop and Alba (2004) and van Horen and Pieters (2013) both highlight cases in which high levels of packaging similarity can also bring additional benefits to the consumers. Warlop and Alba (2004) propose that

when highly similar looking brands sold at very low prices are not considered as a threat to the leader brand. Instead, they may be interpreted by consumers to be beneficial, as they are accessing higher quality at a lower price. Similarly, van Horen and Pieters (2013) demonstrated that when faced with uncertainty, in a situation where well-known brands are not present, consumers recognise high levels of similarity as a benefit because it enables them to identify the product on offer. In these cases, highly similar packaging is seen as increasing the consumer benefit at the same time as reducing costs, leading to the next hypothesis:

H_2 When price is shown and similarity is high, HD consumers' value perceptions will be at their greatest.

In addition to value and quality, this study seeks also to investigate how price and similarity of GSBs impact upon consumer Self Brand Connection (SBC). SBC describes the overlap a between the self-image of an individual and associations they have of the brand in question (Escalas and Bettman, 2005, 2009). When there is a high SBC, the likelihood of brand preference and loyalty is also increased (Wilson, 2017).

One way in which consumers use brands is to enhance the image of themselves that they wish to communicate to other people (Escalas and Bettman, 2003). The authors note that individuals are inclined to present themselves positively due to an inherent desire for self-enhancement. Furthermore, self-verification is also important to individuals who tend to avoid situations which are not in keeping with their self-concept. Both self-enhancement and self-verification suggest that individuals will make brand choices based on what they consider as presenting the best image of themselves.

As discussed previously in development of H_1, when considering GSBs, consumers use price as an indicator of quality (e.g., Garretson et al., 2002; Steenkamp et al., 2010). The lower the price, the lower the quality of the GSB. In order to project the best image of the self, it is unlikely that consumers will consider GSBs with very low prices (and therefore quality) as a reflection of themselves. Another indicator of quality consumers use when evaluating GSBs is packaging similarity (Zaichkowsky, 2006). The more similarity to leading brands that GSBs have, the more likely consumers will be to make associations of increased quality. Therefore, when GSB similarity is high and the price is not shown, the perceptions of quality are likely to be at their highest and therefore the most positive self-image can be put forward by the consumers. This is summarised in the following hypothesis:

H_3 When price is not shown and similarity is high, consumer SBC perceptions will be greater

F3.2 Consumer Self-construal and GSB Evaluation.

The self-construal (SC) of an individual refers to how an individual defines themselves in relation to others (Markus and Kitayama, 1991). In general, people can be classified as being predominantly possessing an interdependent (INSC) or independent self-construal (ISC). According to Markus and Kitayama (1991) INSC define themselves according to relationships with others within their social group, whereas ISC are more detached from the social context and focus instead on themselves. This divergence of self-classification gives rise to differences in cognitive, motivational and behavioural traits between ISC and INSC. Regarding cognitive differences, INSC are known to process information holistically, versus the analytical style of ISC (Cross et al., 2011, see study 1 section 2.2 for a discussion). Holistic processors tend to make a stronger links between contextual factors of a product (i.e., price and packaging) and the perceived product quality (Lalwani and Shavitt, 2013). This suggests that when GSB prices are shown, perceptions of quality may be made based on the price and the packaging. A low price may indicate low quality, but packaging which exhibits similarity to a known leading brand tends to be evaluated with increased favorability as similarity also works as a quality cue (Zaichkowsky, 2006). This presents a conflict for holistic processors which may lead to a lack of clarity regarding how to evaluate the object under question.

In situations that lack clarity, INSC individuals are likely to seek how best to not stand out from the crowd and fit in with others around them (Cross et al., 2011). This leads to a lack of confidence in their own judgements and consideration of what others might prefer in the same situation. Leading national brands are more popular than GSBs and are more likely to be chosen over GSB by INSC consumers (Wang et al., 2020). To favorably evaluate a GSB that looks like the national brand but is being sold at a very low price may feel to INSC consumers as if they are going against the grain. In order to not upset the status quo, INSC consumers will perceive the quality of this condition less positively. This leads to H_4:

H_4 Amongst ISC consumers the positive relationship between similarity and perceptions of quality will be stronger when price is not shown.

As discussed previously in the development of H_2 the concept of quality can be defined as a trade-off between the benefits gained from the product in relation to the costs expended (Zeithaml, 1988). Benefits can directly be equated to perceived quality of the product, but

also can describe additional benefits that purchasing might give the consumer. H_2 argued that high similarity and low price would offer higher levels of perceived value to consumers.

For some consumers engaged in the act of purchasing GSBs, seeking out and achieving perceived value delivers additional hedonic benefits (Ailawadi et al, 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). Garretson et al (2002) and Manzur et al (2011) describe value driven hedonic benefits whereby consumers experience increased self-esteem and a sense of accomplishment from purchasing GSBs. Ailawadi et al. (2001) and Martos-Partal et al. (2015) also note additional benefits in the form of self-expression. Across these four studies there is agreement that the underlying motivation for the described hedonic benefits is ego. Individuals are motivated to be seen as and different from others (Ailawadi et al, 2001; Martos-Partal et al, 2015) and recognised for their knowledge and ability (Garretson et al, 2002; Manzur et al, 2011).

Motivation is one of the characteristic differences separating ISC and INSC individuals (Cross et al., 2011; Markus and Kitayama, 1991). Cross et al (2011) describe opposing motivation traits as individualistic and focussed on self-enhancement for ISC as opposed to driven by group values and self-criticism for INSC. One way in which motivational traits can be satisfied in individuals is through the consumption choices they make (Lee and Shavitt, 2006; Millan and Reynolds, 2014; Zhang and Shrum, 2009). Millan and Reynolds (2014) demonstrated that product choices are made to signal uniqueness and self-betterment to others by ISC individuals. This is not the case for INSC individuals, who according to Lee and Shavitt (2006) and Zhang and Shrum (2009) avoid choices that involve implied status, seeking instead to preserve group harmony. The additional benefits of recognition and individuality which some consumers derive from GSB purchasing are similar to those which drive the consumption choices of individuals with a high ISC tendency. Additional benefits are also known to increase the value perceptions of products and services. This suggests that ISC consumers will perceive greater value in low price and high similarity GSBs which is described in H_5:

H_5 Amongst ISC consumers, an HD GSB will be perceived as more valuable when price is shown, and similarity is high

The final hypothesis in this study looks at the impact of self-construal on the levels of SBC that consumers have with GSBs according to the price and similarity of packaging to leading brands. In the development of H_3 it was established that individuals are inclined to make consumption choices in order to present themselves in the most positive light to others

(Escalas and Bettman, 2003). One way to do this would be by via the consumption of products which are deemed to be of the greatest perceived quality.

When evaluating GSBs, price and resemblance to leading brands are known to be quality cues (Richardson et al., 1994). Because ISC and INSC individuals operate using different modes of cognition, the relationship between product cues and product quality are more easily recognised by the holistic thinking of INSC (Lalwani and Shavitt, 2013). INSC individuals are thus more likely to equate high price and high similarity GSBs with quality. Because high quality implies increased SBC, INSC individuals are more likely to have greater SBC with GSBs of high price and greater similarly to the leading brands than ISC individuals.

In addition to the cognitive influence self-construal has on SBC, motivational differences are also likely to play a role. Unlike ISC who seek recognition and individuality, INSC are motivated to sustain group harmony and minimise the risk of harming the wider group's reputation (Zhang and Shrum, 2009). Therefore, it is reasonable to suggest that INSC individuals will have a greater SBC with brands least likely to reflect badly on the group, thus the final hypothesis states the following:

H_6 Amongst INSC consumers, SBC perceptions will be greater when price is not shown and similarity is high

F4 Methodology

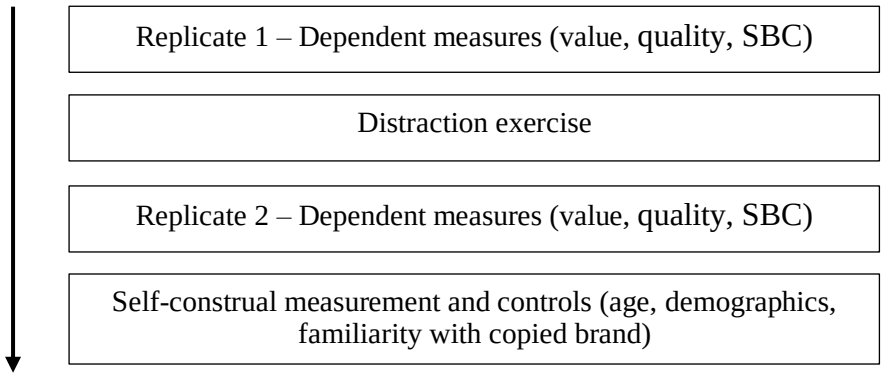
F4.1 Protocol and Sample and Stimulus

A 3x2x4 between-subjects factorial design experiment was conducted: The similarity factor employed three levels (low, medium and high) whilst price employed two factors (shown and not shown). Self-construal employed four levels indicating the dominant self-construal in each group, which was high ISC, slight ISC, slight INSC and high INSC. Two brand replicates were used with an unrelated distraction task between each stimulus. Three hundred and eighteen regular UK based grocery shoppers were recruited via online panel provider Qualtrics (www.qualtrics.com) where the study was hosted, and participants were given a small fee for completion of the survey. Use of a commercial panel minimised any contact between the researcher and participants, however additional consent and debrief information were included in the online survey for clarity (appendix 8). The sample was 51% female, 49% male and age groups were as follows: 18-24 14%, 25-34 22%, 35-55 21%, 45-54 23%, 55-64 20%. Participants were sorted randomly into experimental groups.

Selection of stimuli was undertaken as follows. GSB examples were selected from Tesco as the UK's leading supermarket with 27.6% share (Kantar Worldpanel, 2021). HD GSBs were selected from Lidl and Aldi (one from each). Two food categories were selected over non-food categories as consumers are more likely to have concerns over quality of products that are consumed (Hansen, Singh and Chintagunta, 2003; Kumar and Steenkamp, 2007). The brands chosen as exemplars are well-known household products for UK consumers; Heinz Cream of Tomato Soup was selected as Heinz has 42% share of the tinned soup category and Cream of Tomato is the leading flavour (Coyne, 2014) and McVities Ginger Biscuits is one of the UK's top 10 favourite biscuits (Kantar Media TGI, 2021).

High resolution images were sourced from company websites found using a Google search (appendix 9). Images of GSBs were selected for use as stimuli for each condition to encourage a more realistic setting. The high similarity condition was the HD GSBs, the medium and low similarity versions were the Tesco standard GSB and Tesco Everyday Value GSB respectively. In keeping with Miceli and Pieters (2010) and van Horen and Pieters (2012b) a pre-test was conducted to confirm the similarity classifications. Participants (N = 12, none of whom were participating in the main study) were first asked to review the two brand exemplars (Heinz and McVities) and then sort the GSB examples according to level of perceived similarity (high, medium, or low). All responses agreed with the stimulus categorisation. Many studies investigating GSB similarity use stimuli that have been developed or modified by graphic designers (van Horen and Pieters, 2012a,b; Satomura et al., 2014). Although this approach can give a greater degree of experimental control, the products themselves do not exist outside of the study in question. The overall procedure is shown in figure F16.

Figure F16. Overview of the experimental procedure.



F4.2 Measurement Scales

The dependent measures of quality, value and SBC were all recorded using established scales. Quality and value were taken from Dodds et al. (1991), 4 and 5 items respectively (quality $\alpha_{biscuit}$ = .91 α_{soup}=.93, value $\alpha_{biscuit}$= .90 α_{soup}=.92) and for SBC 6-items were selected according to suitability for grocery items from Escalas (2004) ($\alpha_{biscuit}$ =.96 α_{soup}=.97). The final step of the experiment was to record the self-construal of participants. Self-construal was measured in this study as opposed to primed, to record the natural variation within the population sample. The Singelis (1994) scale for ISC and INSC is the most widely used instrument and was used in this study (ISC α=.83, INSC α=.85). The scale comprises 15 items for each construal and participants are asked to give an indication of their level of agreement with each item on a 7-point Likert scale (1= *strongly disagree* and 7 = *strongly agree*). The Singelis (1994) scale was designed for use within universities with student participants. As a non-student population is used, the scale items were scrutinized to ensure the content was relevant for a broader population and modified accordingly (e.g., Q19 'I would offer my seat on the bus to my professor' was changed to 'I would offer my seat on the bus to my boss').

Sorting self-construal into four levels was undertaken in keeping with Singelis (1994) who states that when determining the self-construal of individuals, measures of ISC and INSC must both be considered. A person may have high ISC and high INSC in which case it is likely that neither would have a dominant effect and Singelis (1994) recommends using the difference between ISC and INSC measurements. The difference between ISC and INSC was calculated and expressed as a percentage ratio of the ISC value. Four levels were created of equal size and labelled as high ISC dominant, slight ISC dominant, neutral ISC/INSC and high INSC dominant. As expected for a Western society, the self-construal values overall have a slight skew to ISC, reflecting the natural ISC dominance within the population (e.g., Markus and Kitayama, 1991; Cross et al., 2011)). The boundaries for each level and average percentage ratio are shown in table F14.

Table F14. Differences between ISC and INSC, expressed as a percentage of the ISC value

Level descriptor	Boundaries for each percentage ratio level (%)	Average percentage ratio
High ISC dominant	>14.30	25.35
Slight ISC dominant	3.49 - 13.80	8.45
Neutral ISC/INSC	-4.34 – 3.26	0.04
High INSC dominant	<-4.34	-19.41

Demographic variables (age and gender), and familiarity to the leading brand were included as covariate controls. Familiarity to the leading brand was measured, following van Horen and Pieters (2012b) as lack of familiarity with the leading brand may influence evaluation of similar GSBs. At the end of the study, demographic information was recorded, and participants indicated their familiarity with the leading brands in each category on a seven-point scale (1 = 'not familiar at all', '7 = highly familiar').

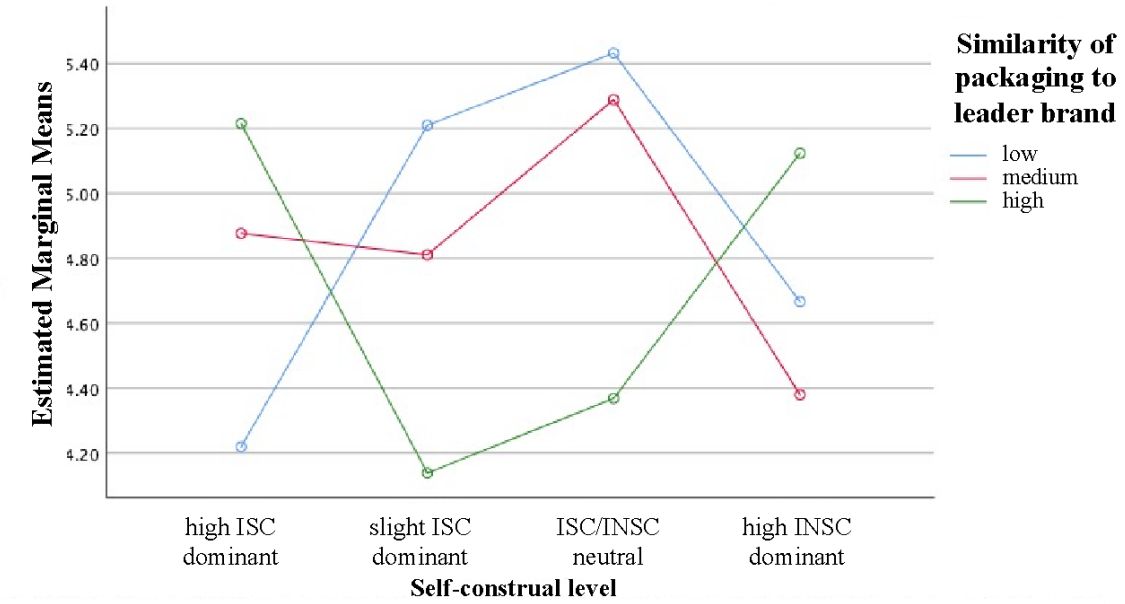
F5 Results

F5.1 How Price, Similarity and Self-construal effect Quality Perceptions (H_1 and H_4)

The hypotheses were tested using three three-way ANCOVAs, one for each of the dependent variables of quality, value and self-brand connection. Prior to analysis, tests were carried out to ensure the assumptions for ANCOVA were met, in keeping with Field (2015). A summary of results is given in appendices 15 and 16, for the biscuit and soup variants respectively. Looking specifically at H_1 and H_4 for the biscuit variant, there was a significant effect of price on perceptions on quality after controlling for the effect of the covariate, $F(1, 291) = 6.60$, $p = .011$, $\eta^2 = 0.02$. When price was not shown, there was increased likelihood of positive quality perceptions (M=5.24, SE=0.09) than when price was shown (M=4.91, SE=0.09). The covariate, familiarity with the leader brand, was significantly related to perceptions of quality, $F(1, 291) = 29.61$, $p = <0.000$, $\eta^2 = 0.09$. The biggest effect size observed was that of the covariate, with moderate size, compared to the small effect size of price. There were no other significant interactions for the biscuit variant. These results indicate that for the biscuit products, when consumers are not made aware of a low price, perceptions of value are higher and, on this basis, H_1 can be partially accepted. No interactions with similarity or self-construal were observed and so H_4 is not supported.

For the soup replicate contrasting results were observed. As with the biscuit variant there was a significant effect of the covariate, familiarity to the leader brand, but a small effect size observed $F(1, 291) = 10.90$, $p = 0.001$, $\eta^2 = 0.04$. No other significant main effects or two-way interactions were observed, but the three-way interaction between price, similarity and self-construal was significant, although also small in size $F(6,291) = 2.55$, $p = 0.02$, $\eta^2 = 0.05$. Further investigation of the three-way interaction was undertaken by grouping the sample by the price variable. For the price shown condition there was a significant interaction between similarity and self-construal $F(6,144) = 2.52$ $p = 0.024$, $\eta^2 = 0.10$. The effects size for this interaction in the price shown group is moderate and can be seen in figure F17.

Figure F17. The relationship between value perceptions and self-construal at different similarity levels in the 'price shown' condition



Covariates appearing in the model are evaluated at the following values: Gender of respondents – 1.49, Age bracket of respondents = 6.14, Familiarity with leader brand = 6.2

Figure F17 shows that for the high similarity condition, in the groups where ISC and INSC are high there are similar positive perceptions of quality. However, the opposite is observed when similarity is low or medium and INSC or ISC are slight. Based on these results, H_4 is not supported as the only significant interaction was observed in the condition where price was shown.

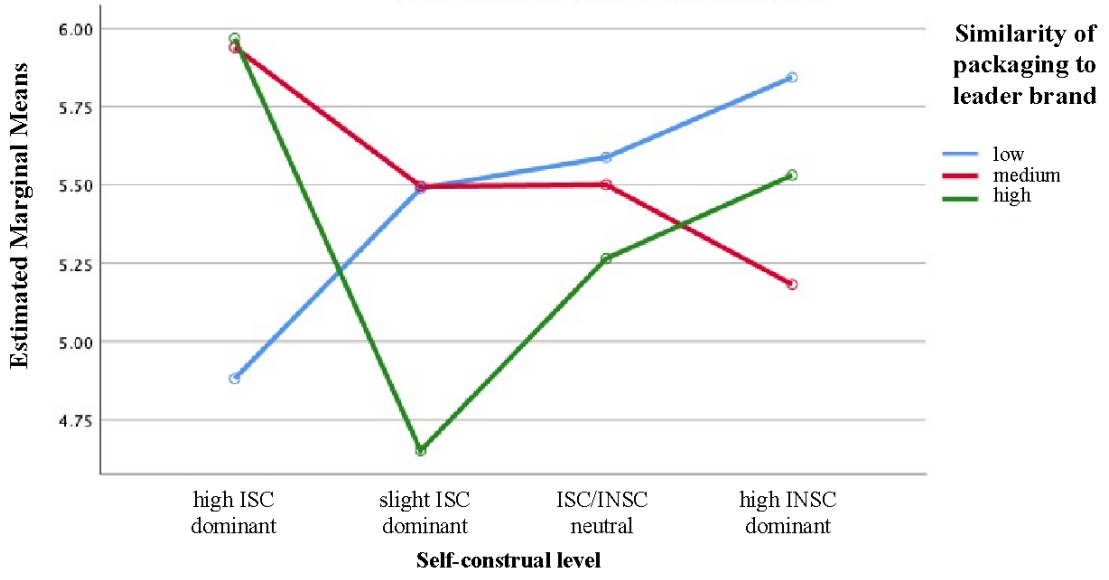
F5.2 How Price, Similarity and Self-construal effect Value Perceptions (H_2 and H_5)

Price had a significant main effect on value with a moderate effect size, after controlling for the effects of the covariates: $F(1, 291) = 17.87$, $p < 0.000$, $\eta^2 = 0.06$. As with the ANCOVA for quality, there was a significant main effect of the covariate familiarity with the leader brand and a large effects size $F(1, 291) = 55.27$, $p = <0.000$, $\eta^2 = 0.16$. There were no other significant relationships for the biscuit variant. In keeping with H_2, when price is shown, there is an increased positive effect on perceptions of GSB value (M=6.04, SE=0.08) compared to when price is not shown (M=5.58, SE=0.08). There were no other main effects or interactions observed and H_2 can be accepted in part.

For the soup replicate there were again contrasting results observed to those seen for the biscuit brand type. No main effects of any of the three independent variables were observed and there were no two-way interactions. The only significant effects were for the

covariate familiarity to the leading brand $F(1, 291) = 47.75$, $p < 0.000$, $\eta^2 = 0.13$ and a three way interaction between price, similarity and self-construal $F(6, 291) = 2.74$, $p = 0.013$, $\eta^2 = 0.05$. Further investigation of the three-way interaction was undertaken by grouping the sample by the price, in keeping with the previous analysis of quality perceptions. For the 'price shown' condition there was a significant interaction between similarity and self-construal $F(6,144) = 2.463$ $p = 0.027$, $\eta^2 = 0.09$. This is shown in figure F18 which reveals that individuals with high ISC levels evaluate similarity in a different way to those for whom INSC has high dominance, or for those with only slight dominance of either self-construal. When similarity of the GSB to the leading brand is high and price is showing, high ISC consumers are more likely to have greater value perceptions than other consumers. This follows the prediction from H_5 and for the brand replicate of soup, the hypothesis can be accepted.

Figure F18. The relationship between value perceptions and self-construal for different levels of similarity in the 'price shown' condition



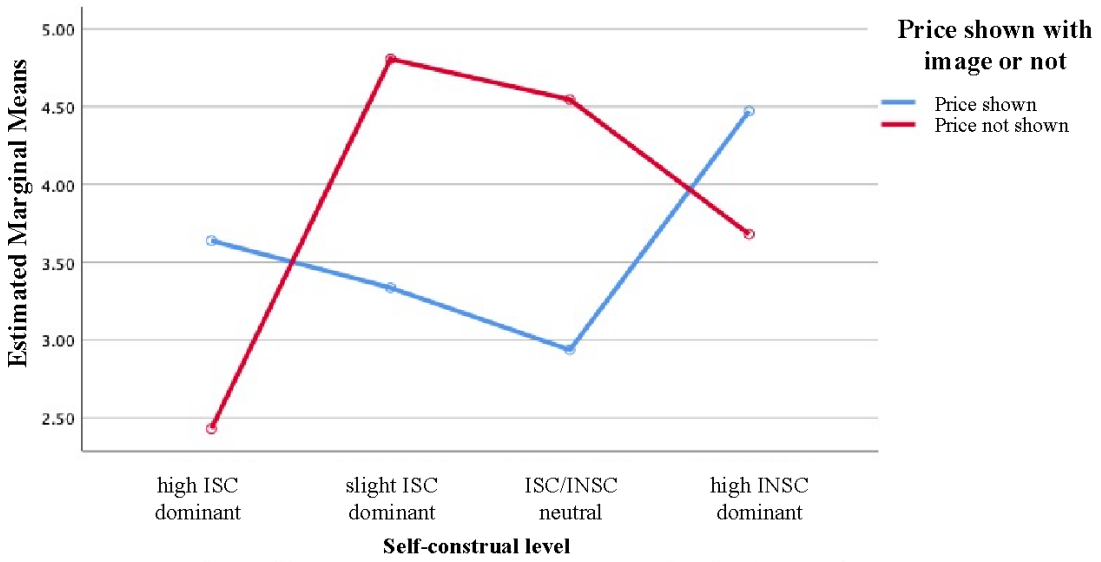
Covariates appearing in the model are evaluated at the following values: Gender of respondents = 1.52, Age bracket of respondents = 6.18, Familiarity with leader brand = 6.15

F5.3 How Price, Similarity and Self-construal effect Self-Brand Connection (H_3 and H_6)

In this third and final ANCOVA, the effects of price, similarity and self-construal and their interactions were investigated on SBC, with familiarity again included as a covariate. For the biscuit variant here was a significant main effect for the covariate familiarity to the leader brand, showing a moderate size of the effect $F(1, 291) = 28.47$, $p<0.000$, $\eta^2 = 0.09$ and also for self-construal $F(3, 291) = 7.63$, $p<0.00$, $\eta^2 = 0.07$. There were no other main or

interaction effects for price or similarity and so H_3 is rejected. However there was a significant 3-way interaction was observed between price, similarity and self-construal with a moderate effect size $F(6, 291) = 3.09$, $p = .006$, $\eta^2 = 0.06$. As before, interpreting the three-way interaction was undertaken by grouping the sample by price. For the condition 'price not shown', there was a significant main effect of self-construal in SBC $F(3, 144) = 6.55$, $p < .000$, $\eta^2 = 0.12$, but no interaction effects were observed. An additional analysis was undertaken grouping the sample by similarity to explore the three-way interaction further. For the high similarity condition, there was a significant interaction between price and self-construal on SBC $F(3, 95) = 5.28$, $p = 0.002$, $\eta^2 = 0.14$ and a significant main effect of the covariate of familiarity to the leader brand $F(1, 95) = 10.70$, $p = 0.001$, $\eta^2 = 0.10$. Figure F19 shows the interaction between price and self-construal in the high similarity condition. The graph of the interaction depicts how showing the price or not for the high similarity condition varies according to self-construal. At levels of high ISC, not showing the price results in the lowest score for SBC. However, when price is shown, the highest SBC rating is given in the by the high INSC dominant group.

