# 'Pick Me, Pick Me!'

# Standing Out in E-Commerce

## Uncovering Insights Regarding Successful Methods for Brand Prominence Online

A thesis submitted for the degree of Master of Research (Marketing)


Louise Dunstone

B. Business (Marketing)

Supervision Team:
Dr. Arry Tanusondjaja
Prof. Jennifer Romaniuk
Dr. William Caruso


May 2023


University of South Australia
Ehrenberg-Bass Institute for Marketing Science

# DECLARATION

This thesis received support from an Australian Government Research Training Program Scholarship, as well as the many sponsors of the fundamental research conducted by the Ehrenberg-Bass Institute for Marketing Science.

I declare that this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.

An abstract from this study, titled *'What Makes a Brand Stand Out Online?'*, was peer reviewed and accepted for presentation at the ANZMAC 2022 Conference.

……………………………………………

Louise Dunstone

May 2023

# ACKNOWLEDGEMENTS

I would like to extend my heartfelt gratitude to my three supervisors for their guidance and support throughout my research journey. Thank you, **Arry**, for your positive and enthusiastic attitude, as well as the writing tips and statistical knowledge that you so generously shared. Thank you, **Jenni**, for your immeasurable contributions to my research. As a mentor and source of inspiration, you have taught me to challenge my assumptions and embrace my intellectual curiosity, motivating me to become a better researcher. Thank you, **Will**, for sharing your coding skills and participating in panel discussions, even while successfully completing your own research in pursuit of a PhD.

I am thankful to the Ehrenberg Bass Institute for Marketing Science and the University of South Australia for their generous funding, which made this research possible. Thank you, **Larry**, for warmly welcoming me to the Institute and acquainting me with the world of research. Thank you, **Kirsty** and **Byron**, for providing me with the initial opportunity to embark on this journey and for your continued support.

I feel extremely fortunate to have discovered the Institute and to have been welcomed into its esteemed team. Having been given the opportunity to contribute to its evidence-based research initiatives is something that I will always treasure. This experience marks a beautiful beginning to my professional career, as I enter my next chapter enriched with a wealth of knowledge and many cherished memories.

Lastly, I would like to express my deep appreciation to my family for their unconditional love and support throughout all my endeavours.

# ABSTRACT

In today's cluttered shopping environments, brands must stand out from their competitors to be noticed (Nenycz-Thiel & Romaniuk, 2021; Romaniuk, 2023; Vinitha et al., 2021). The use of visual design elements on packaging, such as colours, logos, and text, help to attract shopper attention (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk & Caruso, 2018; Silayoi & Speece, 2007; Underwood et al., 2001; Walter & Gioglio, 2020). Visual elements are particularly valuable for consumer-packaged goods (CPG) brands, as shoppers make purchase decsions based on visual examination of the package (Clement, 2007).

Electronic commerce (e-commerce) is an online shopping environment which has seen exponential growth in recent years (Statista, 2023). Increasing competition online means little attention is afforded to individual brands (Hicks & Still, 2019; O'Connor, 2015). Brands have very little 'real estate' in e-commerce, adding to the difficulty that brands face in standing out (Romaniuk, 2018b). Advertisements, special offers, and notifications contribute to the clutter and draw shopper attention away from brands (Nenycz-Thiel & Romaniuk, 2021). This reinforces the importance of visual elements in helping brands to be more visible in e-commerce.

Prior in-store studies identified colour as the most prominent visual element on shelf, through an intercept interview method (Gaillard, 2007; Piñero et al., 2010). Comparable e-commerce studies merely analyse individual elements or categorise elements into visual and verbal groups, for example, image versus text (Kim & Lennon, 2008; Townsend & Kahn, 2014). Whilst potentially useful for evaluation of a single element type, these studies do not allow for comparison across element types. Accordingly, this research extends prior in-store research (Gaillard, 2007; Piñero et al., 2010) to determine if the findings are generalisable to e-commerce.

The thesis investigates the relationship between visual elements and brand prominence, to understand which elements capture the most attention online. Two studies are conducted across 11 CPG categories. **Study 1** investigates eight product cateogies, tested across US and UK markets in 2020. **Study 2** covers three product categories in the US in 2021. The brands tested in Study 2 are local to the sample country, allowing for the

measurement of potential familiarity and usage effects. Brands of varying sizes, including both national and private label brands, are selected to measure the effect of brand size.

The thesis contributes three main discoveries to academia and practice. First, the thesis finds that **colour is the most prominent element** in e-commerce and in-store, extending prior in-store studies (Gaillard, 2007; Pinero De Plaza et al., 2015). Moreover, while colour should be prioritised in both shopping environments, its use is especially important in-store with the possibility of the colour blocking tactic, where multiple facings of a single brand create a substantial block of colour on shelf and effectively attract attention (Aglo, 2019; Kahn, 2017; Vermeulen, 2013; Young, 2003).

**Design is the second most prominent element** in e-commerce and in-store. This finding demonstrates the importance of the overall packaging aesthetic, including structural design features of shape and size. While the potential for structural design to draw attention is acknowledged, it should be noted that practicality and usability are important roles of packaging (Ambrose & Harris, 2011; Underwood, 2003). Therefore, modifications to packaging design may be detrimental if done at the expense of easy transportation, storage, and use (Rundh, 2009).

Finally, **larger brands are more prominent than smaller brands** in e-commerce and in-store. Moreover, **private label brands are less prominent than national brands** in both shopping environments, likely due to a lack of advertising (Baltas et al., 1997; Cunningham et al., 1982; Nenycz-Thiel & Romaniuk, 2014). Nonetheless, **small brands have the opportunity to achieve the promience of a large brand**, by building distinctive visual elements. Advertising is one way in which distinctive visual elements can be built, enhancing the prospects of standing out for both small and private label brands.

The main implication is that brand owners should prioritise the use of colour. Selecting colours the brand can own, rather than adhering to category colour prototypes (Velasco & Spence, 2019), is recommended to help the brand stand out in the cluttered shopping environment. Besides colour, an appealing package design can assist in drawing attention. Lastly, building distinctive visual elements is especially useful for achieving prominence (Romaniuk, 2018b). For both small and private label brands, the task of building and using distinctive visual elements is of increased importance.

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# PART ONE:
# OVERVIEW

# CHAPTER 1: Introduction

Part of the challenge faced by brands in electronic commerce (e-commerce) is being easy to find in cluttered shopping environments (Nenycz-Thiel & Romaniuk, 2021; Romaniuk, 2023; Vinitha et al., 2021), which typically means standing out amidst competitors. Visual elements, such as colours, logos, and text, help shoppers locate brands in shopping environments (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk & Caruso, 2018; Silayoi & Speece, 2007; Underwood et al., 2001; Walter & Gioglio, 2020). To help brands decide which elements to prioritize on packaging, this research investigates the relationship between visual elements and brand prominence in e-commerce and in-store shopping environments.

This chapter provides a broad overview of the thesis, beginning with an outline of the research background and an explanation of the research problem. It then presents an overview of the research method and key findings across two studies. Finally, the academic and managerial contributions of this research are briefly summarised, and the structure of the thesis is presented.

## 1.1 Research Background

The shopping landscape has increased in sophistication across the years. Retailers and manufacturers traditionally operate stores in physical retail formats such as supermarket, convenience, and department stores (Deloitte, 2013). Nowadays, people have more options to facilitate their shopping experience, largely due to substantial technological advances (Hagberg et al., 2016). Conventional in-store shopping environments are now accompanied by e-commerce environments, enabling the buying and selling of goods on the internet regardless of location or time of day (Grewal et al., 2013; Hagberg et al., 2016; Wood, 2011).

Across consumer-packaged goods (CPG) categories, 75 percent of US consumers are making purchases both online and in-store (McKinsey & Company, 2022). The way in which the modern consumer shops, engaging in browsing and purchasing activities across an array of shopping environments – both online and offline – has largely revolutionized the present-day retail landscape (Dawes & Nenycz-Thiel, 2014; Ganesh et al., 2010; Grewal et al., 2017; Hussein & Kais, 2021).

Shoppers spend very little time making purchase decisions in-store (Dickson & Sawyer, 1990; Sorensen, 2016). Most CPG purchases are habitual, driven by past behaviour (Romaniuk & Sharp, 2021b; Wood & Neal, 2009). Up to 90% of shoppers make purchase decisions based on visual examination of the front of the package (Clement, 2007), using familiar colours, shapes, and other packaging elements to facilitate choice (Reimann et al., 2012; Silayoi & Speece, 2004).

Online, shoppers largely behave the same way they do in-store (Anesbury et al., 2016). In fact, evidence suggests that habitual purchasing is even more prevalent online (Andrews & Currim, 2004; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Sharp & Romaniuk, 2016), with larger brands benefitting the most (Chu et al., 2010; Danaher et al., 2003). This highlights the important role of brands in quickly attracting shopper attention.

Brand prominence, in this context, is a concept that involves the extent to which the brand is easily found in shopping environments (Romaniuk & Sharp, 2021b). A brand must be prominent to be found and considered for purchase (Silayoi & Speece, 2007). However, standing out in e-commerce remains a challenge for brands (Nenycz-Thiel & Romaniuk, 2021), largely due to increasing competition amongst brands. In recent years, e-commerce has seen exponential growth, with an increase in CPG brand sales year upon year (Statista, 2023). In 2022, e-commerce accounted for 19.7% of total global retail sales. This figure is projected to rise to 25% by the year 2026 (Statista, 2023). The increase in online shopping has led to substantial competitive clutter in these shopping environments (Grange et al., 2019). Website advertisements, sales promotions and mobile notifications contribute to the clutter and exacerbate the difficulty that brands face in being prominent online (Nenycz-Thiel & Romaniuk, 2021). Moreover, the visual 'real estate' for any one brand is usually quite small in e-commerce. For example, the brand cannot use multiple facings to display the product, as it can on a supermarket shelf (Nogales & Suarez, 2005). Clutter differs depending on the shopping environment, so prominence that enables a brand to be easily found regardless of the environment is crucial for success (Nenycz-Thiel & Romaniuk, 2021).

Brands can either rent or own prominence (Romaniuk, 2023). Renting prominence involves paying for optimal 'real estate' in the shopping environment, such as paying for a top listing on e-commerce or purchasing large shelf space in retailers (Caruso et al., 2018; Tan et al., 2018). This strategy is often costly and offers the brand little control (Nenycz-Thiel & Romaniuk, 2021).

Owning prominence, by creating a strong brand identity, is a more sustainable strategy which can reap long-term benefits (Jain, 2017; Phillips et al., 2014b; Vinitha et al., 2021). A strong brand identity involves establishing a unique brand 'look and feel' to help distinguish a brand from its competitors (Major, 2014; Zaichkowsky, 2010). Various elements, such as colours, logos, and text, can be used to build a brand identity (Romaniuk, 2018b; Walter & Gioglio, 2020). Such elements can be visual or auditory in nature, the latter often used in the brand's advertising (Romaniuk, 2018d). Browsing an e-commerce website or in-store shelf largely relies on visual attention, and as such, visual elements are the focus of this research. Visual elements are used on packaging to increase brand visibility in shopping environments, subsequently increasing the brand's prominence (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk & Caruso, 2018; Silayoi & Speece, 2007).

In CPG categories, visual elements are particularly useful in attracting attention (Kotler & Keller, 2012; Sharp, 2017), as shoppers make decisions based on familiar packaging elements (Reimann et al., 2012; Silayoi & Speece, 2004). With consistent use, a visual element on packaging can develop into a Distinctive Asset (Romaniuk, 2018c). By definition, a Distinctive Asset is a non-brand name element that uniquely signals the brand in shopper memory (Romaniuk, 2018c). Distinctive Assets are valuable as using the element alone can evoke the brand, despite the element being presented without the brand name (Gaillard et al., 2005; Hartnett & Romaniuk, 2008; Romaniuk, 2018b). For example, a flash of purple in the supermarket chocolate aisle can attract attention while automatically signaling Cadbury to the shopper.

Prior studies analysing brand prominence largely focus on the in-store shopping environment, given the infancy of e-commerce as a shopping environment. In a series of in-store interviews, shoppers were asked to view a supermarket shelf and identify the brand that stood out, before explaining the reason behind their choice (Gaillard et al., 2006; Piñero et al., 2010). Colour was the most common reason for a brand standing out across brands and categories. The importance of colour on packaging is supported in CPG experiments spanning multiple categories, from desserts and chocolate (Ares & Deliza, 2010; Deliza & MacFie, 2001; Kovač et al., 2019; Marques da Rosa et al., 2019; Matthews et al., 2019; Betina Piqueras-Fiszman et al., 2012), to beverages such as coffee and wine (de Sousa et al., 2020; Heatherly et al., 2019; Purwaningsih et al., 2019). One packaging study in the chocolate category shows that bright colour is preferred over dull colour (Kovač et al., 2019). Similarly, (Maros et al., 2019) found brightly coloured online product images attract attention and influence clicks.

Along with colour, the packaging design, including its shape and size, are found to impact attention and choice (Cahyorini & Rusfian, 2012; Kovač et al., 2019; Purwaningsih et al., 2019; Wulansari, 2019). The packaging design is often described as a combination of visual packaging features which contribute to the overall brand identity (Silayoi & Speece, 2007). An attractive design can help a brand stand out in shopping environments (Bloch, 1995; Creusen & Schoormans, 2005; Kotler & Alexander Rath, 1984; Nancarrow et al., 1998; Silayoi & Speece, 2007). One e-commerce study suggests the design has the highest influence on purchase decisions, followed by colour, as measured through participants ranking the importance of visual elements on their decisions to purchase a brand online (Al-Samarraie et al., 2019).

Overall, e-commerce research analysing visual elements is sparse, and some conflicting findings are evident. For example, an e-commerce eye tracking study identified the brand name as the most noticeable element on packaging (Kovačević & Brozović, 2018). Another online eye tracking experiment found images attract attention faster than text, including the brand name (Chocarro et al., 2022; Kahn, 2017). Overall, the e-commerce studies typically focus on one or two element types (Barrett & Barrington, 2005; Huang et al., 2022; Kohli et al., 2007; Mohebbi, 2014; O'Connor, 2015; Underwood & Klein, 2002), or merely categorise elements into visual and verbal groups (Kim & Lennon, 2008; Townsend & Kahn, 2014). Whilst potentially useful for evaluation of a single element type, these studies do not allow for comparison across element types. As such, a study that is inclusive of all visual elements, rather than few in isolation, is necessary for advancement of the e-commerce research stream.

## 1.2 Research Problem

The research problem identified in this thesis is the challenge faced by brands in standing out in e-commerce environments. As discussed, visual elements are used on packaging to increase brand visibility in shopping environments (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk & Caruso, 2018; Silayoi & Speece, 2007). The thesis aims to investigate the relationship between visual elements and brand prominence by addressing the following research questions (RQs).

The first research question aims to identity the visual elements that attract shopper attention in the e-commerce shopping environment. Prior studies largely group elements into visual or verbal groups (Kim & Lennon, 2008; Townsend & Kahn, 2014), or focus on just one or two element types (Barrett & Barrington, 2005; Chitturi et al., 2019; Huang et al., 2022; Kohli et al., 2007; Mohebbi, 2014; O'Connor, 2015; Underwood & Klein, 2002), as mentioned. RQ1 therefore takes an inclusive approach in considering all visual elements that contribute to brand prominence in e-commerce.

#### RQ1: Which visual elements are the most prominent in an e-commerce environment?

After establishing the prominent visual elements in e-commerce, the next logical step is to investigate whether this differs to observed patterns in-store. RQ2 investigates the potential variation across shopping environments.

#### RQ2: Does visual element prominence vary between e-commerce and in-store shopping environments?

A wide body of evidence attests to the power of colour in attracting attention in-store (Bloch, 1995; Kauppinen-Räisänen, 2014; Lohse, 1997; O'Connor, 2015; Spence & Velasco, 2018; Velasco & Spence, 2019), particularly in CPG environments (Ares & Deliza, 2010; de Sousa et al., 2020; Deliza & MacFie, 2001; Gaillard et al., 2006; Heatherly et al., 2019; Kovač et al., 2019; Marques da Rosa et al., 2019; Matthews et al., 2019; Piñero et al., 2010; Betina Piqueras-Fiszman et al., 2012; Purwaningsih et al., 2019; Raheem et al., 2014; Wulansari, 2019).

Comparable e-commerce research corroborates the significance of colour (Al-Samarraie et al., 2019; Maros et al., 2019). Therefore, it is reasonable to expect colour to be highly prominent in e-commerce when compared with other visual elements. Therefore, it is hypothesised that:

H1: Colour will be more prominent than other visual elements in an e-commerce environment.

Prior studies find familiarity and usage increase brand prominence (Ahluwalia, 2002; Chandon et al., 2009; Hickman et al., 2020; Kent & Allen, 1994; Pechmann & Stewart, 1990), and brand choice (Alba et al., 1991; Alba & Marmorstein, 1987; Park & Stoel, 2005). Large brands inherently have higher familiarity and usage, simply because they benefit from being purchased by more category buyers that are slightly more loyal, in line with the law of Double Jeopardy (Ehrenberg et al., 1990).

Moreover, large brands benefit from increased loyalty online (Andrews & Currim, 2004; Chu et al., 2010; Danaher et al., 2003; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Romaniuk & Sharp, 2021b). The higher loyalty creates an advantage for brands in the CPG industry, where most purchases are driven by past behaviour (Nenycz-Thiel et al., 2021; Wood & Neal, 2009).

Therefore, it is reasonable to expect brand size to impact the brands selected as most prominent. RQ3 investigates the degree to which brand size explains brand prominence.

RQ3: To what degree does brand size explain brand prominence in an e-commerce environment?

Brand penetration (penetration) is used as the measure of brand size, defined as the percentage of people purchasing a brand at least once in a time period, such as 6 months (Dawes, 2006; Ehrenberg, 2000). Based on above-mentioned literature, it is logical to expect larger brands to be more prominent than smaller brands. Thus, the hypothesis is proposed that:

H2: There will be a strong relationship between brand size and brand prominence in an e-commerce environment.

## 1.3 Research Method

Two studies were executed to answer the RQs, with the overall aim to understand the effect that visual elements have on brand prominence. The studies involved an online survey, with layouts of e-commerce websites and in-store supermarket shelf facings displayed to respondents. The research was tested in two countries, the United States (US) and United Kingdom (UK), spanning 11 CPG categories. The tested categories included consumable and non-consumable, in addition to hedonic and utilitarian options, as later detailed in **Chapter 3**. Moreover, both national and private label brands were included which enabled a more detailed analysis at the individual brand level. Two different online shopping environments were tested, an online marketplace and online supermarket. The testing across various countries, product categories and shopping environments assists in exploring the robustness and generalisability of this research to other markets and products. The studies are now described in greater detail.

### Study 1: 'Real Shop'

The first study uses images of actual shopping environments, including an online supermarket and in-store supermarket shelf. The shopping environment images are derived from an Australian (AU) supermarket retailer. Tested in US and UK markets, eight CPG categories were included, *Crisps, Salad Dressing, Canned Fruit, Coffee, Spread, Water, Biscuits* and *Chocolate*. As the brands tested were not local to the sample country, the respondents were largely unfamiliar with/non-users of the brands. This allows for testing of the visual elements in isolation, largely without interference from the external conditions including familiarity and usage.

### Study 2: 'Mock-Up Shop'

*Study 2: 'Mock-up Shop'* effectively builds on *Study 1: 'Real Shop'* by testing across more product categories and brands. The second study uses mock-up shopping environments, including an online marketplace and in-store supermarket shelf. The study spans three CPG categories in the US market: *Eggs*, *Dog Food* and *Paper Towel*. The tested brands were local to the US sample, and as such, the sample were more likely to be familiar with/users of the brands. This enabled any potential influence of brand familiarity and usage to be measured. Additionally, the analysis involved testing at the brand size level, allowing for investigation of the relationship between brand size and brand prominence.

## 1.4 Key Findings

The key findings of the two studies are summarised below, before they are discussed in more detail in **Chapter 5**.

### Key Finding 1: Colour is the most prominent visual element in e-commerce and in-store, and it is sometimes more important in-store.

The research first uncovers the finding that colour is the most prominent visual element across both shopping environments. This extends prior in-store research to the e-commerce environment, supporting the generalisability of colour across shopping environments (Gaillard et al., 2006; Pinero De Plaza et al., 2015).

For a brand to benefit from colour in the long term, an aim should be to develop the colour into a Distinctive Asset for the brand (Romaniuk, 2018c). However, colour is a difficult Distinctive Asset to build (Hoek & Gendall, 2010; Major, 2014; Romaniuk, 2018a; Ward et al., 2020). Bundling colour with a design element, such as shape, is one way for a brand to build an effective colour element. This colour-and-design combination has potential to be more valuable for a brand than an individual colour alone (Romaniuk, 2018a).

While colour is the top performing element in both environments, it is sometimes more important in-store. A potential explanation for this is the colour blocking technique, in which multiple facings of a single brand create a substantial block of colour on shelf (Aglo, 2019; Kahn, 2017; Vermeulen, 2013; Young, 2003). This technique can increase prominence in-store, given the ability to effectively stand out from surrounding brands. This finding has implications for the way in which colour is prioritised in different shopping environments. For example, brands in-store are likely to benefit from using colourful displays.

Although colour blocking is not achievable in e-commerce as each product image is displayed individually, the use of colour online is equally important. For example, the use of colour as a Distinctive Asset across all product variants can help the shopper recognize the brand in cluttered online shopping environments (Romaniuk, 2018b).

### Key Finding 2: Design is the second most prominent visual element in e-commerce and in-store, demonstrating the importance of an appealing package design.

The second most prominent element across both shopping environments is design, involving the overall packaging aesthetic and structural design, i.e., shape and size. This firstly demonstrates the importance of an appealing package design in terms of the overall aesthetic. It also suggests that visual elements may be processed holistically rather than separately (Romaniuk, 2018a). As such, a combination of visual elements on packaging, rather than one in isolation, has the potential to increase prominence.

Further, this finding suggests that the shape and size of the packaging can increase brand prominence. Shape is typically consistent across brands in a category, so shoppers can quickly identify the brand as a member of the category (Mocanu, 2015). In saying this, modifications to the packaging shape and size can help the brand to stand out amongst the other similar looking packages in the category.

However, it should be noted that the main role of packaging is to protect the product (Underwood, 2003), while enabling usability (Ambrose & Harris, 2011; Underwood, 2003). Unusual packaging shape and size can be costly and difficult to transport (Rundh, 2009; Twede, 1992). Therefore, modifications to packaging design may be detrimental if at the expense of easy transportation, storage, and use (Rundh, 2009).

### Key Finding 3: Larger brands are more likely to be prominent than smaller brands in e-commerce and in-store. However, small brands can achieve the prominence of a large brand.

The research finds that larger brands are more prominent than smaller brands in both shopping environments. This finding suggests that large brands have an advantage online and in-store, particularly in CPG environments where habitual buying is so prevalent (Banelis et al., 2013; East et al., 2008; Ehrenberg et al., 2004; Martin, 2008; Nenycz-Thiel et al., 2021). The increased loyalty online (Andrews & Currim, 2004; Chu et al., 2010; Danaher et al., 2003; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Romaniuk & Sharp, 2021b) is likely to exacerbate the advantage that larger brands have in this context. The research also finds that smaller brands have the potential to achieve the prominence of a larger brand. This has implications for practitioners involved with small brands. Building familiarity with visual elements and the overall packaging can enhance prospects of prominence for smaller brands.

### Key Finding 4: Private label brands are less prominent than national brands of the same size in e-commerce and in-store.

Private label brands are found to achieve lower than expected prominence in relation to their brand size. This finding demonstrates the advantage that national brands have over private label brands in terms of prominence. This may be due to the lack of advertising amongst private label brands (Baltas et al., 1997; Cunningham et al., 1982), where visual elements cannot be showcased to build brand familiarity amongst shoppers. In line with the recommendations for **Key Finding 3**, private label brands should prioritise building familiarity with visual elements. This can be achieved by ensuring a coherent visual design across all categories the brand is present in (Boatwright et al., 2009; Nguyen et al., 2018), securing a favourable shelf position in-store (Chandon et al., 2009), and showcasing the packaging in advertising.