Figure F19. The relationship between SBC and self-construal when price is shown or not for the high similarity condition

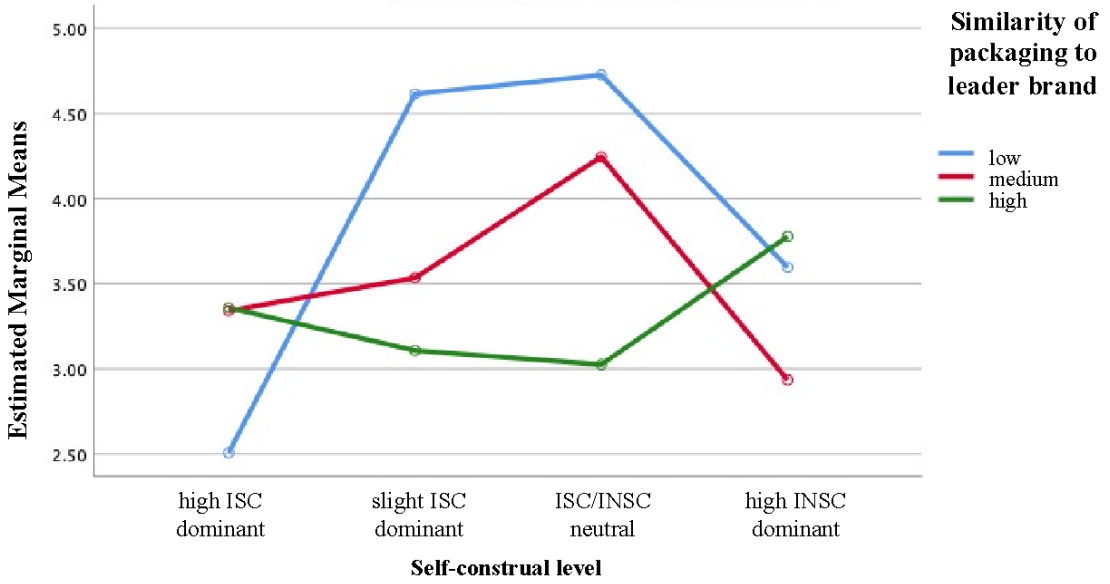


Covariates appearing in the model are evaluated at the following values: Gender of respondents = 1.56, Age bracket of respondents = 5.96, Familiarity with leader brand = 5.54

For the soup variant, a similar set of results were observed, with a significant main effect of self-construal $F(3, 291) = 4.89$, $p = .003$, $\eta^2 = 0.48$. Respondent age was significant as a covariate (not familiarity to the leading brand as has been previously observed) $F(1, 291) =$

3.921, p =.049, η^2 = 0.01. There were no significant two way interactions, but a three way interaction between all of the independent variants was significant $F(6, 291) = 2.32$, p =.033, η^2 = 0.05. Further analysis of the individual groups showed a significant reaction when split by price. In the price shown condition there is a significant interaction between similarity and self-construal $F(6, 144) = 2.21$, p =.046, η^2 = 0.08 but no other significant main or interaction effects. Figure F20 shows the significant interaction.

Figure F20. The relationship between SBC and self-construal when price is shown or not for the high similarity condition



Covariates appearing in the model are evaluated at the following values: Gender of respondents = 1.52, Age bracket of respondents = 6.18, Familiarity with leader brand = 6.15

The results are summarised in table F15.

Table F15. Summary of the significant Analysis of Covariance (ANCOVA) results for both brand replicates

Replicate	Effect	df	F	η^2
	Consumer perceptions of quality			
Biscuit	Price	1, 291	6.60*	.02
Soup	Price x Similarity x SC	6, 291	2.55*	.05
	Consumer perceptions of value			
Biscuit	Price	1, 291	17.87***	.06
Soup	Price x Similarity x SC	6, 291	2.74*	.05
	Consumer perceptions of SBC			
Biscuit	SC	3, 291	7.63***	.07
Biscuit	Price x Similarity x SC	6, 291	3.09**	.06
Soup	SC	3, 291	4.88**	.05
Soup	Price x Similarity x SC	6, 291	2.32*	.05

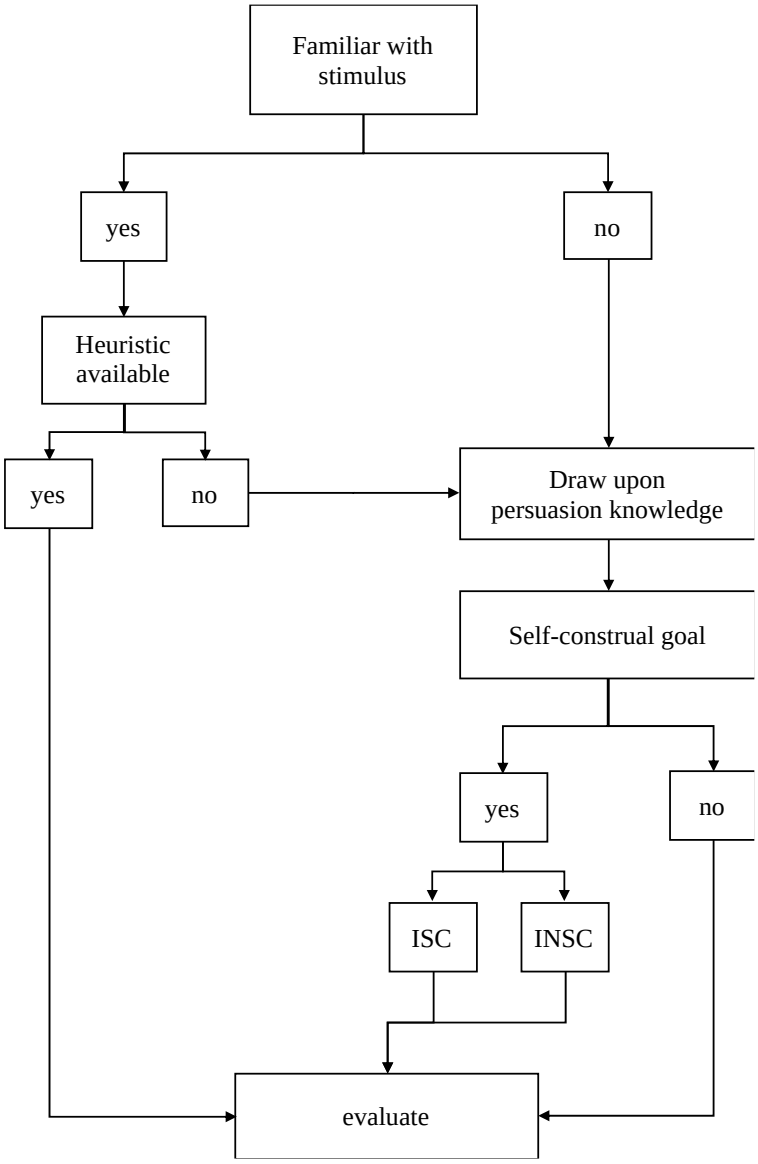
*p<.05, **p<.01, ***p<.001.

F6 Discussion

F6.1 GSB Evaluation using Heuristics, Persuasion Knowledge and Self-construal

Hypotheses H_1 – H_6 investigated the impact of price, similarity and self-construal on consumer perceptions of quality, value and SBC based on assumptions from the PKM regarding how GSBs are evaluated in a non-comparative setting. The impact of self-construal on consumer perceptions was also explored. The results show the same pattern of significant effects for the biscuit and soup variants across the dependent variables of quality and value (table F15). The differences in results between the variants across levels of similarity can be explained if heuristics, persuasion knowledge and self-construal operate in concert. A proposed decision-making process is presented in figure 21. Results of the SBC evaluation show the same pattern for both product variants (table F15), adding additional support to figure F21. As a result, an enhanced understanding of different evaluative processes consumers use to assess GSBs is offered.

Figure 21. Flow diagram depicting the decision-making process for evaluation of GSBs using persuasion knowledge and self-construal



F6.1.1 Use of Price as a Heuristic to Determine Quality and Value

Price is a well-known heuristic used by GSB shoppers to determine quality and value (Zeithaml, 1988; Steenkamp et al., 2010). Low prices are indicative of lesser quality (Steenkamp et al., 2010) but are also known to signal increased value to the consumer (Zeithaml, 1988). In this study, the three GSBs used as stimulus displayed instore prices (at the time of the study), all of which are less than 50% of that of the corresponding national brand. Therefore, showing price equates to a low-price cue and so would be expected to lower perceptions of quality, but increase those of value.

Using a price schema is a short cut consumers deploy in order to minimize cognitive effort when making quality and value judgements (Dodds et al., 1991). Reduced cognitive

expenditure and reliance on price offers an explanation for why no other significant effects were observed for the biscuit variant when looking at quality and value. In keeping with the PKM, Friestad and Wright (1994) suggest that individuals develop 'tactic recognition' heuristics to efficiently deal with commonly used persuasion strategies (such as price). Once the tactic has been recognized, processing can take a peripheral and less onerous route to making a decision (Petty and Cacioppo, 1984). Additional cognition need not be invested to meet the task set when there is sufficient familiarity with the stimulus and identification of a suitable schema can be made.

H_1 and H_2 predicted that showing the price would have a negative impact on quality and a positive impact on value respectively, when similarity to the leading brand was high. Although this can be partially accepted for the biscuit variants, different results were seen for the soup. The only significant effect seen for quality and value for soup were three-way interactions between price, similarity and self-construal. The lack of price as a main effect suggests the price quality schema evoked for the biscuit replicate has not taken place in this case. The absence of a short cut being used may indicate that more in-depth processing has instead occurred. In the case of the soup variant, it is possible that the nature of the product makes it less frequently consumed than biscuits. Research published by Kantar Media (2021b) reports 12.5 million UK consumers eat biscuits at least twice a week, indicating high familiarity with the category. In a similar analysis for tinned soup, the data show that 12 million UK consumers eat tinned soup once a year (Kantar Media, 2021a). This could account for less familiarity with soup packaging and products, and less likelihood of a price heuristic being available to consumers. The use of persuasion knowledge and increased processing in order to make an evaluation is more plausible. According to Petty and Cacioppo (1984) the outcome of a persuasion attempt has two possible routes which are dependent on the amount of cognitive effort expended. In the peripheral route, cognition is low and the likelihood of reliance upon heuristics is high. This contrasts with the central route in which cognitive processing or 'elaborations' occur. Elaborations describe how assessments of the persuasion episode are made based on the information presented in addition to other knowledge held by the individual (Petty and Cacioppo, 1984).

In summary, the different outcomes observed when evaluations of quality and value are made using persuasion knowledge and self-construal, suggest different cognitive processes are used. For the frequently consumed biscuit brand, price was used as a heuristic to make evaluations of both quality and value. For the less commonly consumed category of tinned soup, a similar heuristic may not be available and in order to make an evaluation, persuasion knowledge was consulted to assist with the lack of familiarity.

F6.1.2 Use of Persuasion Knowledge when Familiarity is Lacking

In situations where knowledge regarding the topic of persuasion is lacking (e.g., lack of familiarity with the product / brand), assistance may be required in order for evaluations to take place (Friestad and Wright, 1994). In this instance, consumers are likely to call upon their persuasion knowledge, a resource which '…will "hover" in readiness, available to them [consumers] as an immediate source of help that they learn to depend on in generating valid product and agent attitudes.' (Friestad and Wright, 1994, pp. 10). When persuasion knowledge is evoked, all relevant information retained by the individual is used on order to make a decision. For the soup variants different interactions for quality and value evaluations were obtained in comparison to the biscuit variants. No main effect of price was detected suggesting no price heuristic was used in evaluation as discussed in the previous section. In situations where there is uncertainty regarding the GSB packaging, there may be no short-cut available as a default to aid decision making. In this case, persuasion knowledge may be called upon for assistance and additional processing occurs. Once activated, persuasion knowledge seeks to formulate the best response possible in line with the individuals' goals (Friestad and Wright, 1994).

For both quality and value, results of the soup ANCOVA show a three-way interaction between the independent variables. Further analysis at group level showed a significant interaction in the 'price shown' condition between similarity and self-construal (see table F15 and figures F17 and F18). In two of the experimental groups, levels of self-construal are described as 'slight' or 'neutral' (slight ISC dominance and neutral INSC) which indicates that neither construal is likely to be activated in individuals within those groups. In the absence of heuristic short-cuts, persuasion knowledge may be called upon to assist in making a soup evaluation. When price is displayed, evaluations of quality for the high similarity GSB are low and higher for the low similarity GSB (figure F17). Previous studies have shown that persuasion knowledge is deployed to protect consumers from 'falling for' retailer tactics of similar packaging, leading to less favourable evaluation (van Horen and Pieters, 2012b). This is a possible explanation for low mean scores of the high similarity GSB seen in the quality analysis and to some extent in the value analysis also although the effect is not as marked.

For the low and medium similarity conditions, in the quality and value analyses, similar means scores are seen across the 'slight' and 'neutral' self-construal groups (figure F17, figure F18). Scores are relatively high in comparison to the high similarity GSB, indicating increased preference. Persuasion tactics of similarity to the leading brand are not as overt in these two products meaning they are less likely to incur resistance from persuasion

knowledge (van Horen and Pieters, 2012b). Additional information called upon by persuasion knowledge could be from the Tesco logo displayed on the packaging for both GSBs. This may activate positive associations held by the consumers regarding the Tesco brand and lead to a more positive evaluation.

F6.1.3 High Levels of Self-Construal Change Consumer Perceptions of GSBs

When self-construal goals are activated, evaluation is affected. Evidence to support this can be found in the significant three-way interactions between the independent variables observed for the soup brand in both the quality and value analyses (figures F17 and F18). Different effects are observed for each GSB, with contrasting outcomes for the high and low similarity conditions. Looking first at quality and the interactions between similarity and self-construal when price information is displayed (figure F17). When GSB packaging is highly similar to the leading brand, quality perceptions increase as levels of self-construal move from slight to high. The opposite effect is seen in the low similarity condition and a decrease in quality perceptions is observed when self-construal levels change from slight to high. The shape of the graph in figure F17 appears to show a reversal of GSB value evaluations when high levels of self-construal are activated.

When an individual's self-construal is activated, additional goals and motivations aligned to that construal are available and different processing styles may occur (Markus and Kitayama, 1991). A dominance of INSC gives rise to increased holistic processing ability and enables individuals to better understand the relationship between entities, such as cues of price and similarity, and quality perceptions (Lalwani and Shavitt, 2013). The contrasting effects of showing a low price at the same time as high similarity may cause uncertainty in those of high INSC. H_4 proposed that this uncertainty would lead to a decrease in quality perceptions, however, the opposite result was recorded. A possible explanation for this could be as suggested by Friestad and Wright (1994) that lack of certainty induces increased reliance upon the use of persuasion knowledge to assist in evaluation. Previous studies based on the PKM have shown that in certain situations, when copycat GSBs are sold at low price they may or may not be considered negatively (Warlop and Alba, 2004, van Horen and Pieters, 2012b). Van Horen and Pieters (2012b) demonstrate that consumers evaluate highly similar GSBs more negatively than GSBs bearing less resemblance to the leader brand. Consumers are aware of the obvious attempt at persuasion and seek to resist it accordingly. However, Warlop and Alba (2004) observed that when the tactic of similarity is obvious, a low price may indicate little threat to the leading national brand as the copycat GSB is '…not expected to compete at the same level as the incumbent.' (pp. 26). This highlights how the

outcome of persuasion knowledge to evaluate the tactic of GSB similarity can vary according to circumstance and individuals. The influence of self-construal, although not investigated in extant literature could offer an explanation for the contrasting results observed in previous studies.

For the evaluation of value, when price is shown, the high and medium similarity manipulations are preferred to the low similarity condition. This is in keeping with H_5 which predicted ISC individuals would be motivated to stand out from the crowd and make decisions based on their own thoughts and considerations. Here the similarity of the packaging to the leader brand is seen as positive and when a low price is shown, high value perceptions are given. In the high INSC condition the low similarity GSB (Tesco value) has the greatest value perceptions. Individuals high in INSC are motivated to fit in with their social groups and not stand out (Markus and Kitayama, 1991). When price shown is low and the Tesco brand logo is also displayed on the packaging, as the leading grocery chain in the UK, it is likely that Tesco is seen as the choice for the majority, and therefore fitting in with the group favours Tesco. Interestingly, the moderate similarity condition, also bearing a Tesco logo, is not evaluated as positively. Although the Tesco logo is the same, a higher priced example will be less likely to indicate value than one which is lower priced (e.g., Zeithaml, 1988).

When ISC levels are high, similarity is high and price shown, quality evaluations are also positive. ISC consumers process information analytically and are unlikely to find a low price and high similarity a cause for uncertainty. Evaluations are made based on trusting one's own instincts and not considering other opinions (Cross et al, 2011). The motivation to stand out from others will be taken into consideration when processing the cues presented and hence a positive evaluation of quality can be made without additional reliance upon persuasion knowledge.

F6.2 The effect of Self-construal and Persuasion Knowledge on SBC Evaluation

When asked about perceptions of SBC, results for both GSB variants were the same, showing a significant main effect of self-construal and a three-way interaction between the independent variables. Unlike quality or value, which are features of a product, SBC concerns the perspective of the individual and does not have established heuristics associated with product characteristics. It is likely that in making a SBC evaluation, participants draw first upon persuasion knowledge and consult existing information they store mentally along with their personal goals. Self-construal influences the goals and motivations of individuals which is in keeping with the main effects of self-construal on SBC observed in this study.

F6.2.1 The Impact of Self-Construal on SBC and high GSB Similarity

Results indicate that for the biscuit variant, there was a significant interaction between price and self-construal in the high similarity condition (figure F19). When ISC is high, SBC ratings show a decrease in the absence of price being shown. Individuals with high ISC are analytical processors and tend to consider individual objects or cues as unrelated to others (Cross et al., 2011). It may be that this group are less able to make a connection between the similarity of the packaging to the leading brand and the leader brand itself. This could result in a more negative evaluation being given. Another possible explanation could be the motivation of ISC to be recognised as individuals. The high similarity condition was a Lidl version of a well-known biscuit brand. It may be that a copycat GSB from a HD might not portray an image that meets the goal of individualism and standing out from the crowd.

For the high INSC group, an almost opposite effect can be seen. When price is shown, consumers with high INSC considered the Lidl biscuit GSB to have an increased SBC. The increased ability of INSC to process holistically, may enable them to make more of a connection between the similar GSB and the leader brand it copies. Van Horen and Pieters (2012b) highlight the importance of assimilation in positive evaluation of GSB similarity. During the evaluation process, individuals may access information regarding the target stimulus and use it to inform their assessment. Holistic processing may therefore give rise to a greater degree of assimilation from the leading brand. In this case consumers may be reminded of the biscuit brand they like or have a connection to and seeing a low price displayed might give rise to an increasingly positive evaluation.

F6.2.2 The Impact of Self-construal on SBC and GSB Price

For the soup variant, the interaction of self-construal and similarity to the leader brand was significant when price was on display (figure F20). The impact of high levels of self-construal on GSB evaluations were again observed. In the high ISC group, the lowest SBC scores were given for the low similarity GSB. Low prices and low levels of packaging similarity are not considered to be a reflection of the ISC individual who is motivated to stand out and be recognised by others. For high INSC individuals, less difference was seen in evaluations between the soup variants, but SBC increased for the high similarity variant and decreased when similarity was medium and low. This interaction suggests that when INSC is high, low prices have a negative effect on SBC. It may be that considering the thoughts and

opinions others might have of a low priced GSB could deter INSC individuals, who seek to fit with those around them.

F7 Implications

The implications from this study will be of interest to academics and practitioners alike. A key contribution highlights the interplay between consumers' use of heuristics, persuasion knowledge and self-construal in making product choices (reflected in the model proposed in figure F21). The combined effects of the PKM and self-construal have not, to the authors' knowledge, thus far been explored in grocery store brand research. The PKM and self-construal are both popular theoretical bases for understanding consumption behaviour. Bringing the two together uncovers possible boundary conditions for the PKM at which self-construal becomes a more dominant processing mechanism. Further exploration of this finding in other categories and settings could lead to future development of predictive models to better understand how consumption choices are made.

This study also highlights the impact of self-construal on evaluations of quality, price and SBC. When persuasion knowledge is used, individuals draw upon information they have stored in memory as well as individual goals. Results indicate that at high levels of self-construal, additional motivational elements are activated, and different cognitive processes may also be used. Consumers will always default to the lowest processing route available, but when heuristics are not available persuasion knowledge and self-construal are taken into account and evaluations are likely to be change. Self-construal can be considered as an important influential element in understanding how GSB evaluations are made and in developing greater understanding of consumers' use of persuasion knowledge.

The applied nature and naturalistic elements of this study make interesting findings for practitioners in the grocery retail field. The importance of self-construal in GSB evaluation has been documented for the first time and shows how, when called upon, the additional processing incurred can impact on perceived perceptions. The possibility of priming consumers and temporarily stimulating increased levels of ISC or INSC has clear advantages for retailers at point of sale, both instore and online. Futures studies investigating the effectiveness of primes for self-construal and resulting product choices would further develop knowledge of this topic.

F8 Limitations and Future Research Opportunities

A possible limitation of this study was the use of real packaging samples for the different conditions of similarity. Although this was an intention to ensure external validity of the results, exact levels of similarity to the leading national brand cannot be quantitatively allocated. Previous studies have used stimulus which has been generated for the purpose of the study using professional graphic designers (e.g., van Horen and Pieters, 2012a,b). Increased control over the level of similarity of each treatment is possible with this technique, however the assessment of similarity is still qualitative, and the created packaging is not 'real'. A future study, using a quantified measure of similarity such as that suggested by Satomura et al. (2014), offers a way for researchers to measure the level of likeness displayed by real packaging samples. This could be advantageous for both brand owners and GSB manufacturers alike, with clear guidelines on the optimum levels of similarity required for maximum consumer appeal.

A limiting factor also relating to the use of real product samples as stimulus may be the display of the Tesco logo as part of the packaging design on some of the manipulations (medium and low similarity). An observation made in the discussion suggested that in certain circumstances, when price is not known, it may not be similarity to the leading brand that is being assessed per se. It is possible consumers use the Tesco logo to help inform their decisions. A further investigation of how consumers visually assess GSB packaging would be a way to increase understanding of the impact and importance of the packaging design and logo inclusion. It may also be the case that self-construal, shown in this study to be impactful in GSB evaluation, also influences visual assessment.

This study has shown that self-construal has a considerable influence on persuasion knowledge and the outcome of consumer evaluation of GSBs. A contribution of this research is highlighting the interaction between As store brands continue to grow globally and the HD format becomes part of the mainstream, this finding has considerable impact on both grocery retailers and brand owners. Based on the findings presented, the high similarity and low-price combination are attractive to consumers when levels of self-construal are high, be it ISC or INSC. This could indicate that the success of HDs seen in Western Europe is likely to follow in other parts of the world where the HD format and presence retailers such as Aldi and Lidl still in relative infancy

Chapter G: How self-construal influences visual attention: Using online eye-tracking to investigate grocery store brand packaging in Tesco and Lidl

G1 Abstract

This paper investigates the influence of self-construal on visual evaluation of grocery store brands. Data were collected via a remote online eye-tracking experiment using store brand images as stimuli. Participants were recruited using the professional networking site LinkedIn and primed for self-construal. Results showed that explicit evaluations of grocery store brands differ from visual attention measures. Bottom-up mechanisms of visual attention were observed indicating the importance of size for different store brand packaging elements. Top-down controls were shown to be susceptible to self-construal, indicating that different consumers pay more or less attention to packaging elements according to how they see themselves in relation to others.

Keywords: Eye tracking, visual attention, self-construal, store brands

G2 Introduction

Grocery store brands (GSBs) are an important part of retailer strategy, originally developed as a value alternative to national brands (Richardson et el., 1994). Also known as 'private label' or 'generic brands' GSBs have always been of interest to scholars and practitioners alike, but recent global growth has given rise to renewed attention (e.g., Geyskens et al, 2018; Keller et al., 2020; Loebnitz et al., 2020). Marques et al. (2020) highlight that GSB growth can be attributed to category proliferation but also geographic expansion. GSBs are available in over 90% of all consumer-packaged goods categories (Cuneo et al., 2012). According to Keller et al. (2020) GSB account for 22% of grocery sales in the US and 50% in European markets such as the UK and Spain. Such is the significance of GSB growth in North America that Loebnitz et al. (2020) call for research in this rapidly changing landscape.