### Key Finding 5: Familiarity and Usage influence brand prominence, with slightly more influence in e-commerce.

Familiarity and usage increase brand prominence in both shopping environments, with slightly higher influence in e-commerce. This finding first highlights the importance of using familiar visual elements in the online product image, such as Distinctive Assets (Romaniuk, 2018b). Brands should build these elements prior to listing in online stores, so that the shopper has established levels of familiarity with the elements prior to viewing the brand online. These visual elements may be built outside of the e-commerce environment, such as in advertising, as previously suggested. The finding also reinforces the danger of changing a brand's visual design in e-commerce and in-store, such as through changes to the packaging or product image (Aaker, 2014; Beverland et al., 2015; Romaniuk, 2018c).

Key Finding 6: The visual elements of Text, Image and Logo have a relatively low influence on brand prominence in e-commerce and in-store.

Notably, mentions of text, image and logo were relatively low across categories. A potential explanation for this finding is the intricacy of these elements. It can be speculated that smaller visual elements, such as text, image, and logo, may be more easily identified in a physical shopping environment, where the shopper can pick up and inspect the product. As such, these elements may be less useful in attracting attention in e-commerce shopping environments.

## 1.5 Contributions

The two studies presented in this thesis make important contributions to the fields of branding and shopping environment prominence, particularly in relation to the visual elements that attract attention in e-commerce and in-store. The findings confirm previous research on the significance of colour as a fundamental element for attracting attention in-store and extend this knowledge to the growing e-commerce space. Moreover, the research provides a unique viewpoint by examining the influence of familiarity and usage on brand prominence in conjunction with visual elements, acknowledging their combined impact on shopper behaviour.

This study offers actionable insights for small brands, identifying the opportunity for a small brand to attain the prominence of a large brand. The study reveals the prominence deficit experienced by private label brands, likely due to their limited advertising. This highlights the crucial role of visual coherency across a brand's portfolio, attaining a favourable shelf position, and showcasing the packaging in advertising to gain brand prominence. These findings build on and support previous research, providing both small and private label brands with valuable recommendations to enhance their prominence in e-commerce and in-store shopping environments.

The application of the research across various product categories, brand sizes and types, assists in establishing the generalisability of the studies. Moreover, the use of multiple data sets enhances the robustness of the research. Overall, the research provides valuable implications for practitioners to leverage, which are grounded in empirical evidence and can be applied to address real-world challenges.

## 1.6 Chapter Summary & Thesis Structure

This chapter introduces the focus of the research, surrounding brand prominence in e-commerce. Then, the chapter briefly summarises the research method, key findings, and contributions of the research. The thesis contains six chapters over four major parts.

### PART I: OVERVIEW

The first part consists of the current chapter (**Chapter 1**), outlining the research background and overall aim.

### PART II: BACKGROUND

The second part contains **Chapter 2**, comprising of the research background. The chapter is split into three main sections. The first section provides an overview of shopper behaviour. Also discussed is the use of packaging as an attention device in CPG shopping environments. The second section explains the value of brand prominence in e-commerce. The last section discusses other influencers on prominence, such as brand size. The research questions and hypotheses are also introduced in this chapter.

### PART III: RESEARCH METHOD AND RESULTS

The third part comprises three chapters. **Chapter 3** outlines the method used for *Study 1: 'Real Shop'* and *Study 2: 'Mock-up Shop'*. **Chapter 4** presents the results across the two studies. **Chapter 5** follows with a discussion of the key findings, outlining potential explanations and practical implications.

### PART IV: CONCLUSION

**Chapter 6** concludes the thesis with a summary of the contributions to academic literature and the implications for marketing practice. The limitations of the research are acknowledged, before suggested avenues for future research are presented.

# PART TWO: BACKGROUND

# CHAPTER 2: Literature Review

This chapter presents the relevant literature in three main sections. First, it provides an overview of shopper behaviour. Then, it explains how packaging is used as an attention device in CPG shopping environments.

The discussion then transitions to the value of brand prominence in e-commerce, explaining how a strong visual identity can help brands achieve sustainable brand prominence. Finally, the chapter discusses other influencers on prominence, such as brand size. As the narrative progresses, the chapter introduces the research questions and hypotheses of the thesis. The chapter concludes with a summary.

## 2.1 The E-Consumer

### 2.1.1 How Do People Shop?

Deep-rooted consumer behaviour tendencies have remained unchanged over the years, particularly the frugalness of attention and time (Burke & Leykin, 2014). Shoppers are largely habitual, with purchases often made with little deliberation (Romaniuk & Sharp, 2021b; Wood & Neal, 2009). CPG categories are considered low involvement, meaning that shoppers rarely spend time evaluating each available option or making lengthy purchase decisions (Dickson & Sawyer, 1990). Most everyday purchases are characterised by repeat buying behaviour, with shoppers making a choice from a repertoire of brands (East et al., 2008; Ehrenberg et al., 2004; Martin, 2008). In other words, shoppers have a small selection of brands that they routinely purchase from and rarely purchase brands outside that repertoire. To illustrate this, the average supermarket stocks between 30,000 to 50,000 stock-keeping units (SKUs), while the average household purchases a mere 300-400 unique SKUs in one year (Sorensen, 2011). The habitual nature of shopping is exacerbated for CPG brands, where repertoire buying is so prevalent (Nenycz-Thiel et al., 2021).

Prior in-store research finds shopping trips to vary in length dependent on a range of factors including the type of retail environment, however, quick trips are most common

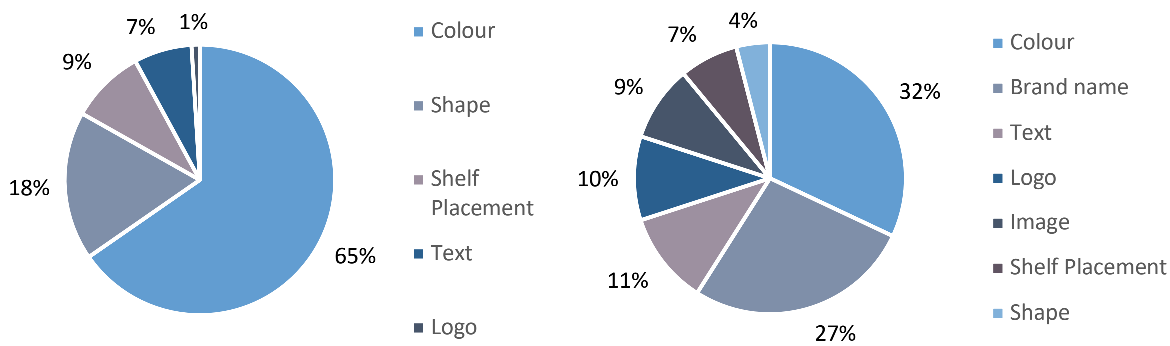
(Silberer et al., 2007; Sorensen, 2016). Shoppers exhibit fast purchasing and a low willingness to spend time searching for brands (Sorensen, 2016). Shoppers typically spend less than 12 seconds making a purchase decision (Dickson & Sawyer, 1990; Hoyer, 1984), and just 2 seconds viewing all brands in the category (Clement, 2007).

Given the short amount of time spent looking at brands, an emphasis should be placed on assisting the shopper to recognise brands quickly (Sorensen et al., 2017). In-store studies have shown that up to 90% of shoppers make a purchase decision based on visual examination of the front of the package (Clement, 2007). This highlights the importance of a package that can quickly attract shopper attention in all shopping environments.

### 2.1.2 Packaging as an Attention Device

In a sequence of in-store interviews, shoppers were asked to view a supermarket shelf and identify the brand that stood out, before explaining the reason behind their choice (Gaillard et al., 2006; Piñero et al., 2010). Colour was the most common reason for a brand standing out across brands and categories (see **Figure 1**).

**Figure 1: Reasons for a Brand Standing Out In-Store**




Based on two intercept interview studies by (Gaillard et al., 2006; Pinero De Plaza et al., 2015)

***Colour was the most mentioned visual element in-store.***

The importance of colour in packaging design has been long documented (Bloch, 1995; Danger, 1987; Kauppinen-Räisänen, 2014; Lohse, 1997; O'Connor, 2015; Spence & Velasco, 2018; Velasco & Spence, 2019). Evidence suggests colour has a strong psychological power in drawing and retaining shopper attention in-store (Marshall et al., 2006; Masten, 1998; Silayoi & Speece, 2004).

Several studies have similarly tested the noticeability of brands in CPG shopping environments (Kovač et al., 2019; Purwaningsih et al., 2019; Wulansari, 2019). Using an online questionnaire, Kovač (2019) asked respondents to assess chocolate packaging in isolation, without any contextual shopping environment, and select the option that caught their attention. Colour and design had the highest influence on attention, with bright colour preferred over dull colour (Kovač et al., 2019). The design is often described as a combination of visual elements on packaging which product a holistic, aesthetically pleasing appearance (Reimann et al., 2010; Silayoi & Speece, 2007; Underwood & Klein, 2002). Multiple authors attest to the importance of an attractive design in helping a brand stand out in shopping environments (Bloch, 1995; Cahyorini & Rusfian, 2012; Creusen & Schoormans, 2005; Kotler & Alexander Rath, 1984; Nancarrow et al., 1998; Silayoi & Speece, 2007).

Similarly, Wulansari (2019) found that colour, design, shape, and size impact purchase decisions, particularly for CPG products. A study across six beverage categories similarly identified colour and shape as influencers on purchase decisions (Purwaningsih et al., 2019). This is supported by evidence showing the shape and size of a package can create brand familiarity (Underwood, 2003) and influence brand choice (Ares & Deliza, 2010; Raghubir & Greenleaf, 2006).

In Kuvykaite's (2009) study, size was found to have the greatest influence on purchase decisions in the milk and washing powder categories, while colour had the lowest influence. This contradicts the commonly cited importance of colour as a visual element on packaging, as earlier presented. Research finds that larger packaging sizes can convey the perception of better value to shoppers (Chandon & Ordabayeva, 2009; Silayoi & Speece, 2004). As such, a larger packaging size may be particularly important for consumers with larger households or those seeking value, especially in product categories such as milk and washing powder that are typically consumed frequently (Silayoi & Speece, 2004). Although colour was rarely explicitly mentioned as a factor impacting purchase decisions in Kuvykaite's (2009) study, it may have inadvertently contributed to the purchase decision by attracting attention, which was not measured in the study.

Collectively, the studies suggest that colour and design, including shape and size, have the largest influence on attention to CPG brands.

### 2.1.3 Do Shoppers Behave Differently Online?

Given the exponential growth of online shopping in recent years (Statista, 2023), understanding the factors underpinning online brand choice is crucial for brands navigating the digital environment. Shoppers have been said to perceive the internet as merely an additional shopping environment that also acts as a convenient tool for browsing (Bajaj & Nag, 2005; McKinsey & Company, 2022). This concept supports the notion that people are multi-channel shoppers, with digital and physical shopping environments complimenting and mutually influencing one another (Nenycz-Thiel et al., 2021).

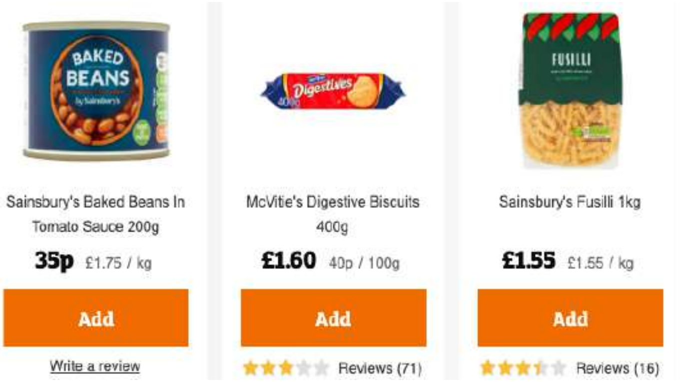
In-store, shopping is quick and habitual, largely driven by past behaviour (Banelis et al., 2013; Romaniuk & Sharp, 2021b; Sorensen, 2016), as discussed. Online, the story is much the same. Users typically only spend 4-9 seconds viewing an e-commerce webpage, skimming approximately 18 words (Chen et al., 2001; Nielsen, 2008; Still, 2017).

Evidence suggests repertoires are smaller in e-commerce than in-store, due to increased levels of loyalty (Andrews & Currim, 2004; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Romaniuk & Sharp, 2021b). Moreover, large brands benefit from a loyalty advantage online, while the inverse is apparent for smaller brands (Chu et al., 2010; Danaher et al., 2003; Huang, 2011). This suggests that attracting attention may be of increased importance in e-commerce, given the tendency for shoppers to rely on large brands, along with prior usage, when making purchase decisions (Danaher et al., 2003; Degeratu et al., 2000; Saini & Lynch Jr, 2016).

### 2.1.4 The Increased Importance of Attracting Attention in E-Commerce

Images of products in e-commerce environments are commonly referred to as 'product images' or 'thumbnails' (Chocarro et al., 2022) (see **Figure 2**). Each product image is typically hyperlinked to a subsequent webpage in which the shopper can further examine product details (Lam et al., 2007).

**Figure 2: Product Images on Sainsburys.co.uk, UK Online Supermarket**




In e-commerce where products become intangible, product images need to attract attention and facilitate purchase decisions in the absence of the physical product (Chaudhuri et al., 2018; Yoo & Kim, 2014). According to several authors, eye-catching product images are crucial for brand success in e-commerce (Clement, 2007; Deng & Poole, 2012; Kovač et al., 2019; Mohebbi, 2014; Silayoi & Speece, 2007). The little time people spend shopping online (Chen et al., 2001; Nielsen, 2008; Still, 2017), highlights the importance for product images to quickly capturing attention (Mohebbi, 2014).

In-store, up to 90% of shoppers make purchase decisions based on visual observation of the front of the package (Clement, 2007), as discussed. Since brands are intangible in e-commerce, shoppers must rely on visuals when making purchase decisions. Consequently, it can be speculated that capturing shopper attention through visual elements is of increased importance in e-commerce environments.

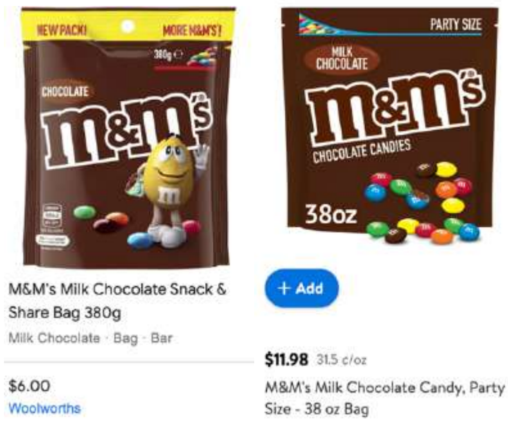
People use multiple devices to facilitate their e-commerce shopping experience, from laptops to smart phones and tablets (Benoni, 2019). Product images can lack visual clarity on these small digital screens, with one study showing that shoppers are often unable to discern key product information (Goodman-Deane et al., 2018). As a result of these findings, researchers developed 'Hero Images', digitally enhanced product images to improve readibility in e-commerce (GS1, 2022). 'Hero Images' retain the packaging elements of design, shape and colour, as the designers consider these to be key elements that assist in brand recognition (GS1, 2022). Meanwhile, the brand name and other text that is deemed difficult to read on standard product images (such as variant and size information) is typically enlarged. 'Hero Images' also decrease the size of images used on packaging, or remove them altogether. In the example in **Figure 3**, the baby image is removed from the Persil packaging, while the Magnum icecream image is englarged and displayed to the side.

**Figure 3: Product Image Compared with 'Hero Image'**


Pictured: Persil Laundry Detergent and Magnum Ice Cream (GS1, 2022)

The research area of 'Hero Images' is in its infancy, and lacks an empirical framework which can provide guidelines regarding the visual elements on packaging that are best retained. One author suggested that although consumers may appreciate the greater legibility of the enhanced image, accentuating product size may inadvertently lead consumers to shop by price (Ashler, 2017). Stripped back 'Hero Images' may also jeopardise effects of brand familiarity. For example, the iconic M&M's characters have been removed from the brand's recent 'Hero Image' (see **Figure 4**). Studies show that shoppers make purchase decisions based on familiar colours, shapes, patterns, images, and quick comparisons of products (Reimann et al., 2012; Silayoi & Speece, 2004). Therefore, a study which uncovers the individual elements contributing to brand prominence is required. Such research will assist in determining if these simplified product images are dampening branding efforts by excluding familiar elements (Ashler, 2017). This is the aim of the thesis.

**Figure 4: M&M's Product Image Compared with 'Hero Image'**




Pictured: Product Image as seen on Woolworths.com, AU Online Supermarket; 'Hero Image' as seen on Walmart.com, US Online Retailer

The trend of altering the brand's image for optimal digital viewing is not limited to product images. Brands across the globe have been influenced by the trend of logo simplification, which often involves removing the original logo colour and/or simplifying the font (Benoni, 2019). There is merit in reducing the complexity of a logo to reduce visual clutter on a small digital screen. However, an oversimplified logo can lose its distinctiveness and subsequently become indistinguishable from competitor brands (Benoni, 2019; Peate, 2022). A prime example of this is the Pringles character, with its distinctive elements stripped back in the brand's new simplified logo (see **Figure 5**).

**Figure 5: Pringles Logo Oversimplification**


(Peate, 2022)

Jointly, the alteration of product images and logos demonstrate the pursuit of brands to achieve greater legibility in e-commerce. However, there is no known empirical framework to date which measures success for 'Hero Image' and logo simplification. As such, industry practitioners are uninformed in regard to the elements that are best retained to increase the likelihood of prominence.

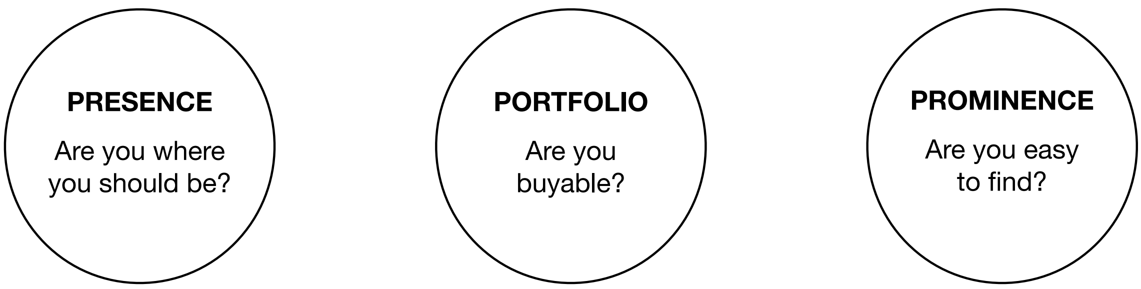
## 2.2 The Importance of Standing Out Online

### 2.2.1 Physical Availability

Two essential components form the basis of brand strategy, Mental and Physical Availability (Romaniuk & Sharp, 2021b; Sharp, 2010), as brand growth depends on building these components at a faster rate than competitors (Romaniuk & Sharp, 2021b). Mental Availability is the propensity of a brand being thought of in buying situations (Romaniuk & Sharp, 2021a), forming the first step towards purchase. The concept of Physical Availability relates to how easy a brand is to find and purchase (Romaniuk & Sharp, 2021b; Sharp & Sorensen, 2017). A brand may come to mind in a purchasing situation; however, it cannot be purchased if not readily available.

Three components encompass Physical Availability: presence – being available in the shopping environments that buying is happening; portfolio – tailoring the product portfolio to suit various category buying situations; and prominence – being easy to find (Romaniuk & Sharp, 2021b). **Figure 6** visualises the three components of Physical Availability.

**Figure 6: Three Components of Physical Availability**




Adapted from (Nenycz-Thiel et al., 2021)

Increasing presence across multiple shopping environments, both online and offline, can allow a brand to reach and acquire new customers (Hammett, 2019; Kollmann et al., 2012; Nenycz-Thiel et al., 2021). E-commerce provides brands with the opportunity to expand their presence, through the addition of a shopping environment (Nenycz-Thiel et al., 2021). Online, brands can be sold on multiple platforms, such as brand-owned websites, online marketplaces, and online versions of brick-and-mortar supermarkets to name a few (Grewal et al., 2017; Hussein & Kais, 2021). With many online sales platforms available to the everyday consumer, there is ample opportunity for the brand to be present in more shopping environments.

Having a quality brand portfolio means providing the shopper with options to suit relevant buying occasions (Nenycz-Thiel & Romaniuk, 2021). For example, a yogurt brand may offer various packaging formats, such as a small 'on-the-go' or jumbo size. Similarly, the brand may introduce a dairy or gluten free option to suit growing consumer segments (Statista, 2022).

However, a brand's presence and portfolio alone are insufficient, as clutter in shopping environments means the brand faces competition in standing out (Grange et al., 2019). Being prominent is a key component of succeeding in e-commerce (Nenycz-Thiel & Romaniuk, 2021). The brand needs to stand out to be noticed and considered for purchase (Silayoi & Speece, 2007).

Clutter, in its various forms, is a major inhibitor of brand prominence (Nenycz-Thiel & Romaniuk, 2021). In shopping environments, competitive clutter arises from the presence of multiple brands within a small space (Grange et al., 2019). The issue of clutter is exacerbated in e-commerce, where increasing online shopping has led to heightened brand competition (Statista, 2023). In e-commerce, the visual 'real estate' for any one brand is usually quite small, and it can be difficult to discern branding features online (Romaniuk, 2018b). For example, text on a package that can be easily read in-store, may become a challenge to interpret in a thumbnail two-dimensional image online.

Situational clutter involves distracting features within the shopping environment (Nenycz-Thiel & Romaniuk, 2021). For example, shoppers are faced with other people and marketing activities in-store. Online, website advertisements, sales promotions and mobile notifications are contributing to the clutter (Nenycz-Thiel & Romaniuk, 2021).

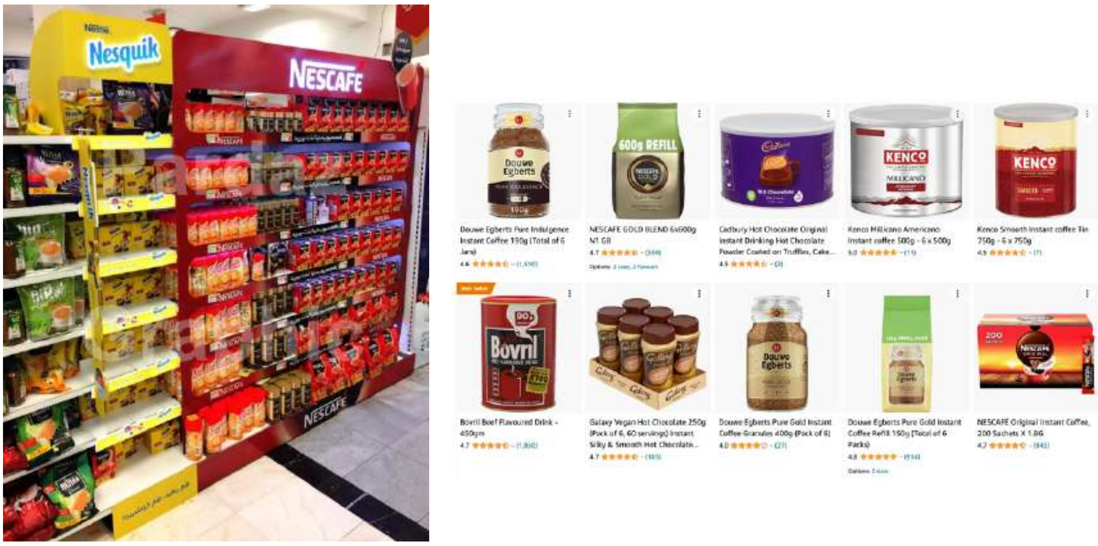
Mental clutter adds to the difficulty that brands face in standing out (Romaniuk & Sharp, 2021b; Wood & Neal, 2009). Shoppers are 'cognitive misers' (Fiske & Taylor, 1991), often thinking about daily tasks other than the shopping activity at hand. Clutter differs depending on the shopping environment, so prominence that enables a brand to be easily found regardless of the environment is crucial for success (Nenycz-Thiel & Romaniuk, 2021).