Grocery retailers typically follow a three-tier system for store brands of 'good, better, best' (Geyskens et al., 2018; Keller et al., 2020). Premium and standard GSBs compete with national brands whilst the low-priced economy tier is used to compete with hard discounters (HD) (Vroegrijk et al., 2016; Geyskens et al., 2018; Loebnitz et al., 2020). Traditionally, economy tier GSBs have used plain packaging consistent with a no-frills message. Although

similar in low price to a mainstream retailer's economy offering, HD GSBs are packaged to look like the leading national brand in the category (Steenkamp and Sloot, 2018). However, plain economy GSBs are being redesigned with packaging that is more upmarket, in response to the success of HDs (Baker et al., 2020). Leading UK retailer Tesco recently launched Ms Molly's, a new GSB brand replacing the Tesco Value economy offering across several dessert and sweet treat categories. Ms Molly's competes directly with HD GSBs. The rapidly expanding global retail format of HDs (of which Aldi and Lidl are exemplars) has up to 35% share in some markets (Hunneman et al., 2021). HDs account for 15% of the UK grocery market share (Kantar Worldpanel, 2021) and Lidl is reported by Loebnitz et al. (2020) as the fastest growing retailer in the UK. Further investigation into how consumers assess HD GSBs and new Ms Molly's economy tier GSB presents an interesting topic for research and is the focus of this study

When making decisions about GSBs consumers rely upon the visible cues of price, packaging and store image (Richardson et al., 1994) as well as psychological motivations such as self-expression and social status (e.g., Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011; Martos-Partal et al., 2015). Self-expression can motivate the purchase of GSBs by showing that one is different from others by the choice of products purchased (Ailawadi et al., 2001 and Martos-Partal et al., 2015). Social status can be achieved in projecting the image of oneself as a 'smart shopper'. Smart shoppers are individuals who are recognised by others on account of their category knowledge and ability to successfully achieve good value for money (Ailawadi et al., 2001; Garretson et al., 2002; Manzur et al., 2011). Smart shoppers are known to be prone to buying GSBs and shopping in HDs (Hunneman et al., 2021).

Buying certain brands or products is a way in which consumers can demonstrate the image they have of themselves to others (Sirgy 1982). One way to define the image we have of ourselves, our self-construal, comes from studies of cultural differences between individuals (Markus and Kitayama, 1991). Self-construal defines how individuals consider themselves in relation to others. Those who predominantly see themselves as separate entities are known as being of Independent Self-Construal (ISC) and others who believe they are an integral part of a larger group, known as Interdependent Self-Construal (INSC). Self-construal influences cognition and emotion and has been shown to impact upon decision making and consumer behaviour (Cross et al., 2011). This includes studies investigating how consumers judge products based on the image of the store (Lee and Shavitt, 2006), brand extensions (Ahluwalia, 2008) and social connections they may have with the brand (Hsieh et al., 2021). No studies have directly investigated the impact of self-construal upon GSB

purchasing. However, Wang et al. (2020) demonstrated cultural differences to be influential in choosing store brands or national brands.

The final consideration relates again to how consumption habits of consumers are used to project self-image (Sirgy, 1982). The desire to present a positive image is a recognised source of bias in commonly used self-report methods of data collection, such as consumer surveys, (Fisher, 1993). Existing research investigating consumer attitudes to GSBs historically relies upon established survey scales (e.g., Richardson et al., 1994; Ailawadi et al., 2001; Manzur et al., 2011; Martos-Partal et al., 2015; Loebnitz et al., 2020). Further insights into unconscious mechanisms underpinning consumer behaviour can be gained using additional behavioural or neurophysiological measures (see Poels and Dewitte, 2006 for a review). Behavioural measures such as reaction time offer researchers measurement of implicit consumer attitudes that are not expressed (e.g., Greenwald and Banaji, 1995; Gregg and Klymowsky, 2013). Bell et al. (2018) suggests a range of neurophysiological techniques that have been adopted by marketing researchers and practitioners. Such procedures enable identification of underlying behaviour and can also highlight responses that consumers do not wish to or cannot share (e.g., Galdi et al., 2008). One technique adopted in the field of marketing that can offer additional insights into consumer decision making is the measurement of visual attention using eye tracking.

The underlying principle of eye tracking is that consumers have to move their gaze in order to process visual stimuli, and thus eye movements are a measure of visual attention (Wedel and Pieters, 2007). In general, visual attention is paid to elements and objects that have increased ability to stand out or are more relevant to an individual's goals or motivations (Orquin and Wedel, 2020). Spending increased time looking at something implies greater cognition, is a marker of how important that item is to the individual and influences subsequent behaviour (Gordon-Hecker et al., 2020; Hofmaenner et al., 2020). The use of eye tracking in marketing offers additional insights into consumer behaviour and has been used to inform product pricing (Ye et al., 2020) packaging development (Clement et al., 2013) and promotional strategy (Gordon-Hecker et al., 2020). In this study, eye tracking offers a neurophysiological methodology to determine if different types of GSB packaging receive different patterns of visual attention and how this is affected by self-construal.

G3 Literature review and Hypothesis development

G3.1 The Branding of Grocery Store Brands

GSBs have evolved in recent years and can be considered as brands in their own right (Geyskens et al, 2018; Loebnitz et al, 2020; Keller et al., 2020; Marques et al., 2020). Improvements to quality (Geyskens et al, 2018; Loebnitz et al., 2020) and range proliferation (Keller et al, 2020) have given rise to increased attention on how GSBs are branded (Marques et al., 2020). Considerations for retailers include naming to ensure consumer differentiation, and if the store brand should be included on the packaging or not (Geyskens et al, 2018). Visible display of the parent store brand on GSB packaging is beneficial in terms of increased consumer preference (Geyskens et al., 2018; Sethuraman and Gielens, 2014). Consumers are less uncertain of the product quality on account of positive spillover from the familiar retail brand (Sethuraman and Gielens, 2014). However, Geyskens et al. (2018) suggest that making the store brand visible on economy tier GSBs poses a risk to the retailer as poor-quality perceptions could backfire and damage the parent brand.

To reduce potential negative spillover retailers are increasingly adopting an umbrella approach to branding economy tier GSBs (Baker et al., 2020; Keller et al., 2020). Umbrella brands typically follow a common design theme across categories and have a more upmarket look than typical budget brands such as the Ms Molly's brand created by UK leading retailer Tesco (Baker et al., 2020; Gielens et al., 2021). The consistent appearance is beneficial to consumers for whom increased familiarity aids categorization (Keller et al., 2020). Categorization theory proposes that consumers process information more efficiently by deploying defined schemas or cognitive structures (Cohen and Basu, 1987). Brands with similar structures will be grouped or linked together to aid faster retrieval. Information held about brands in a person's memory is made up of the brand name and other associations, known as the brand image (Keller, 1993). For GSBs it is common for brand image associations to be used for categorization and subsequent purchase decisions (Keller et al., 2016).

The use of the Ms Molly's umbrella brand by Tesco is common across 8 product categories in desserts and sweet treats, such as biscuits, ice cream, chilled desserts, and confectionery (Tesco.com). In total there are 34 individual Ms Molly's products which offers increased familiarity to consumers through consistency of approach, in keeping with Keller et al. (2020). The Tesco store logo is also displayed on each Ms Molly's pack to encourage positive spillover from the parent brand (e.g., Sethuraman and Gielens, 2014). Geyskens et al. (2018) recommend that value tier GSBs do not carry the store brand on account of increased risk of negative associations. However, the less value focussed packaging of Ms Molly's

(Baker et al., 2020) is likely to mitigate this risk and the benefit of including the parent store logo increase positive consumer perceptions.

H_1 Consumers will express increased willingness to purchase Ms Molly's products when the Tesco store logo is present than when it is absent from the packaging.

G3.2 The Influence of the Self on Motivations to Purchase GSBs

More favourable evaluation of GSBs takes place when the brand image reflects the perceptions consumers have about themselves (known as self-image) (Baker et al., 2020). A match between self-image and brand image is known as consumer self-congruity (e.g., Sirgy 1986; Sirgy et al., 2008). According to Sirgy et al. (2008), in a consumption setting, consumers are motivated to reinforce their own self-image through the products they purchase. When shopping for GSBs, Baker et al. (2020) demonstrated that self-congruity to be related to both psychological needs (such as motivation) but also social needs (how one is seen by others). Ailawadi et al. (2001) and Martos-Partal et al. (2015) consider self-expression to be a motivating factor for the purchase of GSBs. Showing that one is different from others by the choice of products purchased can achieve this.

Garretson et al. (2001) and Manzur et al. (2011) further classify the self-expressive nature of GSB shopping as way of projecting the image of oneself as a 'smart shopper'. Smart shoppers are individuals who are recognised by others on account of their category knowledge and ability to successfully achieve good value for money (Ailawadi et al., 2001). Display of smart consumption habits facilitates the acquisition of social status for the shopper amongst their peers (Martos-Partal et al., 2015). HDs are considered smart places to shop on account of the value for money offered to consumers (Hunneman et al., 2021). However, in certain situations GSBs can pose a social risk to shoppers such as when shopping for others in HDs (Loebnitz et al., 2020). In this circumstance, the image of the HD influences consumer behaviour and according to Loebnitz et al. (2020) purchasing HD GSBs may result in a perceived loss of status. A similar consideration was reported by Wang et al. (2020) who demonstrate low status consumers to be more attracted to national brands as opposed to GSBs, most notably for products that are low in symbolism.

Symbolism refers to the ability of a product to signal to others the identity or image the consumer desires (Escalas and Bettman, 2005). Highly symbolic products are expressive and show others who one is, such as the type of sunglasses or jeans one might wear. The expressive nature of products high in symbolism means that individual preferences are known to be influential when it comes to decision making (Lee and Shavitt, 2006, Lalwani and

Shavitt, 2013). According to Lalwani (2006) although products low in symbolism are less likely to be used to express oneself to others, they are still effective in helping individuals achieve internal self-enhancement goals. The self-construal of an individual affects goals and motivations and is also known to influence products low in symbolism such as GSBs (Lalwani and Shavitt, 2006; Wang et al., 2020). According to Markus and Kitayama (1991) INSC consumers have a greater desire to conform to the views of others to ensure social acceptance. Motivation to fit in increases INSC preference for national brands (Wang et al., 2020), makes them more likely to consider price (Lalwani and Shavitt, 2013) and rely upon store image (Lee and Shavitt, 2006) to judge product quality. It follows that INSC consumers are more likely to prefer GSBs when the store logo is also shown on the packaging.

H_2 INSC consumers will express increased willingness to purchase Ms Molly's products when the Tesco store logo is present than when it is absent from the packaging.

G3.3 Visual Attention

Previous studies have tended to use self-report measures, however these do not necessarily reveal consumers preferences. The innate desire to present a positive self-image is known to be a source of bias (Fisher, 1993). Using neurophysiological measures is a way to mitigate bias, such as the use of visual attention using eye-tracking (Bell et al, 2018). The visual attention an individual gives to an object under their observation can be measured by eye movement (e.g., Wedel and Pieters, 2007). Increased attention given to specific elements is an indication of preference and can offer inferences about behavioural actions (Orquin and Mueller Loose, 2013; Gordon-Hecker et al., 2020; Hofmaenner et al., 2020). Visual attention is influenced by factors known as 'bottom up' or 'top down'.

Bottom-up influences are related to the stimulus under observation and include elements such as visual salience and the size of the elements observed (Wedel and Pieters, 2007; Orquin and Mueller Loose, 2013). Salience relates to the prominence of the object on display such as the colour, stand out from the background, shape, and movement (Orquin and Mueller Loose, 2013). The size of an object also increases attention capture; bigger objects are easier to distinguish from others (Wedel and Pieters, 2007). A larger object has an increased surface area and can therefore attract more visual attention (Orquin and Mueller Loose, 2013). Larger advertisements attract more attention than smaller ones (Lohse 1997) and brands with more facings on an in-store display attract more attention and more likely to be selected by consumers (Chandon et al., 2009). Two packaging elements considered to be significant in attracting visual attention are brand (Pieters and Warlop, 1999; Bialkova et al.,

2020) and product type (Chandon et al, 2009: Bialkova et al., 2020). Pieters and Warlop (1999) observed brand to induce a high level of visual attention but not to be moderated by top-down influences (in this case motivation). Bialkova et al. (2020) demonstrated that shopping goals were influential to both brand and product choice, in addition to stimulus only bottom-up effects. However, in this study comparisons were made between similar package types, and it is anticipated that when reviewing different brands, size of the brand name / logo and product name will have significant bottom-up effects. For Tower Gate, the size of the product name ('Ginger nuts' or 'Digestives') is considerably larger than as shown on the Ms Molly's packaging, and the size of the brand name (Tower Gate) is smaller than on the Ms Molly's variant (see image 1.0).

H_3 The visual attention given to the product name will be significantly greater for Tower Gate than for Ms Molly's

H_4 The visual attention given to Ms Molly's brand name will be greater than that given to the Tower Gate logo

Top-down control considers how psychological factors influence eye movements and visual attention (Maughan et al, 2007; Orquin and Mueller Loose, 2013, Behe et al., 2015; Duchowski, 2017; Gorden-Hecker et al, 2020). The self-construal of an individual is known to impact upon psychological aspects such as cognition and motivation (Markus and Kitayama, 1991). INSC dominance is linked to an increased ability to understand and recognise relationships between different objects and entities, known as holistic processing (e.g., Markus and Kitayama, 1991; Cross et al., 2011). This contrasts with ISC dominant individuals who are more likely to evaluate individual objects in isolation, known as analytic processing.

Evidence of the effect of self-construal on processing of information can be found in experimental studies using neurophysiological measures (Sui and Han, 2007; Liu et al, 2015). Using imaging techniques to observe brain activity, Sui and Han (2007) observed how self-construal modulated neural responses when viewing images of faces. Liu et al. (2019) extended these findings by measuring the visual attention of participants under different self-construal primes. INSC priming gave rise to different gaze patterns on specified facial areas of interest. When reviewing stimuli such as packaging, it is likely that INSC will consider elements holistically and ISC to do so analytically, resulting in differences between measures of attention.

In addition to different processing mechanisms, INSC and ISC have different personal motivations. ISC has a desire to stand out from the rest and be seen as an individual, whereas INSC are driven to maintain group harmony (Markus and Kitayama, 1991, Cross et al., 2011). Combining cognitive processes and personal goals, INSC individuals tend to be more concerned about how they are seen by others and actively look for connections between different entities (such as packaging elements). Therefore, it is expected that INSC dominant individuals will spend increased time looking at individual packaging elements. Taking time to consider how each will reflect upon themselves as well as looking for connections between elements. The presence of additional elements on the packaging such as the logo of the parent store may also lead to an increase in visual attention when INSC is dominant. Similar to H_2, a greater social desire to conform for INSC may lead to increased preference for a GSB with the logo of a well-known retailer displayed on the packaging. An indication of this preference is likely to be indicated with increased visual attention because individuals are more likely to look at objects they have a preference for (e.g., Orquin and Mueller Loose, 2013).

H_5 INSC participants will pay more visual attention to packaging elements (product name and brand name) than ISC participants

H_6 INSC participants will pay more visual attention to packaging elements on the Ms Molly's packaging when the Tesco logo is present

G4 Methodology

G4.1 Study Design and Recruitment and Stimulus Development

A 3(packaging type: Tower Gate, Ms Molly's, Ms Molly's_no logo) x 2(prime: ISC, INSC) between-subjects design was developed. The Ms Molly's packaging was duplicated for each biscuit type, with and without the Tesco logo. The dependent variables were willingness to purchase and visual attention. All data collection took place remotely and the study was hosted online using two professional providers Qualtrics XM, a research software provider (www. Qualtrics.com) and RealEye an online eye tracking software solution (www.realeye.io).

G4.1.1 Participants

For the main study participants (n = 60) were recruited from the researcher's own professional network via LinkedIn. The choice of LinkedIn was made for three reasons; first, the research took place during COVID-19 lockdown restrictions, ruling out the possibility of face-to-face recruitment. Casler et al. (2013) compared in person recruitment to an online

panel and use of social media sites. Their results showed no differences between the three recruitment methods and suggested online to be superior for behavioural research on terms of finding suitable participants and carrying out simple studies. Use of a professional panel is also considered to have a high cost per participant and evidence from existing studies suggests increased participant dropout rates, non-completion of tasks and multiple submissions (Semmelmann and Weigelt, 2018). These factors contributed to the most suitable available option being convenience sampling using the online social media site LinkedIn

LinkedIn has the sole focus of professional networking and is the largest such site in the world (Chang et al., 2017). Typically, LinkedIn users engage for work-related purposes such as self-promotion, networking, job hunting and reviewing profiles of others (Basak and Calisir, 2014). Evidence suggests that social influence is stronger on other well-known social media sites such as Facebook, as it is built upon close friendships (Quinton and Wilson, 2016). The professionalism of LinkedIn gives rise to increased levels of trust between users, who more likely to exert increased effort to complete a task (Chang et al, 2017). For this study the researcher's LinkedIn network was used as a sampling frame. The network is large and varied with over 600 connections and thus the sample of participants (n=60) required represents 10%. Although convenience samples are prominent in consumer behaviour research (Bryman and Bell, 2015) considerations were taken to ensure the sample population followed a similar distribution to the overall population of UK grocery shoppers.

A random selection of 140 prospective participants was made from the total number of connections (c.600). The objective was to recruit 60 professional adults between the ages of 18 and 65, who had experience of shopping in UK grocery stores and were aligned to the UK population. The target age breaks and genders are shown in table G16. according to the most recent UK Census data (Office for National Statistics, 2011). Age breaks and genders were assumed from the information given on each public profile, with education (year of leaving school / university) used as a proxy for age. Care was taken to uphold ethical principles when making contact with connections. Excluded from selection were close friends, relatives, and colleagues to avoid any social obligation to take part. Also excluded were multiple connections from the same workplace to ensure no discussion regarding the study, and any academic researchers or those familiar with the research. Any current students were rejected to mitigate any issues of obligation (in line with the institutional ethical code of conduct).

Table G16. Group number targets to align with UK population

Age	UK population %	Male	Female
18-34	23	12	12
35-49	21	10	10
50-64	18	9	9

Participants were first informed of the study and invited to express interest to take part via a direct personal message using the internal LinkedIn platform, with the offer of £5 Amazon voucher upon completion of the study (materials relating to the recruitment process such as initial contact message, briefing, and debriefing can be found in appendix 10). Those who expressed an interest were given more information and asked to return a signed consent from electronically. Recent improvements to the LinkedIn platform enabled all the sharing of attachments and links to be conducted via the messaging platform. Some participants requested the use of email for ease, and this was accommodated accordingly.

140 of the researcher's LinkedIn connections were invited to take part in the study. Sixty consent forms were signed and returned. As consent was received, participants were allocated to one of 6 groups according to age and gender, with quotas to align each group to the UK population (schematic for group design shown in appendix 18). In this case a balance of gender and age in each group was intended to minimise the effect of any these variables on the eye tracking measures and ensure internal validity across groups, in keeping with Field and Hole (2010). During the study one participant dropped out over security concerns, two experienced technical failures and two were colour blind and unable to take part, leaving 55 successful completions for analysis. The relative ease and speed of recruitment in this study suggests the suitability of LinkedIn as a recruitment tool. However, limitations regarding generalization and the diversity of the sample need to be acknowledged.

G4.1.2 Stimulus: Packaging Type

Two biscuit brands were selected that are well known and popular in the UK and have different GSB variants in multiple UK supermarkets. Both brands are in the top 10 most bought sweet biscuit brands in the UK (Kantar Media TGI, 2021). The GSB variants chosen were the from Lidl and Tesco. Lidl is a well-known UK HD (Hunneman et al., 2021) and Tesco the leading grocery retailer in the UK (Kantar Worldpanel 2021). Lidl's biscuit GSB uses the brand Tower Gate and the Tesco value GSB is branded Ms Molly's (see image G22). Images for the study were sought online from grocery shopping sites however Lidl do not have an online sales channel and images of the packaging obtained online were not of a high enough quality to be used in the study. Using 'real' stimuli is important in visual attention

research because eye movements are very sensitive to context and slight differences can lead to differences in results (Orquin and Wedel, 2020). The researcher contacted the brand teams at Lidl and Tesco to ask if high resolution images could be supplied. Both retailers offered electronic image files for use (and expressed an interest in the study) but the images were not of comparable quality. To ensure consistency, samples of each product were purchased and professionally photographed in a studio by a graphic design student at a UK University for a small fee. The Tesco images were also manipulated by the graphic designer to remove the Tesco logo (these packs were subsequently identified in the study as Ms Molly's_no logo) Using graphic design expertise is common in studies involving real packaging samples to ensure they are suitable for controlled manipulation and of consistent quality (e.g., van Horen and Pieters, 2012).

Figure G22. Examples of the packaging images used as stimulus.

G4.1.3 Measurement of Self-construal

Self-construal is a dichotomous variable which describes the way in which a person defines themselves in relation others around them (Markus and Kitayama, 1991). All individuals have a chronic or dominant self-construal, which they default to, giving rise to cultural differences at a population level such as individualism (ISC) and collectivism (INSC). Although there are cultural characteristics, natural variation occurs within populations because all individuals possess both ISC and INSC a dominant and a latent form. Gardner et al (1999) demonstrated that activation of the latent self-construal could be evoked through the use of priming exercises. This enabled researchers to investigate the effects of self-construal in controlled experimental studies where sample size is small and natural variation of self-construal might not be present. This study took place in the UK which has a dominant Western culture and ISC would be expected to be the prevailing self-construal. The sample size proposed (n=60) might not allow for enough natural variation to enable the impact of ISC and INSC to be investigated

Self-construal was manipulated using a well-established prime known as the pronoun-circling paradigm (e.g., Gardner et al, 1999; Oyserman and Lee, 2008; Liu et al., 2019). Gardner et al. (1999) developed the task to include an independent and an interdependent version whereby participants are asked to read a passage and circle the pronouns within it. To prime for an ISC condition the pronouns used are 'I, me, my' and for INSC they are 'we, us, our'. Oyserman and Lee (2008) showed that other priming methods such as a reading task had greater effects, however Lui et al. (2019) noted the circling of pronouns to be preferred by participants. As this study took place remotely and not in a supervised lab facility (as per all preceding literature) the pronoun circling prime was chosen as it could be adapted to an online setting. By creating a clickable version of the pronoun circling test, a record of participant engagement could be made to ensure the task was completed. Participants who did not highlight the required pronouns were automatically shown a message informing them to complete the section to enable continuation of the study. For a remote reading task, no assurance can be made that participants will read the text as required. An example of the online pronoun task can be seen in Appendix 11.

To ensure the prime manipulation was successful a pilot procedure was undertaken in keeping with good research practice (Bryman and Bell, 2015). Studies using the same prime did not record manipulation checks as the exercise has been well documented as effective (e.g., Gardner et al, 1999, Oyserman and lee, 2008). No prior studies have used an adapted version of this prime in a remote online setting and hence a check was required. A pilot study was chosen over a manipulation check within the final data collection procedure as it was

considered to be less obtrusive and would not influence the outcome, in keeping with Hauser et al. (2018). For the pilot participants (n=40) were recruited using an online provider, Prolific Academic Ltd for a small fee as advised by the provider (Male = 10, Female = 30, ages 18-24 = 11; 25-49 = 19; 50-54 = 3). The gender imbalance of the sample was not considered to be an issue for testing the prime as gender is known not to affect how Twenty Statements Test (TST) is answered (Agrawal and Maheswaran, 2005). Participants were randomly assigned to one of two conditions (INSC/ISC) and asked to complete the appropriate pronoun circling task. On completion of the task the manipulation check used was Kuhn and McPartland's (1954) TST (e.g., Gardner et al., 1999; Agrawal and Maheswaran, 2005). The TST asks for 20 personal descriptive statements, completing the phrase 'I am…'. The subsequent phrases were coded according to how they reflected the independent or interdependent self. Items reflecting personal attributes (a trait, ability, or attitude such as 'I am intelligent') were recorded as ISC and items describing a social role or relationship ('I am a mother' or 'I am from the Newari community') were coded as INSC. Unrelated items were excluded from analysis ('I am going to class after completing this survey'). Coding was carried out by the researcher and an independent Social Science academic working in a Business School (75% agreement). Coders met prior to undertaking the analysis to agree principles upon which to assign codes for each statement, according to guidelines from Agrawal and Maheswaran (2005). A calibration procedure followed; first a sample of 10 entries (2.5%) were coded jointly and discussed, then a further 30 entries (7.7%) were coded independently. A comparison of results showed over 75% agreement and the final data were coded independently. Results showed the TST to be successful in making INSC aspects of the self more accessible. Those primed using the INSC condition described themselves using a greater proportion of interdependent related statements (M=3.7) than those primed for ISC (M=2.0), $F(1,39) = 6.92$, $p<0.05$.

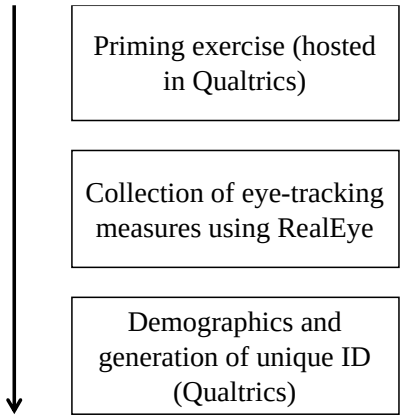
G 4.1.4 Data Collection

The setting for the study was online and data collection was remote on account of restrictions due to COVID-19. Despite the abundance of eye tracking studies in the measurement of visual attention (see Orquin and Wedel, 2020 for a summary), online eye tracking is still in relative infancy. Semmelmann and Weigelt (2018) highlight the availability of eye-tracking in JavaScript, (the most common language for online data collection) as a catalyst for online studies. Specifically comparing in-lab and online experiments, the authors found web-based data to be comparable in terms of precision and replicability. These findings compliment Xu et al. (2015) showing error rates to be low when investigating the use of web cams in a lab

setting and Papoutsaki et al. (2016) highlighting the efficacy of participant calibration and correction during online data collection. Although the controlled conditions of a laboratory cannot be replicated in a remote study, there are advantages such as the opportunity to include diverse populations for greater generalisation as well as the speed of data collection (Semmelmann and Weigelt, 2018).

Before recruiting any potential participants for the study, approval was given by the University Research Ethics Committee where the researcher was based. Steps were taken throughout to ensure anonymity and to address any concerns regarding the use of eye tracking to collect data. Particular attention was given to creating a process whereby anonymous data could be retrieved in the event of a required withdrawal. An overall schematic is shown in figure G23. On receipt of signed consent, participants were sent a link to access the study at a time and place of their convenience. Instructions were given to maximise data quality, including being seated at a screen in a well-lit room and using a suitable browser (Semmelmann and Weigelt, 2018). After completing the priming exercise, participants were automatically transferred to the eye-tracking exercise hosted via RealEye (www.realeye.io). RealEye eye-tracking software has been used in published studies of involving remote online eye-tracking (e.g., Federico et al., 2021).