## 2.2.2 The 'Digital Shelf' – Why Prominence is so Important Online

Brand practitioners are recognising the importance of prominent placement of their brands on the 'digital shelf' (Chapple et al., 2021). With consumers shopping in multiple environments (Dawes & Nenycz-Thiel, 2014; Ganesh et al., 2010; Grewal et al., 2017; Hussein & Kais, 2021), brands must consider their visual representation on all platforms, not just the physical in-store shelf.

One difference between digital and physical shopping environments is the 'real estate' allocated to each brand, as discussed. In-store, brands can purchase multiple facings for higher visual impact and benefit from innovative displays (Nogales & Suarez, 2005). For example, Nescafe and Nesquik, brands in the instant beverage category, attract attention through in-store displays as seen in **Figure 7**.

**Figure 7: Digital and Physical Displays in the Instant Beverage Category**




Pictured: Nescafe and Nesquik In-store Shelf Displays Shelf branding (Pardaz Graphic, 2023); Instant Beverage Category as seen on Amazon.com, Online Marketplace, with Nescafe Displayed in Bottom Right

Meanwhile, the digital 'real estate' is much more limited. Brands in e-commerce can purchase top listings, appearing higher on the page to improve the chance shoppers will see the brand (Romaniuk, 2018b). However, each brand is provided with the same small portion of space in e-commerce, and so there is a more balanced competitive playing field amongst brands. Additionally, a single search can result in hundreds of options, with a multitude of similar looking brands competing for attention (Ashler, 2017; Nenycz-Thiel & Romaniuk, 2021). Nescafe's online product image in the bottom right corner (see **Figure 7**) is much less prominent in e-commerce, where it cannot leverage extravagant branded displays.

### 2.2.3 Salesman on the Screen – How does Prominence lead to Purchase?

Standing out is an important task for brands, particularly in e-commerce where brands are bound by visual constraints (Chapple et al., 2021; Nenycz-Thiel & Romaniuk, 2021), as discussed. Visual attention (attention) in a shopping context, is defined as the options shoppers look at during the decision process (Gidlöf et al., 2017). Attention influences brand choice, with shoppers more likely to purchase the option they look at most (Gidlöf et al., 2017; Janiszewski et al., 2013; Milosavljevic et al., 2012). This is referred to as the gaze cascade effect (Glaholt & Reingold, 2009; Shimojo et al., 2003), and is heightened during fast decision-making scenarios (Milosavljevic et al., 2012), such as online shopping (Anesbury et al., 2016). Therefore, attaining brand prominence in e-commerce can improve the odds of being purchased (Romaniuk, 2023; Varela et al., 2017).

### 2.2.4 How Brands Achieve Prominence

Brands can either rent or own prominence (Romaniuk, 2023). Renting prominence relates to paying for optimal 'real estate' within a shopping environment (Romaniuk, 2023). For example, a brand can pay for the top listing on an e-commerce site or purchase large retailer shelf space such as end caps (Caruso et al., 2018; Tan et al., 2018). However, renting prominence can be costly and offer the brand little control, often only providing short-term benefit (Nenycz-Thiel & Romaniuk, 2021).

A more sustainable way in which brands can attain prominence while transcending the clutter is owning prominence, by creating a strong brand identity (Jain, 2017; Phillips et al., 2014b; Vinitha et al., 2021). Helping to distinguish a brand from its competitors, a strong brand identity is about establishing a unique brand 'look and feel' (Major, 2014; Zaichkowsky, 2010). Brands can build a brand identity through various visual elements, such as colours, logos, and text (Romaniuk, 2018b; Walter & Gioglio, 2020). These visual elements can help to make the packaging more visible in its shopping environment, increasing its prominence (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk & Caruso, 2018; Silayoi & Speece, 2007). Visual elements are particularly useful when shopping for low involvement CPG products (Silayoi & Speece, 2004; Wulansari, 2019), as shoppers make quick purchase decisions based on visual examination of the package (Clement, 2007). Moreover, visual elements can be adapted for use across multiple shopping environments, which is crucial in building their familiarity amongst shoppers (Romaniuk, 2018b). An example of this is M&M's use of the characters. Whether it be 'Red', 'Blue', 'Yellow', 'Orange', 'Green' or 'Ms. Brown', the M&M characters feature on packaging, online product images, in media and outdoor advertising, and in M&M's World stores across the globe (see **Figure 8**). Using the same visual elements in online and offline shopping environments can allow the brand to be recognised irrespective of the environment (Romaniuk & Sharp, 2021b).

**Figure 8: M&M's Character Assets**


Pictured: M&M's World in Times Square, New York City, USA (Chute Gerdeman, 2023); M&M's Packaging (Asprey Creative, 2022)

### 2.2.5 Distinctive Assets – Forming a Connection between the Visual Element and the Brand

In today's cluttered digital and physical shopping environments, a strong brand identity can assist in attracting shopper attention (Grange et al., 2019; Vinitha et al., 2021), as discussed. Creating a strong visual brand identity is vitally important in being distinctive (Buil et al., 2016; Jain, 2017; Vinitha et al., 2021) and enabling brand recognition (Major, 2014; Zaichkowsky, 2010).

One way to build a strong brand identity is through Distinctive Assets (Romaniuk, 2021). Distinctive Assets are non-brand name elements, such as logos, text, and shape, that uniquely signal the brand in the memory of the vast majority of consumers (Romaniuk, 2018c, 2021). Distinctive Assets are learnt through associations in memory (Romaniuk, 2021). When the brand name is presented alongside the asset, links between the brand and the asset are formed in shopper memory. For example, Coco the Monkey is a Distinctive Asset for Coco Pops. Shopper X may notice a television advertisement prominently displaying Coco the Monkey alongside the Coco Pops brand name on the cereal box. A link is then formed in memory between Coco the Monkey and Coco Pops. When Shopper X is next browsing the supermarket cereal aisle, they may again notice Coco the Monkey on the cereal box, further strengthening the asset for the brand (see **Figure 9**).

**Figure 9: Kellogg's Coco Pops Character Asset**


Pictured: Coco The Monkey Character (Wiki, 2021); Coco Pops Packaging Featuring Coco The Monkey (Kellogg's, 2019)

Visual elements, including colours and images, have the potential to become Distinctive Assets. However, merely using an element does not necessarily mean it is an asset for the brand.

### 2.2.6 How Does an 'Element' Become an 'Asset'?

What characterises a Distinctive Asset is its ability to evoke the brand, despite being presented without the brand name (Gaillard et al., 2005; Hartnett & Romaniuk, 2008; Romaniuk, 2018b). To be effective, a Distinctive Asset must solely evoke the brand and no competitors. For example, you may see a red and blue globe and automatically recall a brand. This is a result of Pepsi's long-term commitment to co-presenting the logo with the brand name in shopping and advertising environments. Shoppers have since learnt the association between the globe and Pepsi, and the globe asset can be used alone to evoke the brand (see **Figure 10**). Once developed, strong Distinctive Assets are particularly helpful in enabling the brand to be found in shopping environments (Keller, 2003; Romaniuk, 2018b). Importantly, for an element to become a successful asset, it must be consistently reinforced across all shopping environments, both offline and online (Romaniuk, 2018b).

**Figure 10: Pepsi Globe Asset Evoking the Brand Name**


Pictured: Co-Presentation of Brand Name with Pepsi Globe Asset (PepsiCo, 2023); Pepsi Globe Asset used without Brand Name in 'Better With' Campaign (One Club, 2022)

## 2.2.7 Types of Visual Elements

This section introduces the types of visual elements that can be used by brands. **Figure 11** visualises these elements.

**Figure 11: Types of Visual Elements**


Pictured: Vanish Product Image as seen on Amazon.com, Online Marketplace

### 2.2.7.1 Colour

Colour has been identified as a key visual element in helping a brand to stand out on shelf (Gaillard et al., 2006; Piñero et al., 2010; Romaniuk, 2018b). Research demonstrates the powerful ability of colour in attracting and retaining shopper attention (Marshall et al., 2006; Masten, 1998; Silayoi & Speece, 2004), and influencing purchase decisions (Poturak, 2014).

As discussed, a series of in-store interviews identified colour as the most important element contributing to shelf prominence in a CPG environment (Gaillard et al., 2006; Piñero et al., 2010). A wide body of research attests to the significance of colour in packaging design (Bloch, 1995; Danger, 1987; Kauppinen-Räisänen, 2014; Lohse, 1997; O'Connor, 2015; Spence & Velasco, 2018; Velasco & Spence, 2019). Multiple studies cite the importance of colour for CPG brands, from desserts and chocolate (Ares & Deliza, 2010; Deliza & MacFie, 2001; Kovač et al., 2019; Marques da Rosa et al., 2019; Matthews et al., 2019; Betina Piqueras-Fiszman et al., 2012) to beverages such as coffee and wine (de Sousa et al., 2020; Heatherly et al., 2019; Purwaningsih et al., 2019).

Colour has an advantage in-store as it is the only thing our eyes can take in when we scan a scene at a distance without fixating on any specific object (Wedel & Pieters, 2006). Closer focus is required to process more complex elements such as words. This reinforces the value of colour in that it can quickly draw attention in a cluttered shopping environment (Romaniuk, 2018b). This is especially relevant in CPG environments where purchasing is quick and automatic (Kotler & Keller, 2012; Nenycz-Thiel et al., 2021; Sharp, 2017).

Further research finds the use of an 'novel' colour or colour scheme can assist a brand in standing out on the shelf (Velasco & Spence, 2019). In terms of visual branding, novelty can be expressed as a change to the typically familiar appearance of an existing product or the unconventional appearance of a new product (Garber Jr et al., 2008; Kauppinen-Räisänen, 2014; Velasco & Spence, 2019). A brand's novelty is largely due to its prominence relative to other products in the category. For example, through a series of online visual search experiments, (Garber Jr et al., 2008) found the use of black in the predominately white flour category assisted a brand to stand out and be found more rapidly. It is suggested that a positive relationship between novelty and preference exists (Garber Jr et al., 2008). However, while the use of a novel colour draws attention (Velasco & Spence, 2019), research demonstrates that novelty will not affect purchase consideration unless the product is deemed of high quality (Garber, Burke, et al., 2000).

One specific colour does not perform better than another, rather, the value lies in any colour being uniquely linked to the brand, functioning as a Distinctive Asset (Gaillard et al., 2006). A colour Distinctive Asset is a valuable brand attribute, as it can quickly signal the brand to the shopper (Romaniuk, 2018a; Spence & Velasco, 2018). For example, a flash of purple in the supermarket chocolate aisle can promptly signal Cadbury to the shopper, because of the strength of the Distinctive Asset for Cadbury.

However, colour has been identified as the most difficult element type for a brand to own as a Distinctive Asset (Hoek & Gendall, 2010; Major, 2014; Romaniuk, 2018a; Ward et al., 2020). With a limited number of colours that a brand can choose from, it is a near impossible task for a brand to select a colour to build that is entirely unique (Hoek & Gendall, 2010). Additionally, colour is widely used to signal categories and variants within those categories (Garber, Hyatt, et al., 2000; B. Piqueras-Fiszman et al., 2012; Zampini et al., 2008). For example, red signals the ketchup category, while green signals mint flavoured chocolate. Colour associations can also vary by location or cultural context (Madden et al., 2000). Moreover, the strength of colour varies dependent on the environment that the brand is displayed in. For example, the background colour in e-commerce shopping environments is typically white. A package that is white or pale in colour may struggle to attract attention relative to competitor brands (Romaniuk, 2018b). For these reasons, colour is a difficult element for a brand to build as a unique brand identifier. Bundling colour with a design element, such as shape, is one way for a brand to build a colour element. This colour-and-design combination has potential to be more valuable for a brand than an individual colour alone (Romaniuk, 2018a).

To create a strong visual brand identity, all products within a brand's portfolio should be coherent in terms of the visual design (Nguyen et al., 2018). This visual coherency allows shoppers to easily identify the products as members of a single brand family, enhancing brand prominence on shelf (Boatwright et al., 2009; Nguyen et al., 2018). Cadbury is a prime example of a brand that exhibits strong portfolio cohesion, using the iconic purple colour across all variants in the brand portfolio. Brands in-store can benefit from a visually cohesive portfolio through colour blocking (Aglo, 2019). The colour blocking technique involves multiple facings of a single brand being placed together on shelf, creating a substantial block of colour that contrasts effectively with surrounding products (Aglo, 2019; Kahn, 2017; Vermeulen, 2013; Young, 2003) (see **Figure 12**). Employing this technique is not an option in e-commerce environments, as products are displayed individually and not stacked next to one another as they are on shelf. Nonetheless, having a visually cohesive portfolio which leverages distinctive use of colour is important in e-commerce, as shoppers are more likely to recognize the brand through learnt brand associations (Romaniuk, 2021).

**Figure 12: Colour Blocking on Shelf in AU Supermarket**

Although the research is sparse, the importance of colour in e-commerce has been cited (Al-Samarraie et al., 2019; Maros et al., 2019). In online shopping environments, packaging comprising of brighter colour attracts attention (Maros et al., 2019). The results of this research align with a packaging study conducted in the chocolate category, which showed that shoppers tend to favour bright colours over dull ones (Kovač et al., 2019).

Moreover, Al-Samarraie (2019) conducted an online study where participants were asked to rank the influence of various visual elements on their decisions to purchase a product online. The research identified colour as a key influencing factor on purchase decisions in e-commerce (Al-Samarraie et al., 2019). As earlier discussed, 'Hero Images' are digitally enhanced product images that remove visual elements on packaging to enhance legibility. Colour is one visual element that is always retained, as it is said to be a key element that helps the product to be recognisable on the digital shelf (GS1, 2022).

#### 2.2.7.2 Logo

A logo is a symbol or image, often considered the brand's signature for its products (Adîr et al., 2012; Kaur & Kaur, 2019). A logo can be used to build a strong brand identity (Ward et al., 2020), and distinguish the brand from competitors (Henderson & Cote, 1998).

Logos are typically the strongest Distinctive Asset types, as they have the greatest potential to be uniquely linked to a brand than other visual elements (Major et al., 2014; Ward et al., 2020). This may be due to the greater creative flexibility in designing a logo, for example, when compared to the limited colour choice available to a brand (Hoek & Gendall, 2010; Romaniuk, 2018b). Brands allocate a significant amount of time and monetary resources towards the development and promotion of logos (Adîr et al., 2012), and significant logo changes are rare (Kaur & Kaur, 2019; Kohli et al., 2007; Newstead, 2014). As a result, it appears there is a greater tendency for brands to enforce a consistent logo design (Ward et al., 2020). The consistency of logo execution in shopping and advertising environments aids in creating strong Distinctive Assets (Romaniuk, 2018b).

#### 2.2.7.3 Design

The design of the packaging comprises of two key components, the overall aesthetic design and structural design (Cahyorini & Rusfian, 2012; Silayoi & Speece, 2007). The aesthetic design can be described as a combination of individual visual elements on packaging to produce a holistic, aesthetically pleasing appearance (Reimann et al., 2010; Silayoi & Speece, 2007; Underwood & Klein, 2002). The importance of design has been long documented (Bloch, 1995; Cahyorini & Rusfian, 2012; Creusen & Schoormans, 2005; Kotler & Alexander Rath, 1984; Nancarrow et al., 1998; Silayoi & Speece, 2007). For example, Kotler & Alexander Rath (1984) suggest an attractive design can create brand distinctiveness in cluttered shopping environments, and influence purchase decisions. In a CPG laboratory experiment, Reimann (2010) found that brands with attractive packaging are chosen over larger, well-known brands with comparatively plain packaging. Similarly, in a chocolate packaged goods study, Kovač (2019) identified the significant influence of design on attention.

The structural design of the packaging, involving its shape and size, are design components that can be used to attract attention to the brand (Purwaningsih et al., 2019; Underwood, 2003; Wulansari, 2019). Multiple CPG studies attest to the influence of packaging shape and size on purchase decisions (Kuvykaite et al., 2009; Purwaningsih et al., 2019; Raghubir & Greenleaf, 2006; Wulansari, 2019).

Structural design generally remains relatively consistent across brands within a category (Mocanu, 2015). For example, eggs are presented in cartons and canned fish is sold in circular tin cans. There is an advantage in adhering to these category prototypicality norms, in that the shopper can quickly identify the brand as a member of a category (Mocanu, 2015). In saying this, minor modifications to the structural design can improve brand distinctiveness and assist in drawing attention. Underwood (2003) finds that a unique packaging shape can create brand familiarity. An example of this is the Swiss chocolate brand, Toblerone, well known for its distinctive triangular shape (see **Figure 13**).

**Figure 13: Toblerone Packaging**


Pictured: Toblerone Packaging; Toblerone Product Image as seen on Tesco.com, UK Online Supermarket

However, it should be noted that practicality and usability are important roles of packaging (Ambrose & Harris, 2011; Underwood, 2003). The packaging shape must serve the functional purpose of protecting the product, particularly during the transportation process (Underwood, 2003). From a practical perspective, unusual packaging shapes and sizes are often costly and difficult to store (Rundh, 2009; Twede, 1992). Therefore, it can be speculated that the use of shape as an attention device may be more useful online, given the practical limitations of unusually shaped packages in-store. Overall, modification to packaging design may be detrimental if at the expense of easy transportation, storage, and use (Rundh, 2009).

### 2.2.7.4 Images

The use of an image as a visual element can include the product itself, ingredients, flowers, animals, faces or other subjects (Simmonds & Spence, 2017). Images on packaging have less potential than other visual elements to become strong Distinctive Assets (Romaniuk, 2018 ; Ward et al., 2020). This being as images are typically used exclusively on packaging, so shoppers can only form associations between the image and the brand though direct experience with the product or by viewing the packaging in advertising (Ward et al., 2020).

Nonetheless, packaging images are used by shoppers, both consciously and unconsciously, to infer product information (Benn et al., 2015; Schifferstein et al., 2013). Food images on packaging are said to quickly attract attention and increase appetite (Simmonds & Spence, 2017). Moreover, the use of real (rather than fictitious) and larger (rather than smaller) food images increases purchase likelihood amongst shoppers (Askarifar et al., 2021; Huang et al., 2022; Kovač et al., 2019). Gofman (2009) found that a product image, such as grapes displayed on boxed wine, significantly increasing purchase intentions, when compared with the equivalent box with no product image displayed. Similarly, Piqueras-Fiszman (2013) found that replacing text-based with visual-based ingredient information on packaging increased purchase intentions.

A wide body of research emphasises the power of visual elements, specifically images, in attracting attention (Boerman et al., 2011; Edell & Staelin, 1983; Orquin et al., 2020; Pieters & Wedel, 2004; Piqueras-Fiszman et al., 2013; Townsend & Kahn, 2014). The pictorial superiority effect suggests that images are more quickly processed than text (Paivio & Csapo, 1973). A vast number of studies support this notion, denoting that visual information draws attention more easily than textual information (Edell & Staelin, 1983; Helfman & Holland, 1999; Pieters & Wedel, 2004; Woodruff et al., 2002) and is superior in invoking recall or recognition tasks of shoppers (Guenther et al., 1980; Lutz & Lutz, 1977; Shepard, 1967; Speier, 2006; Starch, 1966).

Research extends the pictorial superiority effect to the online shopping environment, corroborating that images attract attention faster than text in e-commerce (Chocarro et al., 2022; Kahn, 2017). An online eye tracking study found images attract attention faster than text including brand name and price (Chocarro et al., 2022).

However, evidence in the psychology literature suggests the pictorial superiority effect may be of less importance in quick decision-making scenarios (Nelson et al., 1976). For example, in a fast-paced online experiment, Ghosh (2022) found that brand logos (visual) and brand names (textual) equally influence attention when both elements are equal in size. Further, in competitively cluttered shopping environments, the combined use of visuals and text together can facilitate decision making by making the assortment easier to process (Kahn, 2017; Townsend & Kahn, 2014). These studies jointly suggest that images and text may be of equal importance in e-commerce, an environment where decision making is quick and many multiple competitors are present (Anesbury et al., 2016). Moreover, prior research reveals that the pictorial superiority effect is reduced when text distinctiveness is enhanced, through an increase in text size and/or colour (Childers & Houston, 1984; Ensor et al., 2019). This suggests that prominence of visual elements may entirely be a result of their physical distinctiveness, rather than their categorization as a visual or textual element.

#### 2.2.7.5 Text

The visual element of text can be split into two categories, brand name and non-brand name text. The use of the brand name on packaging can increase shopper attention (Gaillard et al., 2006; Kim & Lennon, 2008; Peters-Texeira & Badrie, 2005; Piñero et al., 2010). For example, an online eye tracking experiment identified the brand name as the most noticeable element on packaging (Kovačević & Brozović, 2018). Prior research has shown that shoppers rely on well-known brand names when making purchasing decisions, as they are trusted and deemed of higher quality (Keller & Lehmann, 2006; Shehzad et al., 2014). Moreover, brand names are a key contributor to this heightened loyalty in e-commerce (Danaher et al., 2003; Degeratu et al., 2000; Saini & Lynch Jr, 2016), whereby less product information is available and shoppers rely on the larger, well-known brand.

Non-brand name text elements can include the product variant (e.g., Milk chocolate), taglines (e.g., You're Not You When You're Hungry), claims (e.g., Light), company name (e.g., Mars) and font in which the text is displayed. Taglines and other non-brand name text can lack effectiveness at cutting through in word-rich environments such as in e-commerce (Romaniuk, 2018b). However, a prominently executed font can be useful in e-commerce shopping environments (Romaniuk, 2018f). For example, Snickers have developed a strong font, which the brand can use as a device to elicit the brand name. Special edition packaging replaced the Snickers brand name with various words such as 'sleepy' and 'feisty' (see **Figure 14**). Despite the lack of brand name on the packaging, the Snickers brand remains easy to recall due to the distinctiveness of the font.

**Figure 14: Snickers Special Edition 'Hunger Bars', with Words Replacing the Brand Name on Packaging**


(Mortimer, 2015)

### 2.2.8 Which Visual Elements Contribute Most to Brand Prominence?

Prior studies analysing brand prominence largely focus on the in-store environment, given the infancy of e-commerce as a shopping environment. In review of the literature, it is evident that colour is commonly cited as a fundamental visual element in packaging (Bloch, 1995; Danger, 1987; Kauppinen-Räisänen, 2014; Lohse, 1997; O'Connor, 2015; Romaniuk, 2018b; Spence & Velasco, 2018; Velasco & Spence, 2019). Colour holds a powerful ability in attracting and retaining shopper attention (Marshall et al., 2006; Masten, 1998; Silayoi & Speece, 2004), and influencing purchase decisions (Poturak, 2014).

In-store supermarket studies identified colour as the most common reason a brand stands out on (Gaillard et al., 2006; Piñero et al., 2010). Further CPG experiments, spanning categories such as desserts and beverages, attest to the importance of colour as a visual element (Ares & Deliza, 2010; de Sousa et al., 2020; Deliza & MacFie, 2001; Heatherly et al., 2019; Kovač et al., 2019; Marques da Rosa et al., 2019; Matthews et al., 2019; Betina Piqueras-Fiszman et al., 2012; Purwaningsih et al., 2019; Raheem et al., 2014).

Comparable e-commerce research is sparse, with some conflicting findings evident. For example, an online eye tracking experiment found images attract attention faster than text in e-commerce, including brand name and price (Chocarro et al., 2022; Kahn, 2017). Meanwhile, another e-commerce eye tracking study identified the brand name as the most noticeable element on packaging, attended to faster than other elements (Kovačević & Brozović, 2018).

Although there is a scarcity of pertinent e-commerce literature, there is some evidence that supports the significance of colour and design in e-commerce shopping environments. To recapitulate earlier discussion, online product images that comprise of brighter colours are found to attract attention (Maros et al., 2019). Another study revealed design as the most influential visual element on purchase decisions, followed by colour, as measured through participants ranking the importance of visual elements on their decision to purchase a brand online (Al-Samarraie et al., 2019).