Figure G23. A schematic overview of the data collection procedure



RealEye version 6.9 does not require any participant downloads and runs via a web browser using an integrated webcam common to PC (Microsoft Windows 10) or MacBook/iMac (MacOS), with screen resolution of 1024x968 pixels or more. Once camera access had been enabled, participants took part in a 40-point calibration exercise in keeping with Papoutsaki et al. (2016). A summary of onscreen instructions and equipment calibration can be seen in

appendix 12. On completion of calibration, participants were thanked and given instructions on how to proceed to the next task.

In order to assist with analysis of eye-tracking observations, specific areas of interest (AOI) for each stimulus were assigned, in keeping with previous studies (e.g., Behe et al, 2015; Bogomalova et al., 2020; Badenes-Rocha et al., 2021; Federico et al., 2021). Care was taken to ensure the consistency of size of AOI across each experimental conditions (Bogomalova et al., 2020), and the following AOI were defined in keeping with the study hypotheses; product name ('Ginger nuts' and 'Digestives') and brand name ('Ms Molly's' and 'Tower Gate'). Common visual attention metrics were used to measure attention given to each AOI, namely total fixation duration and number of revisits. Although there are multiple measures available to researchers in the field of visual attention, it is important to select those which are related to the hypotheses and theoretical underpinnings (Orquin and Wedel, 2020). In this study, the increased visual attention given to different packaging elements is under investigation. The measures selected determine this were total fixation duration and number of revisits, both of which are recognised as proxies for interest and intensity of cognitive processes (Badenes-Rocha et al., 2021; King et al., 2019). Total fixation duration is a sum of time given to a specific AOI and number of revisits is a count of times the gaze returns to a specified point (Badenes-Rocha et al., 2021: Federico et al., 2021). Increased fixation times and greater revisit numbers indicate increased attentions being given to the specified area (King et al., 2019)

The final measure in this study is willingness to purchase (WTP), common to studies investigating preferences for GSBs (e.g., van Horen and Pieters, 2012). Participants were asked to rate each brand stimulus based on the packaging and rate how likely they would be to purchase the product on a scale of 1 (definitely not) to 9 (definitely yes). In the final part of the study information relating age and gender were also collected.

G5 Results

The focus of this study is to investigate the impact of self-construal on how consumers consider different types of GSBs looking at both self-report measures (WTP) and visual attention. H_1 and H_2 tested expressed preferences consumers may have for Tesco Ms Molly's value GSB based on the inclusion or absence of the Tesco store logo from the packaging and self-construal. Visual attention measures for the remaining hypotheses (H_3-H_6) were recorded using an eye tracking procedure. H_3 and H_4 assessed the bottom-up effect of AOI size on measures of visual attention for the product and brand names of each stimulus. H_5 and H_6 examined the top-down effects of self-construal on visual attention, considering the product

and brand names of each stimulus and the presence or absence of the Tesco logo. Results were calculated in SPSS using a series of two-way between-subjects ANOVAs, for each dependent measure and brand variant (Digestives and Ginger nuts). For H_1 and H_2 the dependent variable was willingness to purchase. For H_3-H_6 there were two dependent measures (total duration and number of fixations) for each of the two AOIs (product name and brand name). Each set of results will be reported in turn, followed with an overall discussion.

G5.1 H_1 and H_2: Presence and Absence of Retailer Brand Logos

To test the hypotheses, a 2 (Packaging type: Ms Molly's, Ms Molly's_no logo) by 2 (prime: ISC, INSC) between-subjects ANOVA was calculated using SPSS. Three assumptions for ANOVA were tested in keeping with Field (2015) and the data were explored for normality, the presence of outliers and homogeneity of variance. For the Digestive biscuit variant, the first two assumptions were met in part only, with some groups showing non-normal data and the presence of outliers. For the Ginger nut variant, no outliers were present, and normality was shown in 3 out of the 4 combinations. For both variants, Levene's test for homogeneity of variance was significant and the assumption of homogeneity violated (see appendix 17). However, the two-way ANOVA is documented as being robust to violations of normality in particular when the group sizes are similar (Field, 2015). Therefore, although the assumptions were not fully met, the results are reported.

The ANOVA results for the self-report data (summarised in table G17) show no significant effects for either variant of packaging type, self-construal or of the interaction on the outcome variable of WTP for either product variant, thus H_1 and H_2 are rejected.

Table G17. A summary of the results for the self-report analysis

			Independent variable main effects and interactions		
Variant	**Measure**		**Packaging**	**Self-construal**	**Packaging*Self-construal**
Digestives	**Willingness to purchase**	$F(1,30)$	1.28	.104	.132
		^{2}	.003	.04	.004
		p	.75	.27	.72
Ginger nuts		$F(1,32)$	.023	.36	.04
		^{2}	.01	.001	.001
		p	.88	.55	.85

G5.2 H_3 and H_4: Product and Brand Name Attention

To test H_3 and H_4 two measures of visual attention were used for the product name AOI (H_3) and brand name AOI (H_4): total fixation duration and number of revisits. A 2 (prime: ISC, INSC) x 3 (packaging type: Tower Gate, Ms Molly's, Ms Molly's_no logo) two-way ANOVA was computed in SPSS for each product variant (digestives and ginger nuts) and each measure, with Bonferroni *post hoc* tests to further investigate significant interactions. As noted for the self-report measures, there were some instances in which the ANOVA assumptions were not fully met but results are reported. It is not unusual for eye tracking data to have issues with normality (Orquin and Wedel, 2020). Data transformations were undertaken as per Field (2015) but no improvements were observed and the untransformed data were used for analysis (normality and homogeneity of variance tests are reported in appendices 18 and 19).

H_3 predicts Tower Gate product name AOI to have significantly longer fixation duration and a greater number of revisits than Ms Molly's. H_4 predicts the Ms Molly's brand name AOI to have significantly greater fixation duration and number of revisits than Tower Gate (a summary of the results is given in table G18, supporting output for each ANOVA is given in appendix 19).

Table G18. A summary of results of visual attention measures testing H_3-H_6

				Independent variable main effects and interactions		
Variant	**AOI**	**Measure**		**Packaging**	**Self-construal**	**Packaging*Self-construal**
Digestives	**Product name**	**Total duration**	F	(2,46) 36.27***	(1,46) .258	(2,46) .52
			η^2	.61	.01	.02
		No. of fixations	F	(1,46) 43.76***	(1, 46) 1.17	(2,46) 1.16
			η^2	.66	.03	.05
	Brand name	**Total duration**	F	(2,47) 11.14***	(1, 47) 3.25	(2,47) 2.07
			η^2	.32	.07	.08
		No. of fixations	F	(2,47) 16.08***	(1,47) 3.82	(2,47) 1.34
			η^2	.41	.08	.05
Ginger nuts	**Product name**	**Total duration**	F	(2,47) 29.9***	(1,47) 12.12***	(2,47) 14.45**
			η^2	.56	.21	.38
		No. of fixations	F	(2,47) 40.44***	(1,47) 11.13**	(2,47) 7.67**
			η^2	.63	.19	.25
	Brand name	**Total duration**	F	(2,47) 5.20**	(1,47) 3.82	(2,47) 1.34
			η^2	.18	.08	.05
		No. of fixations	F	(2,47) 8.32**	(1,47) 4.12 *	(2,47) 1.35
			η^2	.26	.08	.05

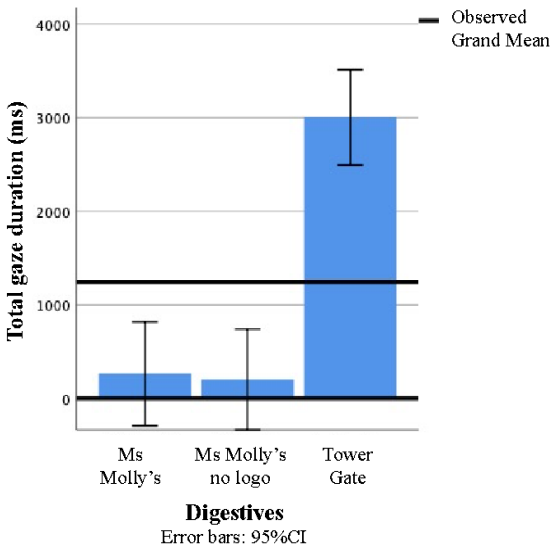
***p<.05, **p<.01, ***p<0.001**

Significant results were shown for the main effect of packaging type on fixation duration and number of fixations for both brand variants. Bonferroni *post hoc* tests revealed that for Digestives and Ginger nuts, fixation duration and number of fixations for the Tower Gate packaging were significantly greater than for Ms Molly's (p<.001 for all), and so H_3 is supported. This demonstrates the bottom-up effect of AOI size and correlates with previous studies reporting similar results (e.g., Wedel and Pieters, 2007; Behe et al., 2015). The prominence and size of an AOI influences how the eye movements are allocated and can be unrelated to consumer preference or specific goals. supporting H_3 for total duration and number of fixations are presented below (figures G24-G27).

Figure G24. Estimated Marginal Means of total gaze duration for AOI product name for Digestives.

Figure G25. Estimated Marginal Means of number of fixations for AOI product name for Digestives

Figure G24 Figure G25



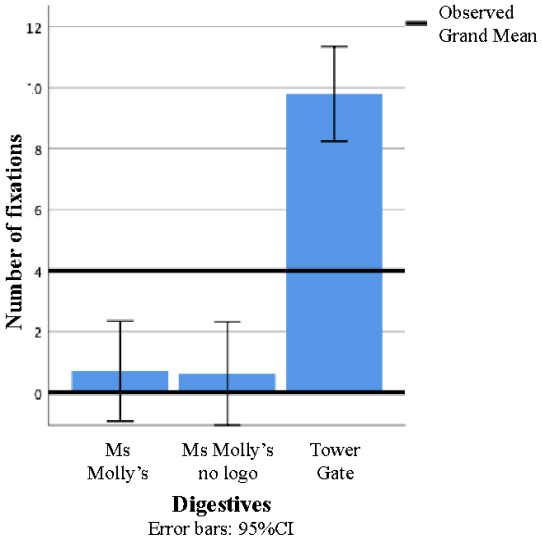


Figure G26. Estimated Marginal Means of total gaze duration for Ginger nuts

Figure G27. Estimated marginal Means of number of fixations for AOI product name for Ginger nuts

Figure G26

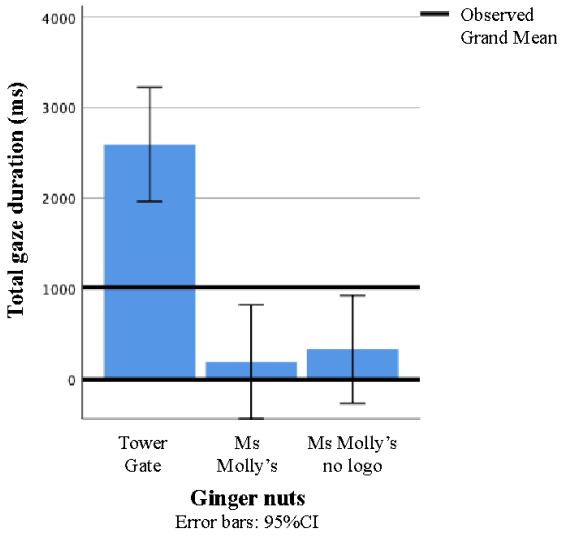
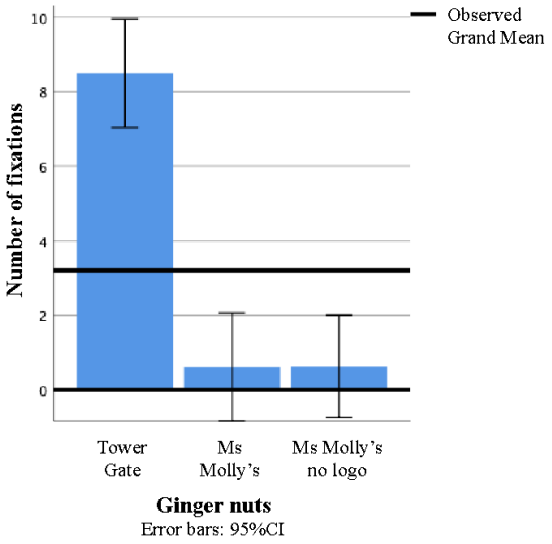


Figure G27



H_4 predicted that, as for H_3, bottom-up effects associated with increased AOI size would lead to increased visual attention for the Ms Molly's brand name. Results revealed that for both brand variants (Digestives and Ginger nut) packaging type had a significant main effect on

fixation duration and number of fixations (table G18). Further analysis again with *post hoc* Bonferroni tests showed Ms Molly's brand name to have significantly greater fixation duration and number of fixations for Digestives (p<0.001 for both) and Ginger nuts (p<0.01 and p<0.001 respectively). Based on these results, H_4 is supported. The *post hoc* test results are shown in figures G28-G31.

Figure G28. Estimated Marginal Means of total gaze duration for AOI brand name for Digestives

Figure G29. Estimated Marginal Means of number of fixations for AOI brand name for Digestives

Figure G28

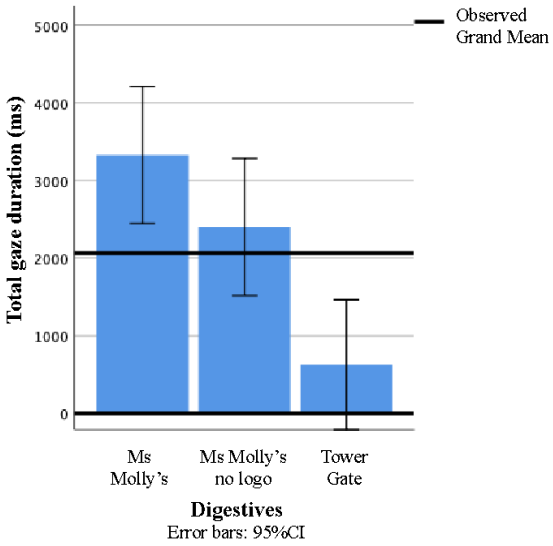


Figure G29

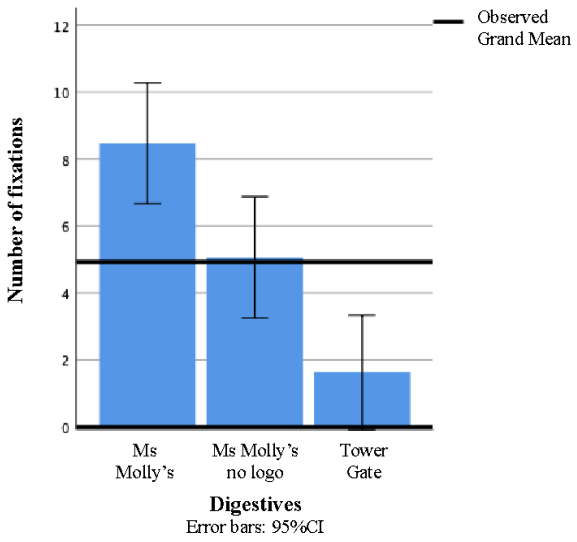
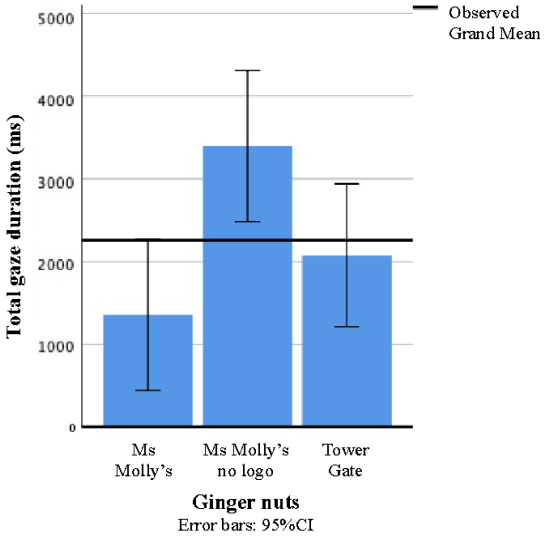


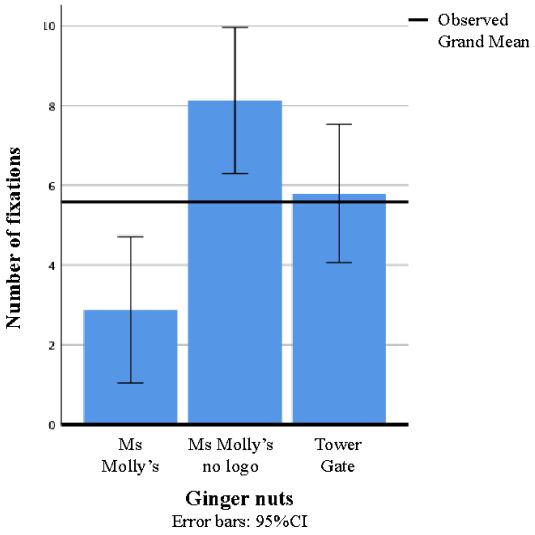
Figure G30. Estimated marginal Means of total gaze duration for AIO brand name for Ginger nuts

Figure G31. Estimated Marginal Means of number of fixations for AOI brand name for Ginger nuts

Figure G30

Figure G31





G5.3 H_5 and H_6 Self-construal and Visual Attention

H_5 and H_6 forecast the impact of top-down effects of self-construal on visual attention. H_5 predicts that the visual attention paid to AOIs will be greater for INSC than ISC individuals. A significant main effect of ISC or INSC on the attention given to either AOI (product name and brand name) would suggest a dominating impact of that construal. Significant main effects of self-construal were observed only for the Ginger nut variant; for product name AOI both total duration and number of fixations were significant, but for the brand name AOI a significant main effect was seen only for the number of fixations (table G18). Analysis of the graphs for each significant result (non-significant result is not shown) show that more visual attention is given to the Ginger nut AOIs by individuals who were primed to be INSC. Although this result was seen only in one brand variant (Ginger nuts), H_5 can be partially supported. Figures G32-G34 depict these results.

Figure G32. Estimated Marginal Means of total number of fixations for Ginger nut AOI product name and self-construal

Figure G33. Estimated Marginal Means of total gaze duration for Ginger nut AOI product name and self-construal

Figure G32 Figure G33

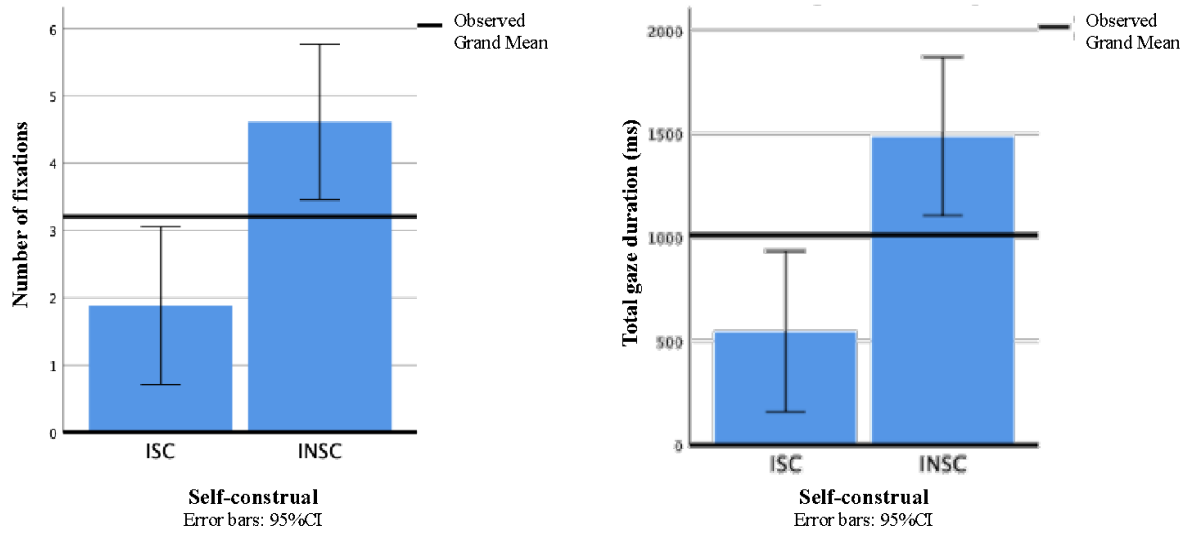
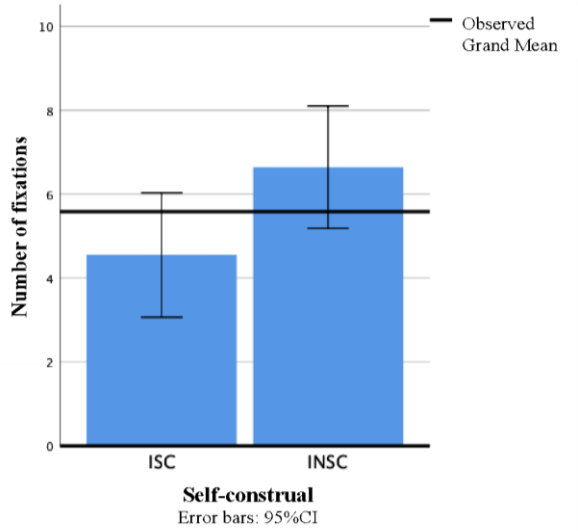


Figure G34. Estimated Marginal Means of total number of fixations for Ginger nut AOI brand name and self-construal



H_6, the final hypothesis predicted that the presence of the Tesco logo on the Ms Molly's packaging would give rise to increased visual attention when INSC was the dominant self-construal. Significant interactions between packaging type and self-construal were observed only for the Ginger nut variant and the product name AOI. Further investigation of results reveal that ISC and INSC participants spent different amounts of time looking at the product name according to the packaging type. Bonferroni *post hoc* tests showed that for total fixation duration and number of fixations, the interactions between Ms Molly's packaging with and without the Tesco logo (Ms Molly's and Miss Molly's no logo) were not significant. On this basis, H_6 is rejected. Results are shown in figures G35 and G36.

Figure G35. Estimated Marginal Means of total gaze duration for AOI product name for Ginger nuts

Figure G36. Estimated Marginal Means of number of fixations for AOI product name for Ginger nuts

Figure G35

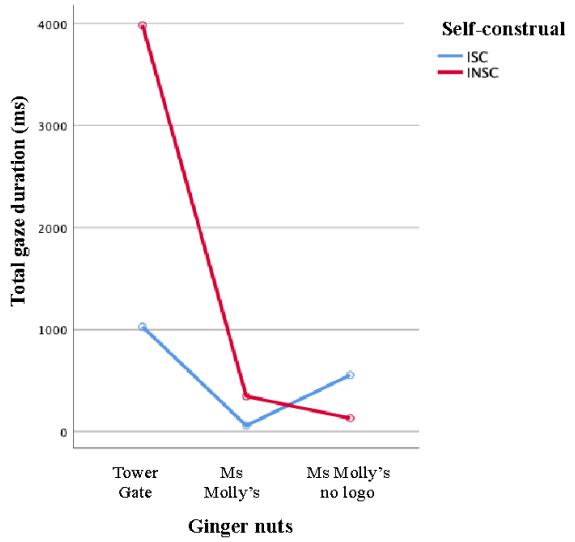
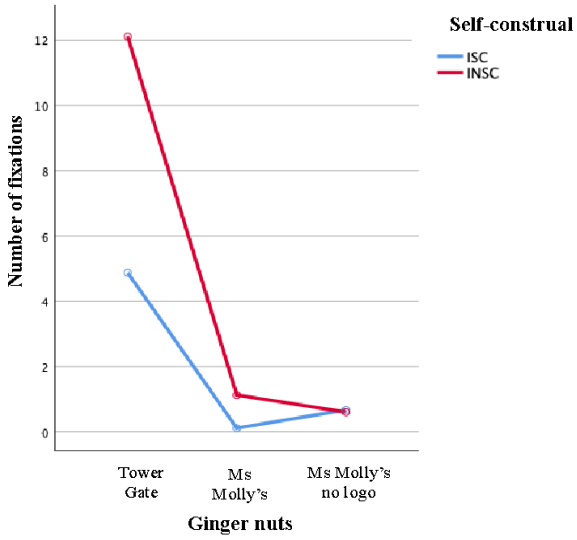


Figure G36



G6 Discussion

G6.1 Willingness to Purchase and Display of the Tesco Logo

H_1 and H_2 were rejected as results showed no significant differences in willingness to purchase when the Tesco logo was not displayed and when it was. It was expected that in keeping with Sethuraman and Gielens (2014) including the store logo on GSB packaging would encourage spillover effects from the parent brand leading to a more positive evaluation. Two possible routes can be explored for explanation, including the nature of the stimulus and how the evaluations were measured.

Looking first at the nature of the stimulus, Gielens et al. (2021) consider Ms Molly's to be a 'smart' private label, adding that packaging developments no longer seek to communicate 'acceptable quality at a low price point' (pp. 107). Use of an umbrella brand (e.g., Ms Molly's) across several categories can reduce consumer uncertainty and lead to additional sales (Keller et al., 2020). Based on this discussion it could be that the Tesco value GSB Ms Molly's represents a different kind of store brand and therefore might not elicit the same consumer responses as more traditional GSBs. Further investigation and comparison to established GSBs would be required in order to explore this phenomenon further.

A well-known measurement scale and self-report methodology were deployed in this study to record consumer explicit consumer responses. However, any unconscious thoughts or cognitive processes will not be recorded this way (Poels and Dewitte, 2006). Gielens et al. (2021) highlight the increasing complexity of consumer needs for GSBs to satisfy. It is reasonable to suggest that use of traditional methodologies to determine attitudes and intentions may be further enhanced with more nuanced, implicit techniques.