However, most e-commerce studies observing visual elements only focus on one or two element types (Barrett & Barrington, 2005; Chitturi et al., 2019; Huang et al., 2022; Kohli et al., 2007; Mohebbi, 2014; O'Connor, 2015; Underwood & Klein, 2002), or merely categorise elements into visual and verbal groups (Kim & Lennon, 2008; Townsend & Kahn, 2014). Whilst potentially useful for evaluation of a single element type, these studies do not allow for comparison across element types. A study that is inclusive of all visual elements, rather than a few in isolation, is necessary to 1) advance the e-commerce research stream and 2) offer industry practitioners an evidence-based framework in selecting visual elements. Thus, the first research question is:

RQ1: Which visual elements are the most prominent in an e commerce environment?

To determine whether prior in-store findings (Gaillard et al., 2006; Piñero et al., 2010) are generalisable to the e-commerce environment, the second research question is:

RQ2: Does visual element prominence vary between e-commerce and in-store shopping environments?

The extensive body of literature attesting to the prominence of colour in-store, in conjunction with the synonymous online evidence, leads to the first hypothesis:

H1: Colour will be more prominent than other visual elements in an e-commerce environment.

## 2.3 Attention to the Familiar

Two widely adapted psychological processes govern the process of human attention, bottom-up (stimulus-based) and top-down (memory-based) processing (Gibson & Carmichael, 1966; Gregory, 1970). The way in which shopper attention is guided towards brands can be explained through the stimulus-based and memory-based processes.

### 2.3.1 Stimulus-Based – Visual Elements

Stimulus-based cognitive processing can be described as 'the retrieval of information from our external environment to build perceptions' (Gibson & Carmichael, 1966). Perceptions are solely based on stimuli in our environment, with prominent elements capturing and directing attention (Pieters & Wedel, 2004). Stimulus-based processing occurs early in the processing stream, is rapid, and independent of knowledge (Wolfe et al., 2003).

Visual elements on packaging are interpreted through the stimulus-based process (Orquin et al., 2020). For example, a brightly coloured package may immediately capture shopper attention solely due to its prominence, irrespective of any other factors. Particularly in online and CPG environments, stimulus-based factors heavily influence attention (Orquin et al., 2020; Orquin & Lagerkvist, 2015). In one study, mere adjustments to a brand label influenced prominence and subsequent choice (Peschel et al., 2019). Online, people shop quickly and display little cognitive effort while navigating webpages (Chen et al., 2001; Nielsen, 2008). Therefore, quickly attracting attention through visual elements is important in cluttered shopping environments (Kahn, 2017; Townsend & Kahn, 2014). Moreover, research finds visual elements that capture shopper attention are necessary as they can increase brand familiarity, alter perceptions, and impact brand choice (Chandon et al., 2007).

### 2.3.2 Memory-Based – Familiarity with Visual Elements and the Brand

Memory-based cognitive processing relates to 'the interpretation of incoming information based on prior knowledge, experiences, and expectations' (Gregory, 1970). In the memory-based process, pre-existing preferences, involvement, goals, expectations, and memory, have been said to interact with other variables to influence brand choice in a purchasing environment (Pieters & Wedel, 2004; Pieters et al., 2007).

It has been established that visual elements can attract attention to a brand (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk, 2018b; Silayoi & Speece, 2007; Walter & Gioglio, 2020). However, a brand can also capture attention because of the shopper's familiarity with that brand (Ahluwalia, 2002; Hickman et al., 2020; Kent & Allen, 1994; Pechmann & Stewart, 1990). In this instance, brand prominence is a result of the memory-based process. Brand familiarity can be defined as the number of brand related experiences accumulated by the shopper over time, including advertising exposure, category engagement, purchasing or usage (Alba & Hutchinson, 1987; Campbell & Keller, 2003). Moreover, brand familiarity influences choice, with shoppers relying on prior experience and familiar visual elements to guide purchase decisions (Alba et al., 1991; Alba & Marmorstein, 1987; Clement, 2007; Orquin & Loose, 2013). This is exacerbated in the CPG industry where repertoire buying is so prevalent (Nenycz-Thiel et al., 2021), and shoppers largely making decisions based on familiar looking packaging (Reimann et al., 2012; Silayoi & Speece, 2004).

Similarly, brand usage increases attention to brands on the supermarket shelf (Chandon et al., 2009). The construct of brand usage involves additional knowledge acquired through direct interactions with the brand. Shoppers may be familiar with a brand without necessarily being a brand user (Alba & Marmorstein, 1987). For example, a luxury fashion enthusiast may know much about the Chanel brand without owning any items from the fashion house. While the two constructs (brand familiarity and brand usage) are theoretically distinct, brand usage typically increases brand familiarity (Alba & Marmorstein, 1987; Simmonds et al., 2020).

It is common for shoppers to be influenced by memory-based factors (e.g., brand familiarity) (Still & Dark, 2010). However, a wider body of evidence supports the notion that attention is determined by a combination of stimulus-based and memory-based factors (Corbetta et al., 2008; Theeuwes, 2010; Wedel & Pieters, 2017; Wolfe, 1994). Similarly, stimulus-based and memory-based processing often interact in influencing brand choice (Still & Masciocchi, 2012). For instance, a shopper may initially be drawn to a brightly coloured package (stimulus-based), subsequently purchasing it as it is a familiar brand (memory-based).

### 2.3.3 Since Familiarity Increases Prominence, Do Larger Brands Benefit More Than Smaller Brands?

In-store, brand familiarity and usage influence attention (Ahluwalia, 2002; Chandon et al., 2009; Hickman et al., 2020; Kent & Allen, 1994; Pechmann & Stewart, 1990) and purchase decisions (Alba et al., 1991; Alba & Marmorstein, 1987; Park & Stoel, 2005), as discussed. Brand familiarity is acknowledged as an important factor when shopping online (Danaher et al., 2003; Degeratu et al., 2000; Park & Stoel, 2005; Saini & Lynch Jr, 2016). For example, shoppers rely on the larger, familiar brand in e-commerce where less product information is available (Danaher et al., 2003; Degeratu et al., 2000; Saini & Lynch Jr, 2016). Another study reveals that familiar brands are more likely to be purchased online (Park & Stoel, 2005).

Large brands inherently have higher familiarity and usage than smaller brands, simply because they benefit from being purchased by more category buyers that are slightly more loyal, in line with the law of Double Jeopardy (Ehrenberg et al., 1990). It is reasonable to anticipate brand size to have an impact on the brands chosen as most prominent, given the positive relationship between brand size and familiarity. To investigate this, a third research question is presented:

RQ3: To what degree does brand size explain brand prominence in an e-commerce environment?

Moreover, shoppers are slightly more loyal in online shopping environments (Andrews & Currim, 2004; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Romaniuk & Sharp, 2021b). Larger brands are found to benefit from this loyalty advantage online, while the inverse is apparent for smaller brands (Chu et al., 2010; Danaher et al., 2003; Huang, 2011). It is reasonable to expect larger brands to be more prominent than smaller brands in e-commerce shopping environments, given the apparent advantages for large brands (Chu et al., 2010; Danaher et al., 2003; Nenycz-Thiel et al., 2021). In saying this, the second hypothesis is formed:

H2: There will be a strong relationship between brand size and brand prominence in an e-commerce environment.

## 2.4 Chapter Summary

This chapter introduces the importance of brand prominence for brands competing in digital and physical shopping environments (Nenycz-Thiel & Romaniuk, 2021). The research problem is explained, involving the challenge faced by brands in achieving brand prominence. The increasing competition in e-commerce due to more brands increasing their online presence is a significant contributor to this challenge (Grange et al., 2019; Nenycz-Thiel & Romaniuk, 2021; Statista, 2023). Visual elements are identified as a fundamental way in which brand prominence can be built (Mohebbi, 2014; Phillips et al., 2014a; Romaniuk, 2018b; Silayoi & Speece, 2007; Walter & Gioglio, 2020).

The chapter presents prior studies in the research area, most of which focus on the in-store environment. No known studies that effectively extend these findings to the e-commerce environment. In summary, this thesis aims to address the following Research Questions and Hypotheses:

- **RQ1:** Which visual elements are the most prominent in an e-commerce environment?
- **RQ2:** Does visual element prominence vary between e-commerce and in-store shopping environments?
- **H1:** Colour will be more prominent than other visual elements in an e-commerce environment.
- **RQ3:** To what degree does brand size explain brand prominence in an e-commerce environment?
- **H2:** There will be a strong relationship between brand size and brand prominence in an e-commerce environment.

The next part of the thesis details the research method, results and key findings.

# PART THREE:

# RESEARCH METHOD & FINDINGS

# CHAPTER 3: Research Method & Data Collection

This chapter covers the research method that is applied to address the research questions. The chapter begins with an overview of the data collection process and then explains the details regarding the creation of the shopping environments and chosen stimuli. Lastly, the chapter reveals the collected measures and data analysis process undertaken to examine the relationship between visual elements and prominence.

## 3.1 Data Collection Procedure

*Study 1: 'Real Shop'* and *Study 2: 'Mock-up Shop'* were developed to explore the effect that visual elements have on brand prominence in e-commerce shopping environments. The data collection procedure is now documented, including details regarding the recruitment, sample, and ethics approval.

### 3.1.1 Recruitment

An online panel was deemed an appropriate source for data collection, due to the nature of the online task. Both surveys were conducted through Toluna, an international online panel provider with access to 36 million panellists globally. Respondents voluntarily participate in the surveys and are rewarded for participation with points which can be redeemed for cash, vouchers, prizes, or a donation to a charity of choice (Toluna, 2019). For additional information about Toluna, see Toluna.com.

### 3.1.2 Sample

Data collection for *Study 1: 'Real Shop'* took place in November 2020. A total of 484 US and 491 UK (n=975) residents over the age of 18 participated in the study. The sample for *Study 2: 'Mock-up Shop'* comprised of 954 US residents over the age of 18, with data collection taking place in September 2021. A combined total of 1929 respondents participated in the studies. A quota sampling approach was enforced across studies to ensure the sample was as representative as possible of the market's general population in terms of category buying. Further details regarding the demographics of each study can be seen in **Table 1.**

**Table 1: Sample Demographics of Study 1 and 2**

| | | Study 1 | | Study 2 |
|---|---|---|---|---|
| **Country** | | **US** | **UK** | **US** |
| **Sample size (n)** | | 484 | 491 | 954 |
| **Age %** | **18-34** | 28 | 44 | 44 |
| | **35-54** | 33 | 39 | 39 |
| | **55 and over** | 39 | 17 | 17 |
| **Gender %** | **Male** | 40 | 49 | 49 |
| | **Female** | 60 | 51 | 51 |

The second study effectively builds on the first, by using brands local to the sample country which are more likely to be familiar or used by the sample. Therefore, potential effects of brand familiarity and usage could be measured for *Study 2: 'Mock-up Shop'*. The sample size was deliberately made large enough to capture both brand users and non-users, in addition to those familiar with the brand or category. The larger sample size provided the research with enough statistical power to sufficiently address the research questions, particularly surrounding familiarity, and usage.

**Table 2: Number of Respondents Assigned to each Shopping Environment**

| Product Category | | Shopping Environment (n) Online | Shelf |
|---|---|---|---|
| Study 1 | Crisps | 119 | 124 |
| | Salad Dressing | 124 | 124 |
| | Canned Fruit | 121 | 121 |
| | Coffee | 123 | 119 |
| | Spread | 124 | 123 |
| | Water | 120 | 121 |
| | Biscuits | 122 | 122 |
| | Chocolate | 122 | 121 |
| Study 2 | Egg | 323 | 631 |
| | Dog Food | 314 | 640 |
| | Paper Towel | 640 | 314 |

***11 CPG product categories were tested across Study 1 and 2.***

Each respondent was randomly allocated to one of three groups (A, B or C) in *Study 1: 'Real Shop'.* Each group viewed three displays from each product category, including at least one online display and one shelf display (see **Table 2**). Similarly, respondents in *Study 2: 'Mock-up Shop'* viewed one online display and one shelf display, each from a randomly allocated product category. Decisions regarding the chosen product categories are later documented in **Section 3.2.1**. The survey duration did not surpass 20 minutes to minimise respondent fatigue.