G6.2 The impact of Size on Bottom-up Visual Attention

H_3 and H_4 predicted that the AOIs of product name and brand name would garner more visual attention for Tower Gate and Ms Molly's respectively. Results support both hypotheses summarised in table G18. Bottom-up effects describe the increased influence on measures of visual attention from elements which are related to the stimulus observed (Wedel and Pieters, 2007; Orquin and Mueller Loose, 2103). Elements with more prominence, for example those that are bigger in size, stand out more and capture more of the recipient's gaze. The pattern of results in this study confirms that larger AOIs attract more visual attention. A summary of AOI size as a % of total visual area is given in appendix 13.

Increased visual attention to an area or an object is an indication of how important it is to the individual (e.g., Gordon-Hecker et al., 2020). In the design of GSB packaging, retailers can place more or less emphasis on elements which are of importance to the overall strategic intention. It is typical for grocery retailers to offer a multi-tiered GSB portfolio, with a premium, standard and value offer in each category (Geyskens et al., 2018). The Tesco value GSB Ms Molly's is used by the company to compete directly with HDs as both are priced at considerably lower than the leading national brand (Baker et al., 2020). The most visual attention Ms Molly's received was for the brand logo, highlighting to consumers that it is different from the other variants on display. This fits with role Ms Molly's is playing for Tesco, described as an umbrella brand across multiple categories (Keller et al., 2020). By comparison the product name is much smaller, not visually prominent and received little visual attention. Typically, grocery stores merchandise by product type giving consumers a choice of multiple brands and GSBs. For Ms Molly's the product name is not a requirement as the decision being made is which brand/GSB to buy as the product choice has already been made. Results showed Ms Molly's_logo attracting more visual attention when the Tesco logo is also visible on pack. This suggests an increase in visual attention and therefore consumer preference when the Tesco logo is showing. Results were not conclusive but highlight the opportunity to repeat a similar study across a wider spectrum of GSBs.

Contrasting results for the Tower Gate variants revealed increased visual attention paid to the product name over the brand logo. This is in keeping with the bottom-up effect of increased AOI size attracting more of the recipient's gaze. Unlike grocery stores, HDs stock very few leading national brands, reported to be less than 10% (Gielens et al., 2021). The product name is therefore important to communicate with the consumer in the likely absence of the leading national brand. By comparison the brand name (Tower Gate) is smaller, taking up only 1.4-1.5% of the total visual landscape. This study has shown how different packaging elements attract different levels of consumer attention according to design. This raises the possibility of further research to determine the ideal size for different AOIs in order to optimize visual attention and consumer preference. This would further assist retailers in designing GSB packaging as the category continues to grow global scale. It may also be possible to use AOI size to develop a typology of GSBs, adding to the current literature. As private labels continue to develop and become 'smart' (e.g., Gielens et al., 2021) guidelines regarding optimum sizes of design elements according to store type could inform future development consistent with consumer preferences.

G6.3 The Impact of Self-construal on Top-down Visual Attention

Top-down visual attention is influenced by consumer goals and motivations (Orquin and Mueller Loose, 2013, Behe et al., 2015; Duchowski, 2017; Gorden-Hecker et al, 2020) and therefore it was anticipated that self-construal would be an influencing factor. Results show a significant main effect of self-construal on total fixation duration and number of fixations for the product name AOI and for number of fixations for the brand name AOI, but only for the Ginger nut packaging. This provides partial support of H_5 and suggests that visual attention is affected by self-construal. When INSC is dominant, the holistic processing mechanism means additional intake of visual information occurs. Extant research supports the prevailing notion that individuals 'look at what they like', giving rise to the use of visual attention metrics in predicting preference and purchase behaviour (Orquin and Mueller Loose, 2013; Gordon-Hecker et al., 2020). Results from this study do not dispute this prevailing perspective but add in an additional consideration of self-construal. H_5 highlights how INSC consumers place more visual attention than ISC on individual AOIs. This observation does not indicate INSC dominant consumers have increased preference for certain product types but does highlight the impact of different processing styles. In other words, INSC consumers may not be placing more visual attention on certain elements because they prefer them, but because they are predisposed to spend increased cognitive effort in evaluating them.

H_6 investigated to effects of store logo and self-construal on GSB evaluation, by looking for significant interaction effects between packaging and self-construal. Supporting evidence for H_6 is limited and the hypothesis was rejected. The significant interaction seen for one product variant (Ginger nuts) and one AOI (product name) did not relate to the Ms Molly's packaging, with and without the Tesco logo. Results from the graphs suggested that INSC individuals are spending more time and making more revisits to the product name AOI when the Tesco logo is present on the Ms Molly's packaging, but it must be stressed that results were not significant for this interaction. This is consistent with the holistic processing disposition when INSC is dominant, individuals are spending increased time looking for links and relationships between entities. The differences seen between ISC and INSC also suggests the influence of self-control goals. INSC are motivated to maintain the status quo and fit in with others around them (Markus and Kitayama, 1991). The reassurance of a logo from the UK leading retailer may serve as an endorsement that this product is widely known and accepted. The only difference between the two stimuli was the presence of the logo, indicating that increased visual attention to other elements are related to this manipulation. However, the results were not consistent across all stimuli and actual mean differences recorded between number of fixations were very small (<2 for both manipulations). A repeated study using lab-based eye tracking and including other GSB types in addition to Ms Molly's variants would enable further examination of the observed effects.

The Ms Molly's GSB used in this study represents a new category branding approach by retailer Tesco as suggested by Keller et al. (2020). Baker et al. (2020) noted that Ms Molly's brand was designed to have a more upmarket feel (despite the value price) and therefore the prominence of the logo and other corporate Tesco elements are deliberately diminished. The lack of significant acknowledgement of the Tesco logo exhibited in this study offers support for this. In order to determine the effect of the logo, it is suggested the study is repeated on GSBs where the store brand is more prominent. However, the focus of this research was to investigate two GSBs from different retailers both of which are positioned at the value end of the market and hence Ms Molly's was selected for inclusion.

G7 Practical Implications

The connection between increased visual attention and preference is well established (e.g., Orquin and Mueller Loose, 2013; Gordon-Hecker et al., 2020; Hofmaenner et al., 2020). To elicit increased visual attention, (and thus preference), practitioners may use advertising materials and messaging to prime consumers to a more ISC or INSC way of thinking. Successful tactics of this nature could influence choice at the point of purchase. It has also

been confirmed that bottom-up effects, such as the size and prominence of different packaging elements are influential in the amount of attention given by consumers. The different roles played by brand logo and product name for competing GSBs from different retailers, has been endorsed. This highlights the possibility of using visual attention measures to classify different GSB types or to develop guidelines for GSB packaging development. At multiple points within the packaging design process, optimum levels of visual attention (and therefor preference) could be determined

The influence of self-construal on top-down effects of visual attention has been demonstrated. INSC consumers devote greater levels of visual attention to GSB packaging elements than ISC consumers. When INSC dominates, consumers spend more time looking at and processing the visual information presented to them. In this study, no supporting evidence suggested INSC have an increased preference for the elements they place increased visual attention upon, however further investigation of this link could be the focus of additional studies. It could be that GSB packaging developments are more relevant to INSC than ISC consumers or that packaging cues are more likely to be successful on INSC consumers. Knowledge of this difference presents the opportunity to researchers to find out more about the impact of self-construal on visual attention in relation to consumption choices. Retailers may also wish to consider the dominant self-construal of their customer base and how it may impact upon product preferences and choices. Self-construal could be used as an addition segmentation variable for consideration when developing products or strategies, particularly in relation to global expansion, in acknowledgement of cultural differences. As HDs continue to expand their format in new markets, understanding how consumers interpret and evaluate packaging design has important implications for retailers and brand owners.

G8 Limitations and Suggestions for Future Research

The use of online eye tracking as a methodology has multiple benefits, particularly during social distancing measures as a result of the COVID-19 pandemic, when data collection for this study took place. Furthermore, data are relatively quick cost-effective to collect in comparison to lab-based studies as multiple participants can access the study asynchronously. However, the technique is still in relative infancy and involves the use of participant's own webcams and screens. The consistent controls of a lab-based study cannot be replicated in these conditions and increased noise in the results is recognised, giving rise to limitations. Some of the data obtained for this study had minor issues relating to normality, although this does not undermine the robust nature of the analysis (Field, 2015). Orquin and Wedel (2020)

suggest it is not uncommon to have normality issues with eye tracking data and recommend in such instances that data are treated prior to analysis. Transformations recommended by Field (2015) ($\log(X_i)$,$\sqrt{X_i}$, $1/X_i$) were computed but made no improvement and untransformed data were used for the final calculations. A further limitation of this study was the use of LinkedIn as a sampling frame. The method was cost-effective, time efficient and a socially distancing compliant way of recruiting participants, however, use of a convenience sample limits the generalisability of the results obtained. Future studies could address this point, replicating the study with randomised sample drawn from a more diverse population. Further recommendations for research follow from contributions made by this study. First, the significance of self-construal in a grocery retail setting has been demonstrated and more studies to endorse this are welcomed. Second, the influence of self-construal on measures of visual attention has been established. To the knowledge of the authors, this is the first study of its kind to do so, giving rise to a call for self-construal to be a key consideration in future eye-tracking studies.

Online eye-tracking is an innovative methodology which has speed and cost advantages for data collection and offers academics and practitioners access to consumer understanding from a broad range of diverse populations. In addition to this, the inclusion of neurophysiological measures alongside traditional measurement scales, enables additional insights to be generated. Given the flexibility and ease remote eye tracking offers to researchers over more traditional methods, multiple applications exist to further understand consumer behaviour. This offers researchers an opportunity to diversify their research methods and promises a bright empirical future for online eye-tracking techniques.

Chapter H: Theoretical Contributions, Managerial Implications, Limitations and Future Research

H1 Introduction

This final chapter concludes the thesis and addresses gaps in knowledge regarding the consumer evaluation of store brands, looking specifically at HDs and value store brands in the UK. The research objective and aims stated in section A2 are answered and the connection between the three studies (Chapters E, F and G) is reiterated. Theoretical contributions are stated, followed by discussions regarding the managerial implications of the three studies, and recommendations made. Limitations of the studies are acknowledged, and future research directions are proposed for further development of knowledge.

H2 Addressing the Research Aims

This thesis seeks to address the overall objective of investigating the psychological processes underpinning consumer perceptions of GSBs in grocery stores and HDs. To meet this objective, 4 RAs were presented in Chapter A

RA1: To develop a theoretically grounded conceptual framework that proposes a logical sequence of procedures to determine how consumers perceive HD GSBs

RA2: To determine if the image perceptions consumers have of HDs are reflected in their observed shopping habits

RA3: To investigate how consumers perceive HD GSBs using the established cues for GSB evaluation of price and packaging

RA4: To understand how self-construal impacts upon the evaluation of HDs and HD GSBs.

There are two related overall objectives; to investigate the psychological processes underpinning the consumer evaluation of GSBs and to extend this investigation to HDs. The first point addressed is a prevalence in previous studies to investigate how consumers shop as opposed to seeking to understand why they make such choices (Chapter B, section B2.3.1). This is of interest to scholars and practitioners because GSBs account for half of the total

grocery sales in the UK (Nielsen, 2019). Furthermore, in HDs, over 90% of the products sold are store brands which leads to this retail format being the biggest seller of GSBs worldwide (Mintel, 2016; Steenkamp 2018; Gielens et al., 2021). HDs represent a growing but under-researched phenomenon (Chapter B, table B3) and have been the subject of several calls for further study (Vroegrijk et al., 2013; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). A summary of the RAs highlighting the Chapter in which each was addressed, and the conclusions from the study are presented in table H19. This is followed with a short sub-section relating to how Chapters D, E, F and G met each RA.

Table H19. Summary of research objectives, conclusions and research aims addressed

Chapter	Research Objective	Research Aims	Conclusion
Chapter D	To develop a theoretically grounded conceptual framework for conducting research	RA1	The extrinsic product cues and psychological traits consumers use to evaluate GSBs can be investigated using the PKM and self-construal.
Chapter E	To determine how observed and expressed store image perceptions of HDs and grocery stores are influenced by self-construal	RA2 RA4	When answering questions about grocery store preferences, consumers may be subject to social bias and answer according to their desired or perceived self-image. The self-construal of an individual influences store brand preferences.
Chapter F	To investigate the impact of self-construal on how consumers evaluate the price and packaging similarity for GSBs and HD GSBs	RA3 RA4	At high levels of self-construal when ISC or INSC is dominant, store brand evaluations of GSBs based on the PKM are reversed.
Chapter G	To examine the influence of self-construal on the visual evaluation of store brand packaging	RA3 RA4	Top-down visual attention is influenced by self-construal. When INSC is dominant, more visual attention is paid to individual packaging elements

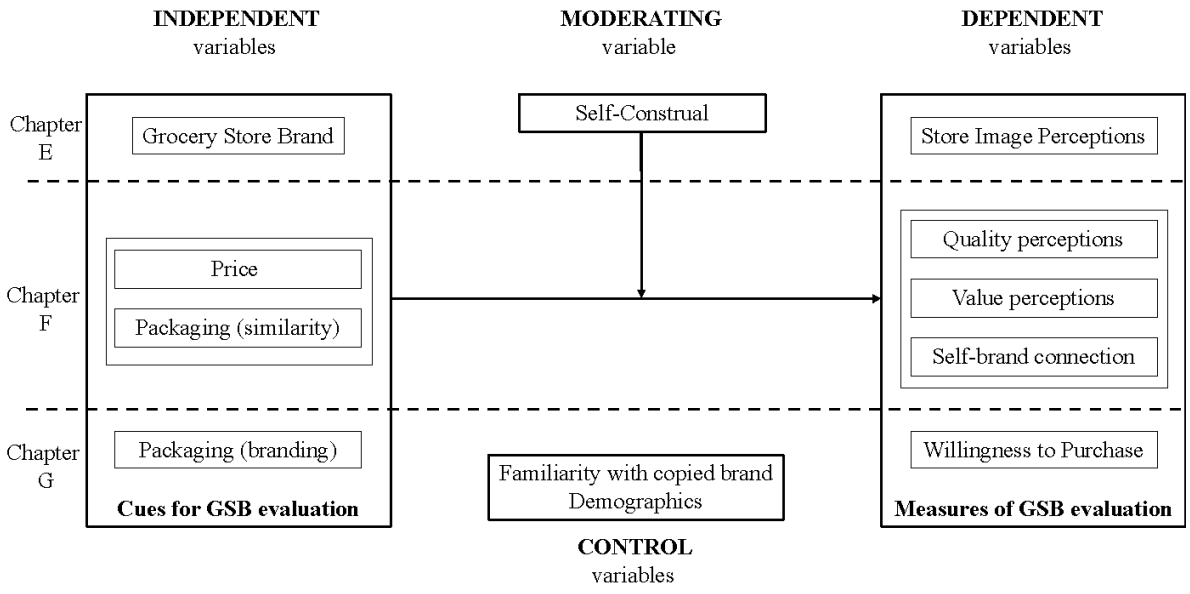
H2.1 Addressing Research Aim 1 in Chapter D

To address RA1, Chapter D presented a conceptual framework, based on the extrinsic product cues of price, packing and store image that consumers use to evaluate GSBs (Richardson et al., Garretson et al., 2001; Steenkamp et al., 2010; Zielke, 2014; Nies and natter, 2010; Keller et al, 2016; Konuk, 2018) and the characteristic psychological traits of consumers who are prone to GSB purchase (Ailawadi et al., 2001; Baltas, 2003; Manzur et al, 2011; Martos-Partal et al, 2015; Quinones et al., 2022). Review of GSB literature highlighted Friestad and Wright's (1994) PKM as a theoretical underpinning for determining consumer attitudes to 'copycat' store brands, GSBs which display a high level of visual resemblance to leading national brands (Warlop and Alba, 1994, Miceli and Pieters, 2010; van Horen and Pieters, 2012a.b, 2013). This addresses the scope of the research because HDs are typically

known for selling copycat GSBs (Kumar and Steenkamp, 2007; Steenkamp and Sloot, 2018). Furthermore, extrinsic cues of GSB evaluation (price, packaging, and store image) align to the types of knowledge upon which the PKM is based (Chapter D, section D2.2.2) confirming the PKM as an appropriate framework for the basis of GSB investigation.

Inclusion of consumer traits into the conceptual framework were derived from two origins. First, Markus and Kitayama's (1991) self-construal is noted by Friestad and Wright (1994) as a likely influence on PKM outcomes as discussed in Chapter B. A review of literature concerning self-construal in marketing research outlined the cognitive processes that give rise to differences between ISC and INSC individuals (Chapter C, section C2.3.1). Second, a summary of ISC traits (Chapter C, table C8) reveals a high incidence of overlap to characteristics of GSB prone consumers (discussed in section B2.4). Together these elements provide supporting evidence that self-construal will have an influence on GSB. The conceptual model developed in Chapter D is presented again in figure H37 highlighting how the individual studies in Chapters E, F and G complement each other in testing the model and meeting the RAs. All three studies include self-construal, but each focusses on a different cue of GSB evaluation. In the first study, Chapter E, store image is the focus. In Chapter F, price and packaging similarity are under observation. In Chapter G, packaging is investigated further with attention on the visual elements that make up the packaging design as opposed to similarity to the leading national brand.

Figure H37. Depicting the relationship between the three studies (chapters E, F and G)



H2.2 Addressing Research Aims 2 and 4 in Chapter E

RA2 addresses a central question highlighted in the research context (Chapter A). The image of HDs as low-cost basic alternatives to grocery stores is at odds with the growth and success reported in recent years (Zielke, 2014; Geyskens et al., 2018; Gijsbrechts et al., 2018; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). This is important for understanding store brand evaluation because store image is known to be an important influence on perceptions of GSBs (e.g., Bao et al., 2011; Nies and Natter, 2010; Keller et al., 2016). In addition to this RA4 seeks to understand how self-construal influences GSB evaluation. Results revealed that when asked directly, consumers expressed preference for mainstream grocery in comparison to HD. However, using the IAT to determine implicit preferences, the mainstream grocer was only preferred by consumers dominant in INSC. This provides evidence to explain the difference between stated consumer preferences and observed behaviours regarding grocery store choices. The prevailing image of HDs as low-cost alternatives to grocery stores means consumers may to be subject to social bias and answer according to their desired or perceived self-image. Furthermore, because only consumers high in ISNC implicitly preferred the grocery store, it has been demonstrated that self-construal impacts store image preferences. From this it can be concluded that GSB evaluation is likely to be influenced by self-construal, given the relationship between store image and GSB evaluation. These findings answer RA2 and support the further investigation of self-construal to meet RA4.

H2.3 Addressing Research Aims 3 and 4 in Chapter F

RA3 seeks to further understanding of HD GSBs and investigate how consumers perceive them using established cues of GSB evaluation (price and packaging similarity). HDs account for the majority of GSB sales worldwide, selling ‘copycat’ store brands which bear close resemblance to the leading national brand, at less than half the price (Steenkamp and Sloot, 2018; Gielens et al., 2021; Hunneman et al., 2021). Furthermore, as less than 10% of the products on sale in HDs are branded, consumers are unable to make direct comparisons with national brands when shopping there. Existing studies almost exclusively consider copycat GSB evaluation to occur through a comparative process (e.g., Warlop and Alba, 2004; Miceli and Pieters, 2010; Olson, 2012; van Horen and Pieters, 2012a; Kelting et al., 2017). Drawing upon the PKM, the presence of the copied national brand highlights the tactic of similarity being used to the consumers, and the copycat is perceived less favourably. When comparison is unavailable, copycat GSBs are considered more positively (D’Astous and Gargouri, 2001; van Horen and Pieters, 2012b).

Chapter F investigates how consumers evaluate similarity and price of different low-priced GSBs in the absence of a direct comparison to the leading national brand. This builds upon the study Chapter E which focussed on store image, and together these studies cover the three cues of GSB evaluation. Results highlighted three different evaluative mechanisms used by consumers according to the availability of heuristics, use of persuasion knowledge and influence of self-construal. Looking first at heuristics, when short-cuts are available consumers default to their use to minimise cognitive effort (e.g., Petty and Cacioppo, 1994; Steenkamp et al., 2010) and no difference between GSB and HD GSB is seen. For less familiar products when heuristics are unavailable, consumers draw upon persuasion knowledge to assist in making an evaluation. Consistent with existing studies (e.g., Warlop and Alba, 2004; Miceli and Pieters 2010; van Horen and Pieters, 2012a,b) high levels of similarity displayed by HD GSBs lead to a less favourable evaluation in comparison to other store brands. However, these evaluations are reversed when levels of self-construal are high and there is a dominance of ISC or INSC. This demonstrates the influence self-construal has over the PKM and highlights differences in how GSBs and HD GSBs are evaluated when shoppers do not default to heuristics. Together these results meet RA3 and RA4, however, one limitation must also be addressed. The GSB stimuli used were Tesco store brands and displayed the Tesco logo on the packaging. Store image is known to influence GSB evaluation and consistent branding of GSB packaging is way for retailers to capitalise upon this (Richardson et al., 1994; Nies and Natter, 2010; Keller et al., 2016). It is possible that packaging elements evoking the Tesco parent brand could have influenced consumers. To address this limitation, a further study was developed to investigate visual evaluation of GSB packaging and how self-construal might be an influencing factor. The way in which this study, Chapter G addresses RA3 and RA4 is presented in the following section

H2.4 Addressing Research Aims 3 and 4 in Chapter G

Chapter G focusses on how GSB packaging is visually interpreted, differentiating it from previous findings which addressed the effects of packaging similarity on consumer preference. The assessment individuals make of objects in their gaze can be recorded using eye-tracking and measurements of visual attention (e.g., Wedel and Pieters, 2007). Areas upon which increased visual attention is placed, indicates preference and may be used to infer intended behaviour (Orquin and Mueller Loose, 2013; Gordon-Hecker et al., 2020; Hofmaenner et al., 2020). Therefore, using this technique, further understanding can be gained regarding how consumers evaluate different packaging types.

Visual attention is influenced by two types of factors; bottom-up and top-down. Bottom-up influences are concerned with how the objects under investigation stand out in terms of size, colour, and prominence (Wedel and Pieters, 2007; Orquin and Mueller Loose, 2013). Therefore, the packaging design of different GSBs and HD GSBs with respect to individual elements such as product name and brand name, can influence consumer preference. Top-down factors are connected to psychological influences, such as motivation (Maughan et al, 2007; Behe et al., 2015; Duchowski, 2017; Gorden-Hecker et al, 2020). The different cognitive and motivational traits associated ISC and INSC are likely to have an impact on patterns of visual attention.

Results from Chapter G demonstrated that when the packaging of different GSBs was assessed using eye-tracking, the visual attention paid to individual elements such as the brand name and product name is not the same. For HD GSBs, the most prominent feature of the packaging design is the product name, which elicits greater visual attention from consumers in comparison to the more discrete product name displayed by a value GSB. A similar pattern was observed for the brand name, with consumer gaze being drawn more to the larger value GSB brand name than the smaller one of the HD GSB. Increased visual attention from consumers, is an indication of more positive perceptions (e.g., Orquin and Mueller-Loose). RA3 was concerned with investigating differences between consumer perceptions of price and packaging between GSBs and HD GSBs. In this study, contrasting patterns of visual gaze between different GSBs were demonstrated, indicating different preferences and meets the objective of RA3. Furthermore, the influence of self-construal over visual attention was another finding of this study. Results highlighted how INSC spend more time looking at individual elements that ISC. This is a further endorsement of how self-construal influences store brand packaging to satisfy RA4.

H3 Contributions to Knowledge from the Three Papers

This section presents the contributions to knowledge that have been made as a result of this thesis. A summary is given in this opening passage, followed by a short discussion outlining each extension. This body of work has investigated the psychological processes that underpin consumer store brand preferences, an area which has been overlooked in existing studies. An explanation for the tension between the popularity of HDs despite consumer perceptions of a poor image as highlighted in section A1.2 is made and calls for more research into HDs are answered (e.g., Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). Also put forward is an extension to studies using the PKM as a theoretical basis for evaluation of GSBs (e.g., van Horen and Pieters, 2012a,b; 2017). In addition to this, and perhaps the most important

contribution of this body of work, is the significance of self-construal as an influence on consumer store brand evaluation. To the best of the researcher's knowledge, this thesis presents the first studies to emphatically demonstrate the importance of self-construal as an influencing factor in the evaluation and preference of GSBs, building upon the work of scholars in this field (e.g., Hong and Chang, 2015; Shavitt and Barnes, 2020).

The background to this research brought attention to the rapid global growth of HDs in recent years and highlighted a paucity of academic investigation in this area. Only a handful of studies were found in the literature search that were specific to HDs (table B3, Chapter B). Unlike other grocery retailers, 90% of HD ranges are made up of store brands (Mintel, 2016; Gielens, et al., 2021) focussing the investigation and literature review to HDs and GSBs. The first contribution to be discussed considers HDs. The consensus of scholarly opinion proposes HDs to be seen as inferior in comparison to other grocery retailers. The perspective is that HDs are basic stores offering a 'no-frills' experience with a limited range of low-cost goods (Zielke, 2014; Geyskens et al., 2018; Gijsbrechts et al., 2018; Dekimpe and Geyskens, 2019; Loebnitz et al., 2020). However, this does not concur with the rapid growth HDs have experienced both in the UK and on a global scale as documented recently by Loebnitz et al. (2020) and Hunneman et al. (2021). The gap between observed and recorded consumer perceptions was investigated, using implicit measures in addition to explicit responses. Results revealed unexpressed preferences for HDs over other grocery stores, highlighting the importance of social bias in this consumption setting. This contributes to grocery retail literature by enhancing understanding of perceptions and attitudes towards HDs and grocery stores. Scholars are encouraged to consider unexpressed consumer opinion in future studies and include implicit measures in data collection procedures.

The second contribution extends understanding of the PKM with the proposal of a decision-making process for GSB evaluation. In this model (figure F21) the relationship between heuristics, persuasion knowledge and self-construal are presented. The cognitive processes called upon to evaluate GSBs are different according to their familiarity, and the level and type of self-construal of the individual. This finding has created a new framework to explain the subjective and personal nature of the PKM highlighted by previous studies questioning use of the PKM as a predicative tool (e.g., Campbell and Kirmani, 2008; van Horen and Pieters, 2013; Isaac and Grayson, 2017). Specifically, it has been empirically demonstrated that consumers default to available heuristics when evaluating GSBs (e.g., Steenkamp et al., 2010). Minimal cognitive effort is required to reach a decision in this instance (Petty and Cacioppo 1994; Dodds et al, 1991). When there is no short-cut as a default, consumers call upon their persuasion knowledge in order to make a better-informed

choice (Friestad and Wright, 1994). However, results have shown that when high levels of self-construal (ISC or INSC) are activated, evaluations of GSBs made using persuasion knowledge are reversed. This builds upon studies using the PKM as an evaluative framework for GSBs, which have presented atypical results (Warlop and Alba, 2004; van Horen and Pieters, 2013). Warlop and Alba (2004) proposed consumers evaluate GSBs based on the benefits they might derive with van Horen and Pieters (2013) suggesting that high levels of uncertainly may alter outcomes of the PKM. Establishing self-construal as an influencing factor on the PKM presents an opportunity for further studies to establish boundary conditions under which changes to expected persuasion outcomes take place.

The third contribution, and the one of most significance to be made by this thesis is an emphatic demonstration of the importance of self-construal as an influencing factor in the evaluation of store brands. Each of the three studies (Chapters E, F and G) empirically confirmed that when ISC or INSC were dominant, differing outcomes of evaluation were recorded. Previous studies have highlighted self-construal as significant factor in a variety of consumption contexts (e.g., Ahluwalia, 2008; Lalwani and Shavitt, 2013; Hong and Chang, 2015; Shavitt and Barnes, 2020). The different processing mechanisms and motivations that prevail when ISC or INSC are dominant offer explanation for consumer preferences. The overlap between ISC traits those associated with GSB proneness extend the findings of Quinones et al. (2022), making a connection between cultural values and smart shopper feelings when buying GSBs. To summarise, the self-construal literature is extended to include grocery retailing as a consumption context which opens-up new opportunities for further exploration in this already considerable domain of literature. This is of interest to both scholars and practitioners in related fields, the implications of which will be presented in the following section, along with other practical suggestions.

H4 Implications for Retail and Marketing Practitioners

The findings from this thesis have significance for retail and marketing practitioners as well as those who are researchers in the field of grocery retailing. The marketing and product teams at Tesco and Lidl were contacted with a request to supply digital images of GSBs for use as stimulus in Chapter G. Both teams expressed interest in findings being shared on completion of the thesis, which is an intention of the researcher and supports the significance of the work for industry professionals. In this section the implications for retail and marketing practitioners are presented. Included is confirmation of implicit consumer attitudes regarding HDs, the use of neurophysiological measures for the collection of additional insights and how

knowledge of consumer self-construal could be used to prime consumers and influence their GSB perceptions.

An important finding from this research reveals a difference between explicit and implicit consumer preferences for grocery stores and HDs. This is of considerable significance for marketing researchers and practitioners for several reasons. First, survey research is the most common method used to elicit consumer information within a commercial marketing context (Malhotra et al., 2017). Self-report measures cannot account for occasions where there are differences between what consumers say and the behavioural actions that are taken (e.g., Greenwald and Banaji; Rezaei, 2021). This suggests the effectiveness of surveys as a research tool is limited in certain settings.

In addition to this. the use of implicit methods to determine consumer attitudes can provide additional insights to researchers and offer a complimentary way to elicit information. The validity of the IAT test in giving insights into preferences that consumers do not express, in a way that is non-invasive, has been demonstrated in this research. When undertaking new product development research or other brand related feedback, managers have an additional tool enabling conscious and non-conscious attitudes to be determined.

Finally, implicit measures can also include other neurophysiological techniques such as observing visual attention using eye tracking (e.g., Orquin and Wedel, 2020). Chapter G demonstrated how eye-tracking can be used to highlight differences in visual attention patterns for GSBs. The established connection linking visual attention to increased preference (e.g., Orquin and Mueller Loose, 2013; Gordon-Hecker et al., 2020) presents an implicit way of determining consumer attitudes and liking for objects or images. Unlike lab-based studies, and those using special glasses, remote eye tracking studies do not require a specialised lab facility or equipment. Typically, participant's own hardware is used in the relative comfort and convenience of their home or chosen location. This allows practitioners a flexible way to gather insights and incorporate online eye tracking into other data collection activities such as regular web-based brand tracking using consumer panels. Embedding eye-tracking software into well-known interfaces Qualtrics (www.qualtrics.com) can be done to deliver a seamless overall experience. This makes it feasible to use online eye-tracking in packaging development and testing, as well as during the design process giving designers and managers access to a different type of feedback from consumers. Building in remote eye-tracking studies into the overall packaging development process presents an opportunity for gaining competitive advantage. Expertise in running and marketing online eye-tracking to industry partners also creates an opportunity for the UK research and analytics industry, in addition to the numerous insight generation techniques already on offer. It is possible that visual

attention metrics will become a common feature in packaging development in the next five years.

Another key finding this thesis has provided is to highlight the influence that self-construal has over consumer evaluation of GSBs. To date, no other studies have applied self-construal in the grocery retail environment, although it has been demonstrated in other consumption contexts. The significance of this is not to be underestimated, particularly as GSBs represent half of the total grocery market in some European countries, including the UK, and just under 20% in North America (Nielsen, 2019). When there is a high dominance of ISC or INSC in consumers, attitudes towards less familiar store brands are altered, as demonstrated in Chapter F. HD GSBs that display high levels of packaging similarity to leading national brands increase in perceptions of quality, value and SBC, whilst the reverse is shown for economy-tier GSBs. For managers this opens two opportunities. First, obtaining knowledge regarding the self-construal of the customer base will allow additional insights regarding purchasing behaviour to be drawn. It is common for retailers to use data from loyalty schemes to the understand patterns of buying and product preferences of their customer base (Rains and Longley, 2021). Adding in information regarding shopper self-construal will highlight any patterns or preferences exhibited and allow marketing programmes and category management activities to be tailored accordingly. Furthermore, retailers may use priming activities to evoke an ISC or INSC dominance in shoppers. Using specialised point of sale materials or online communications, preferences for certain GSBs can be enhanced. Given the number of transactions taking place in one week across the UK grocery market, a small increase in preference could have a significant impact upon sales and profitability.

In summary, increased understanding of consumer self-construal and the use of primes can be effectively used by retailers and managers to enhance the appeal of GSBs for their consumers. By using implicit measures such as eye-tracking or the IAT test, deeper insights into shopper attitudes can be collected. This includes visual attention measures which could be used in the development of GSB packaging that is optimised for shopper preference.

H5 Limitations and Future Research

Recognising the limitations of a research project is an important element of any study. It allows for interpretation of the findings within the context of known constraints and offers directions for future research to address key concerns. In subsequent sections the limitations of the three studies from this thesis are summarised, having been presented within chapters E, F and G. This is followed with opportunities for future research.

H5.1 Research Limitations

One limitation of the studies in this thesis is the setting in which the research was conducted. All three studies were experiments and therefore contrived (Bryman and Bell, 2015). Efforts were made to create a more natural setting and increase external validity using real packaging as stimulus. Correlating evidence demonstrating the effectiveness of self-construal in the evaluation of GSBs and HDs was consistent across all studies. Further studies drawing from more diverse populations are invited to replicate the observed effects of self-construal on GSB evaluation.

Measurement of self-construal is a well-documented limitation as low α values are commonplace (e.g., Bresnahan et al., 2005; Cross et al., 2011). In addition to this, studies drawing from Western populations would be expected to have a natural increased dominance of ISC (Markus and Kitayama, 1991). Undertaking three separate studies gave rise to the opportunity to both measure and prime self-construal. Consistent results from the three studies concurred regarding the influence of self-construal in the context of grocery retail. However, there remains an opportunity to allow for a broader generalisation of results and undertake further study using samples from culturally diverse populations.

As mentioned previously, the use of real packaging as stimulus was a deliberate choice to create more of a realistic setting and conserve external validity (Bryman and Bell, 2015). This included use of digital photographs and images for each study, including logos, store frontage, carrier bags and photographs of products purchased in the respective stores. For the eye-tracking study in Chapter G, real stimuli are of particular importance because in visual attention research eye movements are very sensitive to context and slight misrepresentations can lead to differences in results (Orquin and Wedel, 2020). Previous studies investigating copycat GSBs have used graphic designers to generate stimulus with synthesised levels of similarity (e.g., van Horen and Pieters, 2012a,b). This allows for increased control over manipulations but still relies upon a qualitative assessment of similarity. Using a quantitative technique to measure similarity could be adopted for a future study (e.g., Satomura, et al., 2014).

For each of the studies in this thesis, different sampling and recruitment mechanisms were used, each with their own limitations. In Chapters E and G, convenience samples were deployed, which means that they are unlikely to be representative of the whole populations and therefore results may not be generalised (Saunders et al., 2015). However, for studies investigating psychological processes (as per the over-arching objective of this thesis) convenience samples are considered to be appropriate (Kardes, 1996; Peterson, 2001; Lucas,

2003; Peterson and Merunka, 2014). This is based upon the consideration that behaviour and theoretical concepts observed in a certain situation can be generalised (Berkowitz and Donnerstein, 1992; Mook, 1993). Mook (1993) adds that only survey research has a requirement for representation. Recommendations from Peterson and Merunka (2014) to ensure 'real world' relevance of convenience samples, were followed and applied to participant selection. In Chapter F, data were collected via survey from a professional panel provider as common in marketing research (Malhotra et al., 2017).

Finally, the first two studies (Chapters E and F) were conducted before the COVID-19 pandemic and the third study, Chapter G took place during the pandemic. To date, no differences in the constructs under investigation have been identified as a result of the pandemic, but this is a factor to be take into consideration. By understanding the limitations, a study presents, opportunities for further and future research can be highlighted. Future research directions are in the following and final section.

H5.2 Future Research Directions

Future research directions from this thesis could lead to questions that have arisen from the findings regarding the influence of self-construal on GSB evaluation to be explored.
The first opportunity expands the current findings to other types of GSB. This thesis specifically investigated value GSBs and HD GSBs but extending an investigation to other GSB tiers and national brands would be of interest to brand owners and retailers. It is typical for grocers to operate multitier systems of GSBs (e.g., Geyskens et al., 2018; Baker 2020; Keller et al., 2020; Gielens et al., 2021) and understanding how self-construal impacts across different GSB tiers would extend the findings of this thesis and build on recent studies in this domain.

Second, and further adding to the developing stream of GSB tier research, there is an opportunity to classify store brands based on the visual gaze patterns of consumers with regard to packaging features such as product name and brand logo. Chapter G demonstrated how different sizes of visual elements such as product and brand names, influence measures of bottom-up attention. The relationship between store brand tier classification and bottom-up visual attention measures could be investigated. This would enable retailers to develop best-practice in GSB design and ensure visual features such as logo and product name were optimised according to the intended store brand tier. In addition to this, the influence of different colours and images could also be analysed.

Third, establishing self-construal as an important construct in grocery retailing, opens multiple opportunities for additional studies to test this finding in populations outside of the

UK. The prevailing dominant self-construal in the UK and other Western populations is ISC (Markus and Kitayama, 1991). A study investigating the impact of self-construal on GSBs ISC dominant nations versus those of NSC dominance (e.g., China or Japan) would enhance findings of this thesis and provide a global perspective to the results obtained.

Fourth, in Chapter F, results highlighted an interaction between self-construal and the PKM in the evaluation of GSB stimuli. For individuals who are dominant in either ISC or INSC, there is a point during the evaluation process where results suggest self-construal takes the place of the PKM as the dominant processing mechanism. Determination of the boundary conditions at which this phenomenon occurs could be further explore in other categories and settings to develop predictive models for consumption choices.

Finally, this thesis explored two GSB food categories, which denotes an opportunity to extend the findings by undertaking studies investigating multiple product types, food and non-food. This follows from Hansen et al. (2006) demonstrating category differences between store brands and Loebnitz et al. (2020) who consider social risk as influential factor in how different categories of goods are perceived. Determining if some categories are more influenced by self-construal than others would be interest to practitioners and researchers.

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Appendices

Appendix 1. Literature search including titles searched and terms used for initial and updated searches

Date	*Database*	*Journals*	*Keywords*	*Yield*
13.06.17	2000-2017 Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Business Source Premier Search term 1	Journal of Consumer Psychology, Journal of Consumer Research, Journal of Marketing, Journal of Marketing Research, Marketing Science International Journal of Research in Marketing, Journal of Retailing, Journal of the Academy of Marketing Science, European Journal of Marketing, Marketing Letters, Marketing Theory, Psychology & Marketing, Journal of Business Research	Private label	114 hits 65 not relevant **49 articles**
14.06.17			Store brand	145 hits 41 overlaps 84 not relevant **19 articles**
	As above	As above	Copycat	9 hits 2 overlaps 2 not relevant **5 articles**
			Brand imitation	6 hits 2 overlaps 1 not relevant **3 articles**
			Lookalike	1 hit 0 overlaps 0 not relevant **1 article**
			knockoffs	1 hit 0 overlaps 0 not relevant **1 article**
			Hard Discounters or discount retailers	23 hits 3 overlaps 17 not relevant **2 articles**

Date	Database	Journals	Keywords	Yield
10/10/21	2017-2021 Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - Business Source Premier Search term 1	Journal of Consumer Psychology, Journal of Consumer Research, Journal of Marketing, Journal of Marketing Research, Marketing Science International Journal of Research in Marketing, Journal of Retailing, Journal of the Academy of Marketing Science, European Journal of Marketing, Marketing Letters, Marketing Theory, Psychology & Marketing, Journal of Business Research	Private label	**21 hits** **5 articles**
10/10/21	As above	As above	Copycat	8 hits 2 overlaps 5 not relevant **0 articles**
			Brand imitation	1 hit 1 overlap 0 not relevant **0 articles**
			Store brand	59 hits 5 overlaps 53 not relevant **0 articles**
			Lookalike	0 hit 0 overlaps 0 not relevant **0 article**
			knockoffs	0 hit 0 overlaps 0 not relevant **0 article**
			Hard Discounters or discount retailers	8 hits, 1 overlap 6 not relevant **0 articles**

All Journals searched are ABS 3, 4 and 4*

Appendix 2. Example extract from GSB literature search summaries

Article	Unit of Analysis	Type of Private Label	Research Objective	Dependent Variable	Notes and theoretical underpinnings
Batra and Sinha (2000) 'Consumer level factors moderating the success of private label brands', *Journal of Retailing,* 76(2), pp.175-191.	Consumer	Unspecified	Investigates how different determinants of perceived risk help explain variations in purchase	Private label purchase behavior	Consumers are more likely to buy a PLB when the 'consequences of making a mistake' declines. Suggest that consumers perceive the consequences of making a mistake to be worse when there is a difference in quality between the brand and PLB. **Quality matters to consumers** **Cue Utilization theory**
Corstjens, M. and Lal, R. (2000) 'Building store loyalty through store brands', *Journal of Marketing Research*, 37(3), pp. 281-291.	Retailer	Unspecified	To investigate the role of private label brands (PLBs) in building store loyalty	Store differentiation, store loyalty and profitability	Quality PLBs can generate store differentiation, store loyalty, and store profitability. PLBs and NBs have a complimentary role because a quality PLB strategy is only profitable if a significant portion of shoppers buy the NB. **PLBs increase the power of the retailer.** **Stochastic choice models**
Till, B.D. and Priluck, R. L. (2000) 'Stimulus generalization in classical conditioning: An initial investigation and extension' *Psychology and Marketing,* 17(1) pp.55-72.	Consumer	Similar looking test products	To investigate the effects of stimulus generalization on similar looking brands within the same and different categories	Attitude toward the brand (Stuart et al, 1987)	**Stimulus generalization and classical conditioning of attitudes** **Similarity Theory (Tversky, 1977)**
Ailawadi, K. L., Neslin, S. A. and Gedenk, K. (2001) 'Pursuing the value conscious consumer: Store brands versus national brand promotions. *Journal of Marketing*, 65(1), pp. 71-89.	Retailer and Manufacturer	Unspecified	To investigate if promotions of national brands and PLBs attract the same value-conscious consumers, which would aggravate the conflict between retailers and manufacturers	Store brand use, in-and-out of store NB promotion use (based on different consumer traits) Note: in store promotions are deals and displays / specials found out about in store. Out of store promotion is a coupon or a flyer, considered before going to the store (more planned)	Psychographics are attitudes rather than demographics. **Store brand use correlates mainly with traits related to economic benefits and costs**, whereas the use of out-of-store promotions is associated mainly with traits related to hedonic benefits and costs. There are four well defined segments, Deal focussed consumers, store brand-focussed consumers, deal and store brand users and non-users of store brands and deals Theory of Reasoned Action (TRA), Utility theory
D'Astous, A. and Gargouri, E. (2001) 'Consumer evaluations of brand imitations', *European Journal of Marketing,* 35(1/2), pp.153-167.	Consumer	Copycat brands and copycat private labels (CCPLs)	To investigate the impact of the strength of imitation, the presence of the original, store image and persona characteristics on consumer evaluations of imitations.	Evaluation of imitation brands experiments	''in general **consumers do not perceive private brands as equivalent to national brands**, but as inevitably inferior (Ward et al.1986).'' Kapferer (1995) the risk of confusion increases with brand similarity and is greater when the original brand is **not present** **Considered Stimulus generalisation and TRA**
Dhar, S.K., Hoch, S.J. and Kumar, N. (2001) 'Effective category management depends on the role of the category' *Journal of Retailing,* 77(2), pp.165-184.	Retailer	Unspecified	Investigates the role of private label in increasing category performance	Category performance, pricing, retail sales promotion, product assortment, private label level	Private Label Brands (PLBs) play a key role in increasing demand for a category and improve the category performance for that retailer **Takes the perspective that PLBs are worth having**
Putsis, W.P. and Dhar, R. (2001) 'An empirical analysis of the determinants of category expenditure', *Journal of Business Research,* 52 (Dec), pp. 277-291.	Retailer and Manufacturer	Unspecified	Investigating the determinants of category expenditure for national brand and private labels	Expenditure	Promotions between PLBs and NBs are asymmetrical and therefore PLBs make no sense as they do not induce brand switching and share steal from national brands (NBs). However, research demonstrates that NB and PLB promotions increase category expenditure (and don't need to steal share to do so). **Therefore, PLBs are worth having**
Garretson, J.A., Fisher, D and Burton, S. (2002) 'Antecedents of private label attitude and national brand promotion attitude: similarities and differences', *Journal of Retailing,* 78(2), pp.91-99.	Consumer	Unspecified	Investigating the similarities and differences between consumer attitudes toward national brands and private labels	Purchase of promotes products, purchase of private label products	Value consciousness relates to both NBs and PLBs Smart shoppers buy NBs **Increased quality perceptions of PLBs will increase sales** **Acquisition-transaction utility theory (Thaler, 1985)**
Sayman, S., Hoch, S.J. and Raju, J.S. (2002) 'Positioning of store brands', *Marketing Science* 21(4), pp. 378-389.	Consumer	CCPLs	Investigates the positioning of private labels and assesses consumer perceptions of similarity	Perceptions of similarity	Game Theory The optimum store brand positioning is to be as close as possible to the leading national brand, however, **it only changes buyer behavior if the quality is comparable.** **Game Theory (stochastic modelling)**
Verhoef, P.C., Nijssen, E.J. and Sloot (2002) 'Strategic reactions of national brand manufacturers towards private labels: An empirical study in the Netherlands', *European Journal of Marketing,* 36(11/12), pp. 1309-1326.	FMCG marketing and brand managers	Unspecified	Investigates the strategic actions of brand owners in relation to private label brands	Qualitative. Inductive to create scale items investigated quantitatively Brand strength, image and product variety Attitude toward private label introduction Reaction to competitor's behaviour to private labels Ability to differentiate products technologically	Manufacturers are more concerned with other rival brands than PLBs. Rival brands are attacked with promotions, PLBs are 'distanced' (in terms of quality) through innovation and advertising
Baltas, G. (2003), 'A combined segmentation and demand model for store brands', *European Journal of Marketing,* 37(10), pp.1499-1513.	Consumer	Unspecified	To design a model of store brand consumption and investigate store brand consumption determinants	Consumption of store brands	the store brand loyal customer is profiled as a consumer with higher social status, who shops more frequently the category, exhibits store loyalty, and tends to spend less on the category.
Ailawadi, K. L., and Harlam, B. (2004) 'An empirical analysis of the determinants of retail margins: the role of store-brand share', *Journal of Marketing,* 68(1), pp. 147-165.	Retailer	Unspecified	Develops and tests a model of the key determinants of margins that retailers earn on national brands and private labels.	Percentage margin, dollar margin per unit, and total dollar margin	Retail margin is higher % wise (May be smaller $wise) for store brands than manufacturer brands. **TRA** High store brand share enables retailer to earn higher percentage margins, on national brands, however heavy store brand used contribute much less to the total dollar profit of the retailer than do light store-brand buyers

Appendix 3 Chapter E participant recruitment, information, consent and debrief

Kingston University London

Participant Information Sheet

Study title: An investigation into consumer attitudes towards grocery stores and hard discounters

Thank you for your interest.
You are invited to take part in a doctoral research study. Before you decide to proceed it is important that you understand what the research is being conducted and what it will involve. Please take time to carefully read the following information and ask if anything is not clear.

What is the purpose of the study?
In this study, the researcher is seeking to investigate the attitudes consumers have towards different types of grocery stores in the UK. The results of the study will be part of a wider research plan which looks at how attitudes towards grocery stores impact upon how consumers perceive grocery store brands or private labels.
In order to investigate perceptions of different grocery stores, the research would like to explore reactions of consumers to images of different stores and ask some questions about their attitudes in general. All of this will take place on a computer screen which will be in an individual booth for your comfort and privacy.

Who can take part in this study?
Adults (18+) who currently reside in the UK and have knowledge of UK grocery stores are eligible to take part in this study.

Do I have to Participate?
No. If you do not wish to take part then please inform the researcher now or at any time during the study and you are free to leave.

What will I have to do?
You will be asked to sit at a computer screen, answer some questions related to the topic and complete a small task. The task involves sorting images and words into categories by clicking on a given letter on the computer keyboard. You will be given instructions once you are seated in front of the screen.

There are no identified risks or disadvantages of taking part in this study. If at any time you wish to end your session, please inform the researcher. It is your right to do this if you wish and doing so will not cause any consequential actions.
All test results and answers to questions are anonymous. None of the information requested can be used to identify you in any way. All data collected in this study will be analysed statistically and used as part of a doctoral thesis and may also be used in subsequent publications
The study has been reviewed and granted permission to proceed by the Ethics Committee of the Faculty of Business and Social Sciences ant Kingston University.

If you have any questions regarding the study please do not hesitate to ask. Alternatively, you may with to contact my supervisor, Dr Chris Hand whose email address is [Redacted]
If you wish to complain about any aspect of how you have been treated in this research, please contact Professor Jill Schofield who is the Dean of the Faculty of Business and Social Sciences at Kingston University London.
[Redacted]

This research is part of a doctoral student thesis and has not been funded commercially.
Thank you for taking your time to read this information sheet.

Kingston University London

www.kingston.ac.uk

Consent Form

- I the undersigned voluntarily agree to take part in a study investigating consumer attitudes to grocery stores
- I have read and understood the Information Sheet provided. I have been given a full explanation by the investigators of the nature, purpose, location and likely duration of the study, and of what I will be expected to do. I have been given the opportunity to ask questions on all aspects of the study and have understood the advice and information given as a result.
- I understand that the data generated through this interview will statistically analysed and used as part of a doctoral thesis and may also be used in publications after the study has ended.
- I understand that all personal data relating to volunteers is held and processed in the strictest confidence, and in accordance with the General Data Projection Regulation (GDPR) 2018. I agree that I will not seek to restrict the use of the results of the study on the understanding that my confidentiality is preserved. I agree that the data I provide can be used for xx PhD research and in any future related research or teaching projects.
- I understand that I am free to withdraw at any time during the study.

I confirm that I have read and understood the above and freely consent to participating in this study. I have been given adequate time to consider my participation and agree to comply with the instructions and restrictions of the study.

Name of volunteer……
(BLOCK CAPITALS)

Signed ……

Date ……..

Name of researcher/person taking consent ……..
(BLOCK CAPITALS)

Signed ……..

Date ……

The survey has been completed
Thank you very much for taking part

Please see below for some information regarding the study.
You took part in a short experiment involving images of supermarkets and some positive and negative words. Then you completed a survey regarding your thoughts about different supermarkets and about how you see yourself.

The goal of this study is to determine if there is a difference between the expressed and unexpressed preferences people hold for well-known supermarkets brands. In addition to this, the impact of self-construal (how a person thinks of themselves in relation to others) on expressed and unexpressed supermarket preferences was investigated.

A summary of the study's findings will be made available to participants upon request from April 2020. If you would like to receive a summary of the findings after that point, please contact the researcher, Kate Jones. Contact details can be found on the card you were given prior to starting the study.
If you wish to withdraw from the study, you may do so up until the post-participation withdrawal date of March 1st, 2020.

This research forms part of a PhD thesis investigating consumer preferences for different types of supermarket store brands and your participation is greatly appreciated.
If you have any questions regarding the research, please do not hesitate to contact the researcher. Alternatively, you may wish to contact the researcher's supervisor. Please see below for contact details.

Supervisor: Dr Chris Hand
Associate Professor, Faculty of Business and Social Sciences

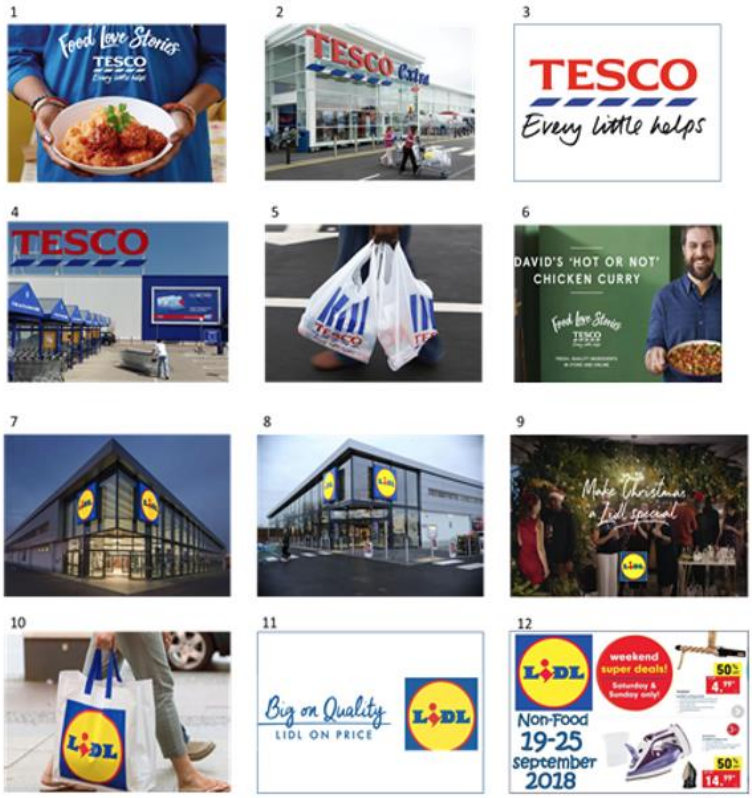
[Redacted]

If you wish to complain about any aspect of how you have been treated in this research, please contact Professor Jill Schofield who is the Dean of the Faculty of Business and Social Sciences at Kingston University London.
Professor Schofield's contact details are as follows:

Dean's Office, Faculty of Business and Social Sciences,
Kingston University London,

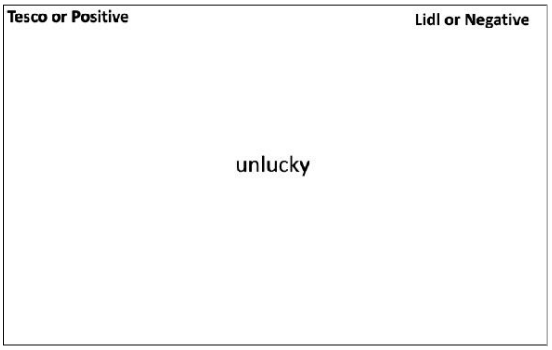
[Redacted]

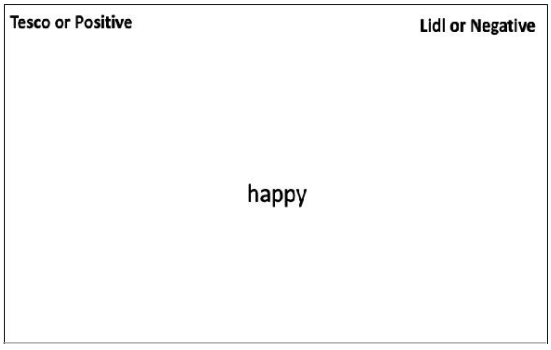
Appendix 4 Store image stimulus for the IAT test



All images sourced via google search

Appendix 5 Store image stimulus for the IAT test Images sourced from the following pages:





Appendix 6 Proposed scale for explicit measurement of store image

(Mazursky and Jacoby, 1986: Hopkins and Alford, 2001: Delgado-Ballester *et al*., 2014).

Question 1

For the grocery store brand shown on the screen, please indicate by clicking in the relevant box how much you agree with the following statements, where 0 = do not agree at all and 10 = completely agree

a. The store is a pleasant place to shop

0	1	2	3	4	5	6	7	8	9	10

Do not agree at all — Completely agree

b. The store carries high quality merchandise

0	1	2	3	4	5	6	7	8	9	10

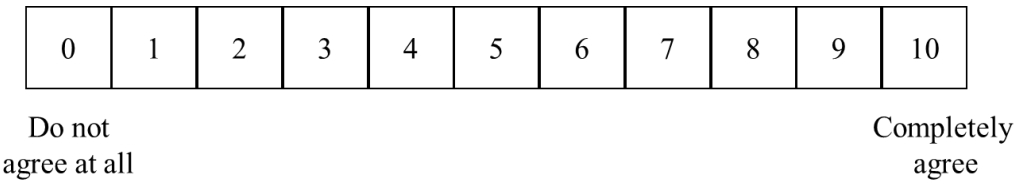
Do not agree at all — Completely agree

c. Salespeople are helpful

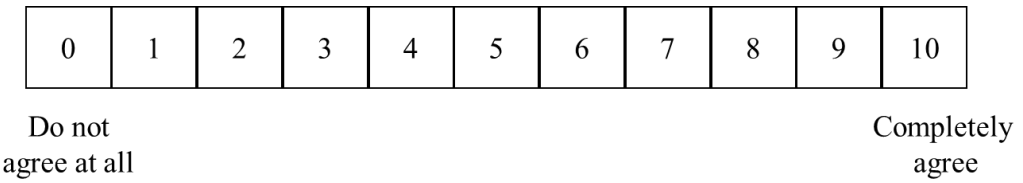
0	1	2	3	4	5	6	7	8	9	10

Do not agree at all — Completely agree

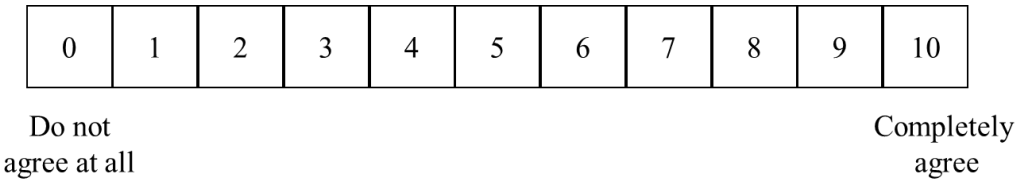
d. The store's merchandise charges competitive prices



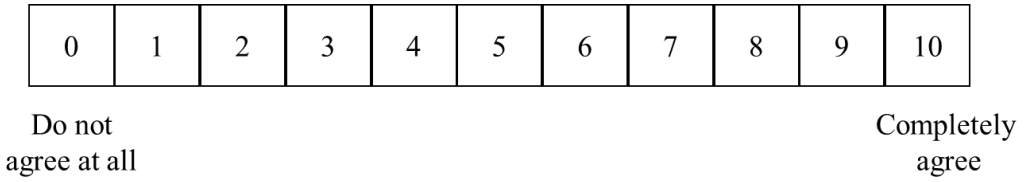
e. The store has convenient opening hours



f. The store offers a broad assortment



g. The store offers good overall service



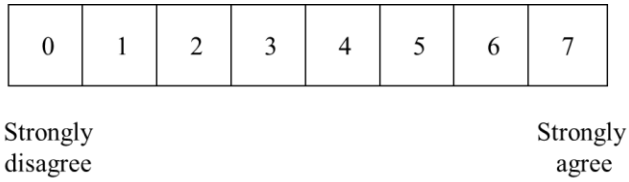
The same scale was also used for Lidl, showing the Lidl logo.

Appendix 7: Proposed scale for self-construal measurement (Singelis, 1994)

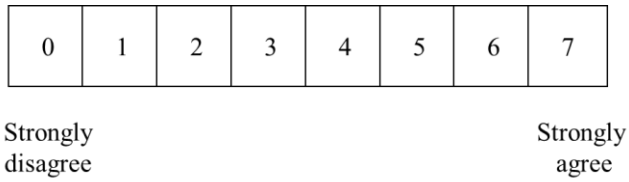
The following questions are about you. Both have 12 parts and won't take you more than a few minutes. Please read each question and answer on a scale of 1 to 7 where 1= *strongly disagree* and 7 = *strongly agree*
(all questions will be presented in a random order I the study)

Question 1

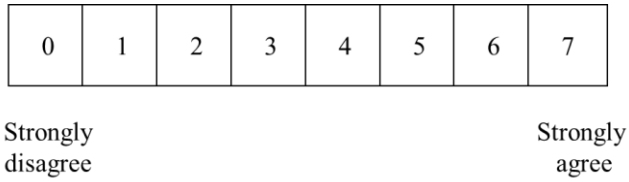
a. I have respect for the authority figures with whom I interact



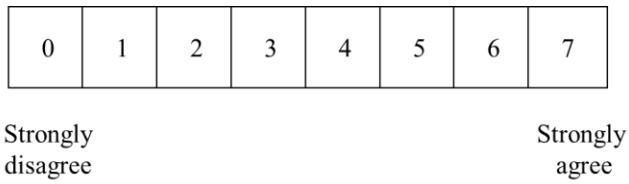
b. It is important for me to maintain harmony within my group



c. My happiness depends on the happiness of those around me



d. I would offer my seat in a bus to my lecturer[2]



e. I respect those people who are modest about themselves

[2] Changed from Singelis (1994) original 'professor' to 'lecturer / boss' to better suit sample population

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

f. I will sacrifice my self-interest for the benefit of the group I am in

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

g. I often have the feeling that my relationships with others are more important than my own accomplishments

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

h. I should take in to consideration advice from my family[3] when making education / career plans

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

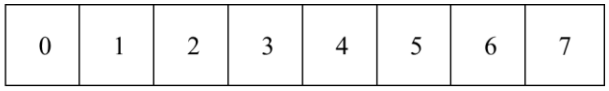
i. It is important to me to respect decisions made by the group

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

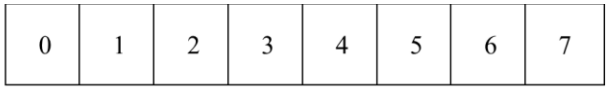
j. I will stay in a group if they need me, even when I'm not happy with the group

[3] Changed from Singelis (1994) original 'my parents' to 'my family' to better represent the sample population



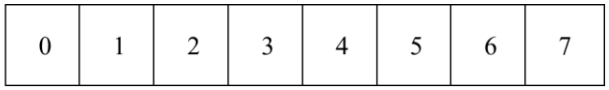
Strongly disagree — Strongly agree

k. If my brother or sister fails, I feel responsible



Strongly disagree — Strongly agree

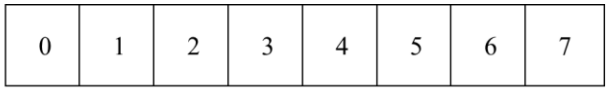
l. Even when I strongly disagree with group members, I avoid an argument



Strongly disagree — Strongly agree

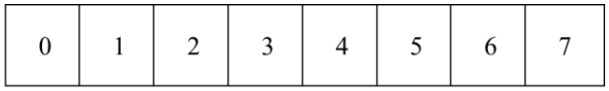
Question 2

a. I'd rather say 'No' directly than risk being misunderstood



Strongly disagree — Strongly agree

b. Speaking up during a class is not a problem for me



Strongly disagree — Strongly agree

c. Having a lively imagination is important to me

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

d. I am comfortable with being singled out for praise or rewards

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

e. I am the same person at home I am at university*** [4]/ work

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

f. Being able to take care of myself is a primary concern for me

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

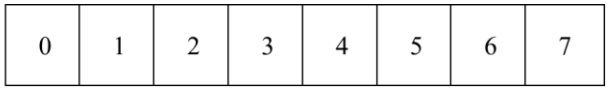
g. I act the same way no matter who I am with

0	1	2	3	4	5	6	7

Strongly disagree — Strongly agree

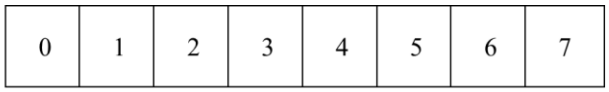
h. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am.

[4] Changed from Singelis (1994) original 'school' to 'university / work' to better represent the sample population



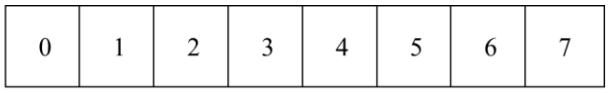
Strongly disagree — Strongly agree

i. I prefer to be direct and forthright when dealing with people I've just met



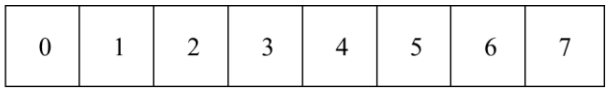
Strongly disagree — Strongly agree

j. I enjoy being unique and different form others in many respects



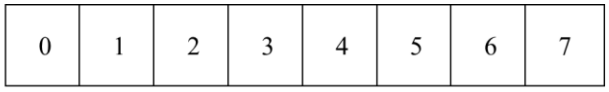
Strongly disagree — Strongly agree

k. My personal identity independent of others, is very important to me



Strongly disagree — Strongly agree

l. I value being in good health above everything



Strongly disagree — Strongly agree

Appendix 8 Participant consent and debrief used in Chapter F

Welcome to the survey.
This research forms part of a PhD thesis and has not been funded by a third party.

There are two parts to the study, first you will be shown some pictures of supermarket own-brands and asked some questions about them. Then you will be asked some questions about yourself and what you think and feel in different situations.
Please answer all of the questions as honestly and truthfully as you can.
If you wish to end the survey at any point, you are free to do so.
Your participation in this survey will be anonymous. No personal data will be collected and no identifying pieces of data concerning you will be shared with the researcher, only your responses to the questions will be recorded.
Please click the appropriate box to confirm your consent to continue and start the survey.
Press the arrow to begin

- ○ I consent to my answers being used for research purposes.
- ○ I do not consent to my answers being used for research purposes.

Thank you for taking part in this study

You were shown some images of supermarket own brands and asked to give your opinions on them with regard to value, quality and how representative of you as a person you felt they were. You were also asked about how you think about yourself.

The goal of this experiment was to determine the impact of packaging similarity and price on different supermarket brands and how self-construal (the way a person thinks about themselves) Impacts upon this evaluation.

A summary of findings will be made available on request from January 2020. If you would like to receive a copy, please contact the researcher, Kate Jones [Redacted]

If you wish to withdraw from the study, you may do so until 31 December 2019. Please contact the researcher in the event of this being the case. Your data will be retrieved and removed.

This research forms forms of a PhD thesis investigating consumer preferences for different types of supermarket brands and your participation is gratefully appreciated.
If you have any questions regarding the research, please contact the researcher, or the researcher's supervisor:

Researcher: Kate Jones [Redacted]
Researcher's Supervisor: Professor Chris Hand [Redacted]

If you wish to complain about any aspect of this research, please contact the research provider.

Appendix 9 Chapter F Stimulus

33p

45p

35p

25p

36p

25p

Appendix 10 Chapter G participant information, consent and

Kingston University London

debrief

Participant Information Sheet

Study title: An investigation into consumer preference of grocery store brands

Invitation

You are invited to take part in a doctoral research study. Details regarding the study are described in this document. Before you decide to take part, it is important that you understand what research is being conducted and what it will involve. Please take time to read this information sheet and feel free to discuss your participation with friends or family. If you agree to participate, please sign and return the consent form to the researcher via email, keeping a copy for your records

What is the purpose of the study?

In this study, the researcher is seeking to examine the eye-tracking patterns of different individuals to see if there are differences in how the packaging of grocery store brands (also known as private labels) is visually interpreted. The results of the study will be part of a wider research plan which

looks at how attitudes towards grocery stores influences how consumers think about the private label brands that they sell.
To investigate how individuals look at packaging, the research plans to use eye-tracking to record the eye movements of people when viewing different images. All of this will take place remotely and online whilst you are seated at your own computer screen in your own preferred surroundings.

Who can take part in this study?
Adults (18+) who currently reside in the UK and have knowledge of UK grocery stores are eligible to take part in this study. It is also important that for the nature of the research that participants are not registered as blind or are known to be colour blind. If either of these conditions apply to you then it may prevent you from taking part.

Do I have to Participate?
No. Your participation is entirely voluntary. If you choose not to patriciate, then you do not need to give a reason. Similarly, if you wish to take part and then change your mind at any time you may do so without giving a reason. If you withdraw from the study all your data will be destroyed.

Will I be rewarded for my time?
Yes. Your time and your responses are very valued by the researcher and a £5 voucher is offered to you on completion of the study. Details on how to claim your voucher will be provided on receipt of confirmation from you that the study has been completed.

What will I have to do?
You will be invited to sit comfortably at your own computer screen (not a tablet or mobile phone) with the camera switched on. You will be asked to answer a couple of questions and for your consent again. Then you will be asked to complete a task involving reading a short paragraph and clicking on some of the words. When this has been completed there will be an exercise to make sure the eye tracking component of the study has been correctly set up. Once this is complete you will be asked to look at some images on the screen and then answer a couple of questions. Whilst you view the images your eye movements will be recorded. No imagery of you will be captured.
In total the study should take no more than 10 minutes. You don't have to complete any of the tasks and you can stop at any point with no need to inform the researcher or give any reason for doing so.

Will any images of me be captured?
No. In an eye-tracking study the camera only captures the movement of your eyes and is not taking images of your face or anything else.

Are there any risks?
There are no identified risks or disadvantages associated with taking part in this study and the process itself is non-invasive. You may stop and end the study at any time.
In the event that you have any complaints about the process then please contact the researcher, the researcher's supervisor or the Dean of the Faculty

Will my taking part in the study be kept confidential?

Yes. All results and answers to questions are anonymous. None of the information requested can be used to identify you in any way and you are free to withdraw at any point.
Data will be stored securely in accordance with the UK Data Protection Act (2018). Because all of the data are anonymous, in the event you wish to be removed from the study, the following procedure has been created to enable your data to be located. When you complete the study, you will be given a randomly generated 4-digit number (that only you will know) and asked to input it. This number is unique to you and can be used at any time prior to the final withdrawal date (31/9/21) to locate your information in the database so that it may be removed and destroyed. It will also be used to identify you in order to give you your reward.
All data collected in this study will be analysed statistically and used as part of a doctoral thesis and may also be used in subsequent publications.
If you have any questions regarding the study, please do not hesitate to ask.

Contact details of the researcher
Principal researcher: Kate Jones [Redacted]

What if there is a problem?
If you have any questions relating to the research, please do not hesitate to ask the researcher (Kate Jones). Alternatively, you may wish to contact the researcher's supervisor:

Professor Chris Hand [Redacted]

If you have any concerns about the research or at any point you wish to complain about how your experience, please contact:
Professor Jill Scofield, Dean of the Faculty of Business and Social Sciences / Pro Vice-Chancellor
Kingston University, Penrhyn Road, Kingston Upon Thames, KT1 2EE [Redacted]
Post participation withdrawal date
If you wish to withdraw from the study and you decide that you do not want your data included after your participation, then you may do so up until the post participation day of September 30th, 2021.

Who is organising and funding this research?
This research has not been funded commercially and is part of a doctoral thesis.
The study has been reviewed and granted permission to proceed by the Ethics Committee of the Faculty of Business and Social Sciences at Kingston University.

Thank you for taking your time to read this information sheet.

Kingston University London

Consent Form

- I the undersigned voluntarily agree to take part in an online eye-tracking study investigating how consumers look at grocery store brands.
- I have read and understood the Participant Information Sheet provided. I have been given a full explanation by the researcher regarding the nature, purpose, location and likely duration of the study and of what I will be expected to do. I have been given the opportunity to ask questions regarding the study and understood the information given as a result.
- I understand that the study will take place online and that only data relating to the movement of my eyes will be recorded, no images of my face or my surroundings will be recorded
- I understand that data generated in this study will be analyzed and be used as part of a doctoral thesis and may also be used in publications after the study has ended.
- I understand that no identifying pieces of data linking to me personally will be collected and that all data will be held in accordance with the UK Data Protection Act (2018).
- I understand that I am free to withdraw from the study at any time up until Sept 30th 2021 without needing to justify my decision and without prejudice.

I confirm that I have read and understood the above and freely consent to participating in this study. I have been given adequate time to consider my participation and agree to comply with the instructions and restrictions of the study

Name of participant (BLOCK CAPITALS) ……

Signed ……

Date ……

Name of researcher (BLOCK CAPITALS) ……

Signed [Redacted]

Participant Debrief Sheet

Study title: An investigation into consumer preference of grocery store brand

Thank you for taking part

Your participation in this study has been greatly appreciated. This sheet is a follow up the information you have already received and seeks to tell you a little bit more about the research you were part of.

What was the purpose of the study?

In this study, the researcher was seeking to examine the eye-tracking patterns of different individuals to see if there are differences in how the packaging of grocery store brands (also known as private labels) is visually interpreted. The results of the study will be part of a wider research plan which looks at how attitudes towards grocery stores influences how consumers think about the private label brands that they sell.

Also included in this study was consideration for the different thinking styles people have, to see if different styles might have different effects on visual interpretation. The reading task you completed first was a psychological prime, designed to influence the way the brain to interpret information in a certain way. Half of the participants in this study were influenced with a collectivist prime (we/us/our) and half with an individualistic one (I/me/my). If the results show a difference it could help to explain the purchasing behaviour of individuals.

To reassure you, all of the information you have given is completely confidential and there is nothing in the dataset that can link you personally to any of the results. Data will be stored securely in accordance with the UK Data Protection Act (2018). Because all of the data are anonymous, in the event you wish to be removed from the study, please email or message me with the 4-digit code given to you in the study (this will locate your entry). This number can be used at any time prior to the final withdrawal date (30/9/21) to locate your information in the database so that it may be removed and destroyed.

All data collected in this study will be analysed statistically and used as part of a doctoral thesis and may also be used in subsequent publications. If you'd like to receive a copy of the findings, please let me know.

If you have any questions regarding the study, please do not hesitate to ask.

Kate Jones

[Redacted]

Dear XX
I hope you are keeping well.
I am contacting you as I am looking for people who might be interested in taking part in a short online eye tracking study which is a part of my PhD research. The study is looking at how people view the packaging of different brands.
It will take place online and at a time convenient to you.
If you are interested, please reply with your email address and I will send you some more information and a consent form.
Many thanks for your time

Kindest Regards
Kate

Follow up email / message

Dear XX
Thank you so much for expressing your interest in taking part in this study. It is important that I provide you with some more information regarding the process before you give your consent to take part, and to answer any questions that you might have.

Please take your time to review the attached information sheet and please let me know if you have any questions. If you are happy to proceed, please return a signed copy of the consent form to me and I will send you a link to the study.

In order that you are compensated you for your time and to thank you for taking part, there is a £5 voucher for you on receipt of confirmation that the study has been completed.

If you change your mind about taking part, that is absolutely not a problem and you don't have to let me know.

Thank you again.
Kate

Email with link to the study

Dear XX

Thank you for sending me your signed consent and for agreeing to take part in this research. Please find below a link where you can access the study.

The study works best if you are seated at a screen in a well-lit room and please note Safari does not support the software, but Chrome works well.

I hope you enjoy the study and please do contact me if you have any problems or questions

Study link

At the end of the study, you will be given a unique 4-digit code and asked to input it. This is important as it is a way of identifying you in the data whilst retaining your anonymity.

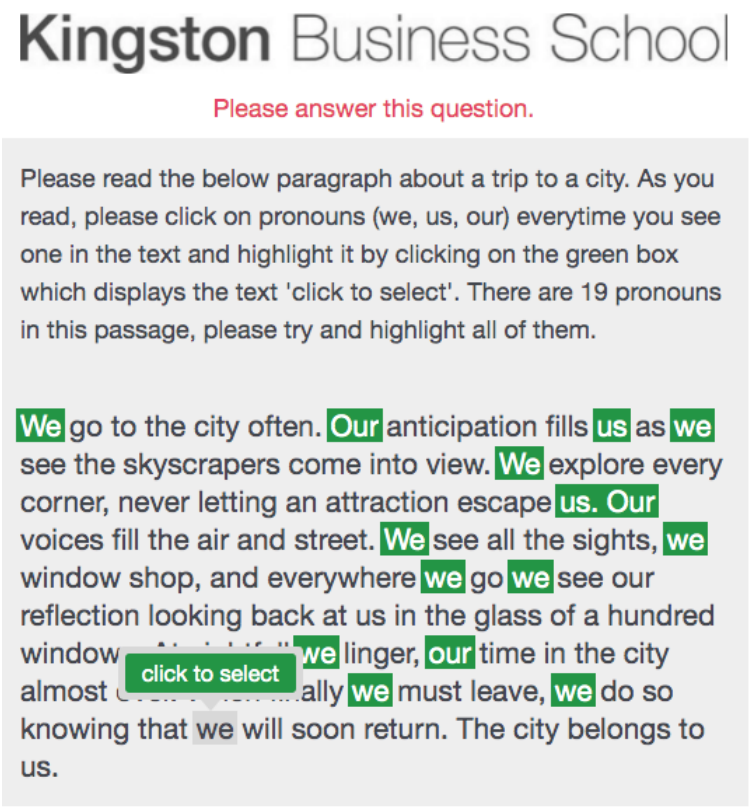
Please make a note of this number (you will be reminded to do so in the study) so you may remove your data from the study in the future if you wish to and in order for you to claim your £5 reward and receive a debrief from the researcher.

On completion of the study, you will automatically be directed to an anonymous form where you can input your 4digit code and email address to where the debrief and reward can be sent.

Thank you again for taking part in the study, I look forward to debriefing you soon

Kate

Appendix 11. Online pronoun task used for priming of self-construal (INSC shown)



Appendix 12. Summary of on-screen instructions for eye-tracking set up.

Eye-tracking Test

Before we begin, you need to accept RealEye Terms & Conditions and Privacy Policy.

In a few words: We value your privacy and don't store any images from your webcam. It's not our intention to collect any personal data, and you always have the right to ask us to remove your data.

☑ I agree to the RealEye Terms of Service and Privacy Policy.

Next

Eye-tracking Test

Hi there!

You're about to take part in a webcam eye-tracking test. Please read all instructions carefully.

Next

Eye-tracking Test

Your browser will enter full screen mode.

If you're using a laptop, please connect it to the power adapter.

Next

Eye-tracking Test

Your face has to be in good lighting

Please sit comfortably and make sure your face is evenly lighted. This is really important!

Next

Eye-tracking Test

Try to keep your head still

Stay in front of the screen for the whole time. Make sure no one will interrupt you for the next few minutes.

Next

Eye-tracking Test

Please enable webcam access

✔ OK. We can use your webcam to do the task.

Next

Eye-tracking calibration

Please move mouse pointer over the red dots

Is your face inside the green frame?

Appendix 13 A summary of each AOI size expressed as a % of the overall visual area.

	Digestives		Ginger nuts	
AOI	**Tesco**	**Lidl**	**Tesco**	**Lidl**
Product name	0.5	4.3	0.3	4.9
Brand logo	4.1	1.4	3.9	1.5
Nutritional info	0.6	1.0	1.0	0.7

Appendix 14. Sample size calculations for three studies using G*Power

Study 1 = Chapter E

Study 2 = Chapter F

Study 3 = Chapter G

Sample G*Power 3.1 calculation for Study 1

Test Family	t-test
Statistical Test	Difference between two independent means
Type of Power Analysis	A priori
Effect Size (d)	0.8
α	0.05
Power	0.8
Number of Groups	2
Total Sample Size	42

Sample G*Power 3.1 calculation for Study 2

Test Family	*f*-test
Statistical Test	ANCOVA: Fixed effects, main effects and interactions
Type of Power Analysis	A priori
Effect Size (*f*)	0.2
α	0.05
Power	0.8
Number of Groups	24
Total Sample Size	316

Sample G*Power 3.1 calculation for Study 3 Pilot

Test Family	t-test
Statistical Test	Difference between two independent means
Type of Power Analysis	A priori
Effect Size (d)	0.8
α	0.05
Power	0.8
Number of Groups	2
Total Sample Size	42

Sample G*Power 3.1 calculation for Study 3

Test Family	*f*-test
Statistical Test	ANOVA: Fixed effects, special, main effects and interactions
Type of Power Analysis	A priori
Effect Size (*f*)	0.4
α	0.05
Power	0.8
Number of Groups	6
Total Sample Size	64

Appendix 15 Normality tests and Homogeneity of Variance for Study 2, Chapter F – Biscuit

Dependent Measure	self-construal 1 = high ISC dominant 2 = slight ISC dominant 3 = neutral ISC/INSC 4 = high INSC dominant	similarity 1 = low 2 = med. 3 = high	price 1 = shown 2 = not shown	Shapiro Wilk's (p)	Outliers	Skewness	Kurtosis	K-S test	df
Quality	1	1	1	0.643	0	0.31	-0.233	0.2	18
	2	1	1	0.645	0	0.202	-0.828	0.2	10
	3	1	1	0.398	40	-0.735	0.789	0.136	16
	4	1	1	0.555	0	-0.595	-0.794	0.2	9
	1	1	2	0.614	0	0.467	0.047	0.2	13
	2	1	2	0.053	0	-0.477	-1.247	0.083	14
	3	1	2	0.726	0	-0.107	-0.536	0.2	15
	4	1	2	0.537	102, 104	-0.577	1.745	0.2	11
	1	2	1	0.026	120, 119	-1.315	1.733	0.027	15
	2	2	1	0.277	130	1.067	1.318	0.2	11
	3	2	1	0.414	0	0.166	-1.231	0.2	14
	4	2	1	0.517	0	-0.753	0.363	0.2	13
	1	2	2	0.299	0	0.268	-1.215	0.2	13
	2	2	2	0.898	0	-0.187	-0.268	0.2	15
	3	2	2	0.093	0	0.247	-1.979	0.127	9
	4	2	2	0.151	0	0.269	-0.886	0.061	16
	1	3	1	0.464	0	-0.455	-0.11	0.2	12
	2	3	1	0.592	0	0.695	0.093	0.16	14
	3	3	1	0.157	0	0.193	-1.162	0.2	10
	4	3	1	0.18	0	0.033	-1.381	0.109	17
	1	3	2	0.651	0	-0.716	1.147	0.2	9
	2	3	2	0.165	0	-0.718	-0.387	0.2	14
	3	3	2	0.18	0	0.15	-1.297	0.2	17
	4	3	2	0.814	0	-0.026	1.191	0.2	13
Value	1	1	1	0.002	2	-1.917	4.573	0.019	18
	2	1	1	0.032	26	-1.469	3.181	0.166	10
	3	1	1	0.064	0	-0.671	-0.444	0.07	16
	4	1	1	0.093	50	-1.528	3.034	0.2	9
	1	1	2	0.251	0	-0.765	0.4	0.2	13
	2	1	2	0.003	0	-1.214	0.386	0.002	14
	3	1	2	0.518	0	-0.359	-0.7	0.2	15
	4	1	2	0.303	0	-1.111	1.347	0.2	11
	1	2	1	0	119	-3.11	10.849	0.002	15
	2	2	1	0.284	0	0.223	-1.471	0.2	11
	3	2	1	0.038	138	-1.247	1.017	0.102	14
	4	2	1	0.006	159	-1.273	0.751	0.045	13
	1	2	2	0.043	0	-0.145	-1.495	0.2	13
	2	2	2	0.852	0	-0.316	0.088	0.2	15
	3	2	2	0.119	0	0.124	-1.529	0.2	9
	4	2	2	0.049	0	-0.949	0.23	0.099	16
	1	3	1	0.43	0	-1.204	0.705	0.2	12
	2	3	1	0.003	236, 237	-1.494	1.383	0.019	14
	3	3	1	0.765	0	-0.072	-0.668	0.2	10
	4	3	1	0.079	264	-1.026	0.577	0.2	17
	1	3	2	0.364	267	-1.145	1.761	0.2	9
	2	3	2	0.05	0	-0.627	-0.802	0.139	14
	3	3	2	0.042	0	-0.194	-1.439	0.124	17
	4	3	2	0.239	0	0.116	-1.367	0.2	13
SBC	1	1	1	0.085	0	0.009	-1.432	0.112	18
	2	1	1	0.349	0	0.537	-0.827	0.2	10
	3	1	1	0.108	0	-0.906	0.418	0.136	16
	4	1	1	0.587	0	-0.06	-1.12	0.2	9
	1	1	2	0.151	0	1.235	1.446	0.142	13
	2	1	2	0.423	0	-0.098	-0.72	0.2	14
	3	1	2	0.711	0	-0.139	-0.964	0.2	15
	4	1	2	0.912	0	-0.181	-0.415	0.2	11
	1	2	1	0.102	0	0.801	0.044	0.129	15
	2	2	1	0.983	0	0.211	-0.46	0.2	11
	3	2	1	0.034	0	-0.599	-1.29	0.047	14
	4	2	1	0.248	0	-0.173	-1.445	0.2	13
	1	2	2	0.591	0	-0.135	-0.792	0.2	13
	2	2	2	0.486	0	0.233	0.856	0.2	15
	3	2	2	0.349	195	-0.1068	2.438	0.2	9
	4	2	2	0.207	0	0.347	-1.037	0.148	16
	1	3	1	0.833	0	0.383	-0.564	0.2	12
	2	3	1	0.505	234	0.733	1.499	0.2	14
	3	3	1	0.021	0	0.951	-0.417	0.043	10
	4	3	1	0.047	0	-0.374	-1.388	0.117	17
	1	3	2	0.421	0	-0.105	-1.626	0.2	9
	2	3	2	0.447	0	0.215	-137	0.2	14
	3	3	2	0.141	0	-0.144	-1.407	0.15	17
	4	3	2	0.832	0	0.047	-0.168	0.2	13

Quality dependent variable, biscuit

Levene's Test of Equality of Error Variances[a]

Dependent Variable: qmb

F	df1	df2	Sig.
1.158	23	294	.283

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Age + B_fam + similarity + price + SC_group + similarity * price + similarity * SC_group + price * SC_group + similarity * price * SC_group

Value dependent variable, biscuit

Levene's Test of Equality of Error Variances[a]

Dependent Variable: vmb

F	df1	df2	Sig.
.747	23	294	.795

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Age + B_fam + similarity + price + SC_group + similarity * price + similarity * SC_group + price * SC_group + similarity * price * SC_group

SBC dependent variable, biscuit

Levene's Test of Equality of Error Variances[a]

Dependent Variable: sbmb

F	df1	df2	Sig.
.869	23	294	.641

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Age + B_fam + similarity + price + SC_group + similarity * price + similarity * SC_group + price * SC_group + similarity * price * SC_group

Appendix 16 Normality tests and Homogeneity of Variance for study 2, Chapter F, Soup

Dependent Measure	self-construal 1 = high ISC dominant 2 = slight ISC dominant 3 = neutral ISC/INSC 4 = high INSC dominant	similarity 1 = low 2 = med 3 = high	price 1 = shown 2 = not shown	Shapiro Wilk's (p)	Outliers	Skewness	Kurtosis	K-S test	df
Quality	1	1	1	0.336	0	-0.55	-0.496	0.2	18
	2	1	1	0.17	0	0.144	-1.22	0.2	10
	3	1	1	0.401	0	-0.408	-0.743	0.2	16
	4	1	1	0.944	0	-0.194	-0.717	0.2	9
	1	1	2	0.103	0	0.666	-1.199	0.2	13
	2	1	2	0.118	0	0	-1.614	0.2	14
	3	1	2	0.794	0	0.154	-0.459	0.2	15
	4	1	2	0.063	102, 103, 104	-1.183	3.155	0.072	11
	1	2	1	0.314	0	-0.351	-1.048	0.2	15
	2	2	1	0.565	0	-0.317	-1.163	0.2	11
	3	2	1	0.452	0	0.14	-1.228	0.2	14
	4	2	1	0.911	0	-0.096	-0.953	0.2	13
	1	2	2	0.519	0	-0.44	-0.185	0.2	13
	2	2	2	0.147	182	-0.654	-0.348	0.016	15
	3	2	2	0.301	0	0.904	-0.054	0.2	9
	4	2	2	0.423	0	0.175	-1.238	0.2	16
	1	3	1	0.109	0	-0.778	-0.636	0.2	12
	2	3	1	0.493	0	0.42	-0.598	0.2	14
	3	3	1	0.128	248	-1.207	1.165	0.2	10
	4	3	1	0.143	0	0.477	-0.791	0.2	17
	1	3	2	0.969	0	-0.215	-0.787	0.2	9
	2	3	2	0.704	0	-0.122	-0.77	0.2	14
	3	3	2	0.26	292	-0.915	1.017	0.2	17
	4	3	2	0.176	0	-0.481	-1.113	0.2	13
Value	1	1	1	0.384	0	-0.391	-0.123	0.2	18
	2	1	1	0.331	0	-0.168	-1.591	0.2	10
	3	1	1	0.253	0	-0.316	-1.036	0.2	16
	4	1	1	0.478	50	-0.992	2.284	0.2	9
	1	1	2	0.136	0	-0.194	-1.483	0.166	13
	2	1	2	0.019	0	-1.542	2.637	0.2	14
	3	1	2	0.125	93	-1.105	1.832	0.2	15
	4	1	2	0.007	104	-2.036	4.98	0.182	11
	1	2	1	0.022	119	-1.155	0.982	0.123	15
	2	2	1	0.373	0	-0.088	-1.523	0.2	11
	3	2	1	0.582	0	-0.525	-0.261	0.2	14
	4	2	1	0.257	0	-0.733	-0.355	0.034	13
	1	2	2	0.066	0	-0.597	-1.125	0.176	13
	2	2	2	0.12	0	-0.866	0.121	0.2	15
	3	2	2	0.549	192, 193	0.285	1.885	0.2	9
	4	2	2	0.043	0	-0.303	-1.43	0.193	16
	1	3	1	0.004	216	-1.522	2.215	0.019	12
	2	3	1	0.167	0	-0.059	-1.589	0.2	14
	3	3	1	0.614	0	0.583	-0.053	0.163	10
	4	3	1	0.003	261	-1.77	3.962	0.021	17
	1	3	2	0.609	0	-0.341	-0.717	0.2	9
	2	3	2	0.109	0	-0.63	-0.783	0.144	14
	3	3	2	0.38	0	-0.292	-0.219	0.2	17
	4	3	2	0.027	0	-0.466	-1.639	0.081	13
SBC	1	1	1	0.005	0	0.306	-1.735	0.036	28
	2	1	1	0.996	0	-0.16	0.387	0.2	10
	3	1	1	0.336	0	-0.676	0.38	0.2	16
	4	1	1	0.621	0	0.076	-0.826	0.2	9
	1	1	2	0.05	0	0.902	-0.447	0.081	13
	2	1	2	0.162	0	0.27	-1.034	0.133	14
	3	1	2	0.872	0	-0.043	-0.734	0.2	14
	4	1	2	0.401	0	-0.284	-0.954	0.2	11
	1	2	1	0.033	0	0.887	-0.466	0.2	15
	2	2	1	0.802	0	0.317	-0.822	0.2	11
	3	2	1	0.135	0	-0.254	-1.318	0.185	14
	4	2	1	0.712	0	0.383	-0.67	0.2	13
	1	2	2	0.022	0	0.7	-0.64	0.021	13
	2	2	2	0.016	0	0.429	-1.511	0.022	15
	3	2	2	0.693	195	-0.53	1.399	0.95	
	4	2	2	0.055	0	0.33	-1.412	0.05	16
	1	3	1	0.669	0	0.469	-0.268	0.2	12
	2	3	1	0.362	0	0.532	0.459	0.2	14
	3	3	1	0.208	0	0.349	-1.271	0.2	10
	4	3	1	0.205	0	0.03	-1.404	0.2	17
	1	3	2	0.122	0	0.626	-1.303	0.2	9
	2	3	2	0.68	0	0.012	-0.949	0.2	14
	3	3	2	0.234	0	-0.214	-1.266	0.2	17
	4	3	2	0.082	0	0.372	-1.481	0.2	13

Quality dependent variable, soup

Levene's Test of Equality of Error Variances[a]

Dependent Variable: qms

F	df1	df2	Sig.
.868	23	294	.643

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + similarity * price + price * SC_group + similarity * SC_group + price * Gender + price * Age

Value dependent variable, soup

Levene's Test of Equality of Error Variances[a]

Dependent Variable: qms

F	df1	df2	Sig.
.968	23	294	.507

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + similarity * price + price * SC_group + similarity * SC_group + price * Gender + price * Age + SC_group * S_fam + price * S_fam + similarity * S_fam + Age * S_fam + Gender * S_fam

SBC dependent variable, soup

Levene's Test of Equality of Error Variances[a]

Dependent Variable: sbmb

F	df1	df2	Sig.
.869	23	294	.641

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + B_fam + Gender + Age + similarity + price + SC_group + similarity * price + similarity * SC_group + price * SC_group + similarity * price * SC_group

Appendix 17 Normality tests and Homogeneity of variance for H_1 and H_2

	group	Shapiro Wilk's (*p*)	Outliers	Skewness	Kurtosis	K-S test (*p*)	df
Digestives	1 ISC, MML	0.007	1	1.68	3.14	0.07	8
	2 ISC, MM	0.11	3	0.935	2.08	0.194	8
	3 INSC, MML	0.18	0	0.26	-1.48	0.2	8
	4 INSC, MM	0.11	0	-0.4	-1.9	0.2	8
Ginger Nuts	1 ISC, MML	0.6	0	0.39	-0.01	0.2	8
	2 ISC, MM	0.29	0	-0.36	-1.32	0.29	8
	3 INSC, MML	0.69	0	-0.42	-0.87	0.2	8
	4 INSC, MM	0.37	0	0.05	-0.94	0.2	8

MML = Ms Molly's with Logo

MM = Ms Molly's

Digestive Biscuits

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
digestives	Based on Mean	3.581	3	30	.025
	Based on Median	2.660	3	30	.066
	Based on Median and with adjusted df	2.660	3	26.407	.069
	Based on trimmed mean	3.591	3	30	.025

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: digestives

b. Design: Intercept + SC + Digestives + SC * Digestives

Ginger Nut Biscuits

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
ginger nuts	Based on Mean	6.709	3	32	.001
	Based on Median	2.056	3	32	.126
	Based on Median and with adjusted df	2.056	3	22.388	.135
	Based on trimmed mean	6.545	3	32	.001

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: ginger nuts

b. Design: Intercept + SC + Ginger_nuts + SC * Ginger_nuts

Appendix 18 Normality tests for eye tracking data by group (H_3-H_6)

	Group	Shapiro Wilk's (p)	Outliers	Skewness	Kurtosis	K-S test (p)	df
Ginger Nuts	ISC, MML	<0.01	1	3	9	<0.01	9
Product name	ISC, MM	<0.01	1	1.53	1.23	0.01	9
Number of fixations	INSC, MML	0.05	1	1.53	2.57	0.04	9
	INSC, MM	0.02	1	1.96	4.19	<0.01	10
	ISC, TG	0.2	0	-0.59	-0.01	0.32	8
	INSC, TG	0.27	0	0.62	-0.55	0.2	9
Ginger Nuts	ISC, MML	0.75	0	-0.16	-1.1	0.2	9
Brand name	ISC, MM	0.5	0	-0.203	-0.75	0.2	9
Number of fixations	INSC, MML	0.84	0	0.2	-0.83	0.2	8
	INSC, MM	0.11	0	0.71	-0.41	0.01	10
	ISC, TG	0.08	0	1.33	1.67	0.2	8
	INSC, TG	0.41	0	0.75	-0.51	0.2	9
Digestives	ISC, MML	0.01	1	1.86	3.1	<0.01	8
Product name	ISC, MM	<0.01	0	1.24	-0.01	0.02	9
total gaze duration	INSC, MML	0.22	0	0.75	0.14	0.2	8
	INSC, MM	<0.01	1	1.96	3.89	0.01	8
	ISC, TG	0.31	0	-0.02	-1.4	0.2	9
	INSC, TG	0.98	0	0.01	-0.28	0.2	10
Digestives	ISC, MML	0.76	0	-0.57	-1.83	0.2	8
Brand name	ISC, MM	<0.01	1	2.04	4.4	0.143	9
total gaze duration	INSC, MML	0.6	0	0.51	-0.19	0.2	9
	INSC, MM	0.5	0	1	1.2	0.2	8
	ISC, TG	0.24	0	0.54	0.11	0.2	9
	INSC, TG	<0.01	1	3.01	9.64	<0.01	10

MML = Ms Molly's with Logo
MM = Ms Molly's
TG = Tower Gate

Appendix 19 Homogeneity of Variance test and ANOVA output for each significant result

a) Digestive, product name, total duration

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
product name	Based on Mean	9.409	5	46	.000
	Based on Median	7.663	5	46	.000
	Based on Median and with adjusted df	7.663	5	20.929	.000
	Based on trimmed mean	9.483	5	46	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: product name

b. Design: Intercept + Digestives + SC + Digestives * SC

Tests of Between-Subjects Effects

Dependent Variable: product name

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	94265401[a]	5	18853080.2	14.933	.000	.619
Intercept	68399555.4	1	68399555.4	54.179	.000	.541
Digestives	91572795.5	2	45786397.7	36.267	.000	.612
SC	325758.949	1	325758.949	.258	.614	.006
Digestives * SC	1310219.95	2	655109.975	.519	.599	.022
Error	58073786.1	46	1262473.61			
Total	233072511	52				
Corrected Total	152339187	51				

a. R Squared = .619 (Adjusted R Squared = .577)

b) Digestive, product name, number of fixations

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
product name	Based on Mean	6.291	5	46	.000
	Based on Median	5.545	5	46	.000
	Based on Median and with adjusted df	5.545	5	18.486	.003
	Based on trimmed mean	6.498	5	46	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: product name

b. Design: Intercept + Digestives + SC + Digestives * SC

Tests of Between-Subjects Effects

Dependent Variable: product name

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1045.700[a]	5	209.140	18.633	.000	.669
Intercept	694.220	1	694.220	61.852	.000	.573
Digestives	982.356	2	491.178	43.762	.000	.655
SC	13.139	1	13.139	1.171	.285	.025
Digestives * SC	26.125	2	13.063	1.164	.321	.048
Error	516.300	46	11.224			
Total	2394.000	52				
Corrected Total	1562.000	51				

a. R Squared = .669 (Adjusted R Squared = .634)

c) Digestive, brand name, total duration

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
brand logo	Based on Mean	2.691	5	47	.032
	Based on Median	2.243	5	47	.065
	Based on Median and with adjusted df	2.243	5	29.648	.076
	Based on trimmed mean	2.696	5	47	.032

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: brand logo

b. Design: Intercept + Digestives + SC + Digestives * SC

Tests of Between-Subjects Effects

Dependent Variable: brand logo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	89795406[a]	5	17959081.2	5.913	.000	.386
Intercept	240171775	1	240171775	79.070	.000	.627
Digestives	67670827.0	2	33835413.5	11.139	.000	.322
SC	9866467.80	1	9866467.80	3.248	.078	.065
Digestives * SC	12586831.1	2	6293415.53	2.072	.137	.081
Error	142760213	47	3037451.35			
Total	458006463	53				
Corrected Total	232555619	52				

a. R Squared = .386 (Adjusted R Squared = .321)

d) Digestive brand name, number of fixations

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
brand logo	Based on Mean	2.743	5	47	.030
	Based on Median	1.538	5	47	.196
	Based on Median and with adjusted df	1.538	5	34.027	.204
	Based on trimmed mean	2.703	5	47	.032

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: brand logo

b. Design: Intercept + SC + Digestives + SC * Digestives

Tests of Between-Subjects Effects

Dependent Variable: brand logo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	488.279[a]	5	97.656	7.410	.000	.441
Intercept	1377.008	1	1377.008	104.484	.000	.690
SC	.904	1	.904	.069	.795	.001
Digestives	423.887	2	211.943	16.082	.000	.406
SC * Digestives	67.506	2	33.753	2.561	.088	.098
Error	619.419	47	13.179			
Total	2393.000	53				
Corrected Total	1107.698	52				

a. R Squared = .441 (Adjusted R Squared = .381)

e) Ginger Nuts product name total duration

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
product name	Based on Mean	4.989	5	47	.001
	Based on Median	3.156	5	47	.015
	Based on Median and with adjusted df	3.156	5	19.589	.030
	Based on trimmed mean	4.751	5	47	.001

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: product name

b. Design: Intercept + SC + Ginger_nuts + SC * Ginger_nuts

Tests of Between-Subjects Effects

Dependent Variable: product name

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.009E+8[a]	5	20183044.5	21.001	.000	.691
Intercept	54434170.0	1	54434170.0	56.639	.000	.547
SC	11649744.1	1	11649744.1	12.122	.001	.205
Ginger_nuts	57410630.9	2	28705315.5	29.868	.000	.560
SC * Ginger_nuts	27790795.3	2	13895397.6	14.458	.000	.381
Error	45170082.6	47	961065.588			
Total	200389228	53				
Corrected Total	146085305	52				

a. R Squared = .691 (Adjusted R Squared = .658)

f) Ginger Nuts product name number of fixations

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
product name	Based on Mean	7.809	5	47	.000
	Based on Median	6.106	5	47	.000
	Based on Median and with adjusted df	6.106	5	14.936	.003
	Based on trimmed mean	7.496	5	47	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: product name

b. Design: Intercept + SC + Ginger_nuts + SC * Ginger_nuts

Tests of Between-Subjects Effects

Dependent Variable: product name

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	982.789[a]	5	196.558	22.318	.000	.704
Intercept	555.829	1	555.829	63.112	.000	.573
SC	98.000	1	98.000	11.128	.002	.191
Ginger_nuts	712.252	2	356.126	40.437	.000	.632
SC * Ginger_nuts	135.364	2	67.682	7.685	.001	.246
Error	413.928	47	8.807			
Total	1942.000	53				
Corrected Total	1396.717	52				

a. R Squared = .704 (Adjusted R Squared = .672)

g) Ginger Nuts brand name total duration

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
brand logo	Based on Mean	2.426	5	47	.049
	Based on Median	1.671	5	47	.160
	Based on Median and with adjusted df	1.671	5	27.716	.175
	Based on trimmed mean	2.248	5	47	.065

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: brand logo

b. Design: Intercept + SC + Ginger_nuts + SC * Ginger_nuts

Tests of Between-Subjects Effects

Dependent Variable: brand logo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	56383601[a]	5	11276720.2	3.224	.014	.255
Intercept	273299779	1	273299779	78.124	.000	.624
SC	13351052.0	1	13351052.0	3.816	.057	.075
Ginger_nuts	36357028.2	2	18178514.1	5.196	.009	.181
SC * Ginger_nuts	9380804.66	2	4690402.33	1.341	.271	.054
Error	164419302	47	3498283.02			
Total	490977121	53				
Corrected Total	220802903	52				

a. R Squared = .255 (Adjusted R Squared = .176)

h) Ginger Nuts brand name number of fixations

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
brand logo	Based on Mean	2.671	5	47	.033
	Based on Median	1.797	5	47	.132
	Based on Median and with adjusted df	1.797	5	34.691	.139
	Based on trimmed mean	2.636	5	47	.035

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: brand logo

b. Design: Intercept + SC + Ginger_nuts + SC * Ginger_nuts

Tests of Between-Subjects Effects

Dependent Variable: brand logo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	320.448[a]	5	64.090	4.561	.002	.327
Intercept	1651.317	1	1651.317	117.519	.000	.714
SC	57.827	1	57.827	4.115	.048	.081
Ginger_nuts	233.843	2	116.922	8.321	.001	.261
SC * Ginger_nuts	38.037	2	19.018	1.353	.268	.054
Error	660.419	47	14.051			
Total	2634.000	53				
Corrected Total	980.868	52				

a. R Squared = .327 (Adjusted R Squared = .255)