### 3.1.3 Ethics Approval

In agreement with the University of South Australia's Human Research Ethics Policy, the ethics application was sent to the Human Research Ethics Committee for review in October 2020 (*Study 1: 'Real Shop'*) and August 2021 (*Study 2: 'Mock-up Shop'*). The project information and consent form detailed at the beginning of the survey (see **Appendix B** and **C**) accompanied the application. The documents within the ethics application explained the research purpose, method, respondent confidentiality and storage of information. The Human Research Ethics Committee approved the proposal and documentation for *Study 1: 'Real Shop'* in mid-November 2020, prior to the survey being distributed in late November 2020. *Study 2: 'Mock-up Shop'* involved a brand in one of the included product categories, with ethics approved in September 2021 by the Human Research Ethics Committee in accordance with the University of South Australia's contract research guidelines.

## 3.2 Experimental Design & Choice of Stimuli

The two studies involved the design of an interactive questionnaire. This section details the decisions made regarding the experimental design, involving the chosen categories, brands, and shopping environments.

### 3.2.1 Category Selection

The research spanned eleven CPG product categories, namely *Crisps, Salad Dressing, Canned Fruit, Coffee, Spread, Water, Biscuits and Chocolate* (*Study 1: 'Real Shop'*), *Eggs, Dog Food, Paper Towels* (*Study 2: 'Mock-up Shop'*). Consumable and non-consumable products were present in the study, including those both hedonic and utilitarian in nature: hedonic products, such as *Chocolate*, are consumed for sensory fulfilment, whereas utilitarian products, such as *Paper Towels*, usually serve more practical or functional benefits (Kwok & Uncles, 2005). Previous work has suggested that hedonic and utilitarian products are perceived differently on shelf (Wang, 2017). Thus, the inclusion of both hedonic and utilitarian products allows for comparisons in the analysis process. Testing across multiple product categories assisted in testing the generalisability of the results.

### 3.2.2 Brand Selection

#### 3.2.2.1 Stimuli

The stimuli across the two studies comprised of real brands. The use of real brands assisted in creating a more realistic shopping environment. Both national and private label brands were included for a more detailed analysis at the individual brand level.

*For Study 1: 'Real Shop'*, brands in the AU market were used. The brand images were sourced from one of the largest supermarket retailers in Australia.

The brands used in *Study 2: 'Mock-up Shop'* were available in the US market. The brand images used were sourced from US e-commerce platforms that are commonly used to purchase CPG products, including Walmart.com and Kroger.com. A complete list of the brands used across studies is available in **Appendix D**.

#### 3.2.2.2 Brand Size

It was deemed important to include brands of different sizes in the study, since RQ3 examines the impact of brand size on brand prominence.

Notably, the *Study 2: 'Mock-up Shop'* data was used to measure brand size effects, where the brands tested were local to the US sample. As such, the sample were more likely to be familiar with/users of the brands. As discussed in **Chapter 2**, **Section 2.3.3**, larger brands benefit from being purchased by more category buyers (Ehrenberg et al., 1990), and consequently have higher levels of familiarity and usage than smaller brands. The inclusion of larger brands allowed for an adequate measurement of familiarity and usage.

For this study, brand size is measured through the metric of penetration, which is explained in the following section. Market share is a brand performance metric quantifying brand revenue relative to competing brands in the category (Farris et al., 2016). Penetration is a key component of market share, defined as the percentage of people purchasing a brand at least once in a time period, such as 6 months (Dawes, 2006; Ehrenberg, 2000). In this study, penetration is determined by the proportion of category users that had purchased the brand in the last three months (*Egg, Dog Food*) and six months (*Paper Towel)*.

### 3.2.3 Environment Selection

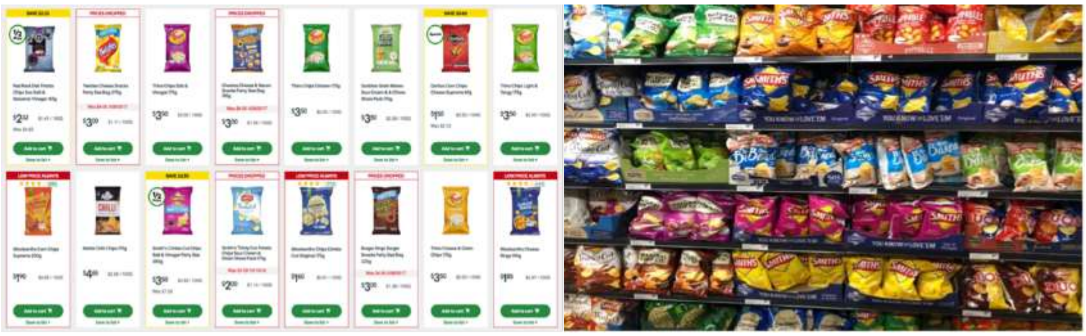
Along with different product categories and brands, these brands are displayed in different shopping environments as discussed below.

#### 3.2.3.1 Shopping Environments: Online and Shelf

For *Study 1: 'Real Shop'*, real online and shelf environments were displayed to respondents (see **Figure 15**). Images of actual shopping environments were derived from one of the largest supermarket retailers in Australia.

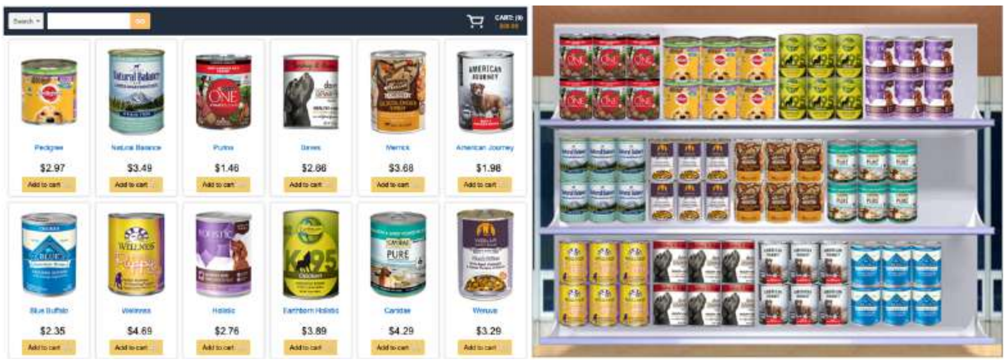
*Study 2: 'Mock-up Shop'* involved the creation of two mock-up shopping environments, an online and shelf display (see **Figure 16**). Suitable shopping environment layouts were provided by the expert panel provider, Toluna. The complete set of shopping environments used for this research is provided in **Appendix A**.

**Figure 15: Shopping Environments for Crisps used in Study 1, 'Real Shop'**



Pictured: Online Bricks and Mortar Supermarket; In-Store Supermarket Shelf

**Figure 16: Shopping Environments for Dog Food used in Study 2, 'Mock-Up Shop'**



Pictured: Mock-Up Online Marketplace; In-Store Supermarket Shelf

#### 3.2.3.2 Further Considerations

Prior research suggests shelf position has an impact on attention (Chandon et al., 2009; Drèze et al., 1994; Raghubir & Valenzuela, 2006) with online shopping studies finding attention is guided towards the centre of an assortment (Atalay et al., 2012; Chandon et al., 2007). Thus, for *Study 2: 'Mock-up Shop'*, where position could be controlled, the location of the twelve brands was randomised for each respondent to control for positioning effects.

Additionally, brands in-store are often stacked on shelves alongside multiple products of the same kind, rather than standing in isolation. Accordingly, this presentation was enforced within the mock-up shelf for *Study 2: 'Mock-up Shop'*.

Moreover, studies have found contextual factors can influence shopper attention, including time pressure (Pieters & Warlop, 1999) and stress (Janelle, 2002). Given the potential for time pressure to impact attention, a time limit was not placed on respondent choice.

## 3.3 Key Measures

This research uses a split sample experimental design, through two studies. An experimental design is often used in marketing research to investigate the relationship between two or more variables (Gravetter & Forzano, 2012). Under this approach, changes to one or more independent variables can impact the dependent variable. This research aims to examine the effect that various visual elements (independent variables) have on brand prominence (dependent variable) in e-commerce shopping environments.

The following section details the key variables measured, along with the survey questions used. Open-ended questions were posed to respondents which prompted a response based on their attitudes. The primary benefit of the self-report method is the few restrictions imposed on respondents, thus true thoughts and opinions can be identified (Gravetter & Forzano, 2012).

### 3.3.1 Brand Prominence

The sole dependent variable measured was brand prominence, involving the extent to which a brand attracts attention in the shopping environment (see **Chapter 2, Section 2.2.1** for a review). The investigation of brand prominence involved the presentation of a shopping environment alongside a product selection task. The message *'On the next screen, you will see some retail layouts for brands in a category. We'd like you to look at the image and click on whatever option immediately stands out/catches your eye.'* was presented to respondents, where one brand could be selected. The percentage of respondents that selected each of the displayed brands was calculated as part of the preliminary data analysis.

### 3.3.2 Visual Elements

Visual elements, such as colours, logos and text, act as the independent variables. As the central focus of the research, the influence that visual elements had on brand prominence was then examined. After having selected a brand as most prominent, a reflection question was posed to respondents in which they were asked to explain their reason for brand selection in an open-ended text box. The question *'Why did that option stand out from the others?'* was asked. Each response was coded into a category by two expert coders. The proportion of mentions of each visual element was mapped against other variables in the first stage of data analysis. The following section elaborates on the data analysis process.

## 3.4 Data Analysis Approach

The following section breaks down the data analysis process and statistical methods used to answer the research questions.

### 3.4.1 Coding Procedure

Several steps of data analysis were conducted to draw findings from the studies. Firstly, the open-ended responses derived from the survey question, *'Why did that option stand out from the others?'*, were coded into multiple categories by two expert coders. An extensive coding framework was created by the two coders, whereby the product image was broken down into key visual elements as established in the literature (see **Chapter 2, Section 2.2.7**). The coding categories, alongside a subset of coding categories used in the coding process, are displayed in **Table 3**. The table also includes examples of responses extracted from the survey.

**Table 3: Codes, Subset of Codes, and Example Responses**

| Codes | Codes Subset | Example Response |
|---|---|---|
| **Colour** | ❖ Single colour<br>❖ Multiple (two+) colours<br>❖ Substantial colour (taking up >50% area or bold/bright) | *'The colour - in this case Smiths because the brand name is on a bright red label/base. that's the first one the eye goes to.'* |
| **Design** | ❖ Aesthetics<br>❖ Shape<br>❖ Size<br>❖ Simple<br>❖ Unique/unusual | *'The design seemed neat and clean.'*<br>*'Visually appealing.'* |
| **Text** | ❖ Brand name<br>❖ Style of typeface (font)<br>❖ Miscellaneous words | *'Size of main lettering on label.'* |
| **Image** | ❖ Animal<br>❖ Product image<br>❖ Character<br>❖ Face | *'The picture of the product on the front.'* |
| **Logo** | ❖ Any mention of logo | *'Hellmans stands out because the label is clear and bright, and the dark blue cap pulls it all together.'* |
| **Familiarity with the Brand/Packaging** | ❖ Any mention of familiarity with the brand or packaging | *'It is a very recognizable package and brand.'* |
| **Usage** | ❖ Any mention of past or present brand usage | *'I've bought this brand before, so my eyes gravitated to it.'* |
| **Marketing/Advertising** | ❖ Any mention of marketing | *'I love the commercials.'* |
| **Brand/Product Attribute** | ❖ Feature of the brand or product | *'I'm picky about those eggs. I like free-range organic or cage-free.'* |
| **Price** | ❖ Any mention of price | *'It's inexpensive.'* |
| **Position** | ❖ Position of brand on website or shelf | *'How low or high it is located on the shelfing.'* |
| **Other** | ❖ N/A | *'Nothing stands out.'* |

***The coding framework includes factors that impact brand prominence, including visual elements and additional elements.***

To assist with the coding process, a subset of codes was documented alongside the codes to aid in identifying the key element/s of each response. Other themes emerged in the responses, such as marketing/advertising, price, and usage. For completeness, these responses were also coded into categories, to be later explored at analysis stage.

Given multiple reasons could be provided by the respondent, such as 'colour of the font' or 'I use the brand and the logo was striking', the coders assigned multiple codes to reflect each response if necessary. This is known as a simultaneous coding method, in which multiple codes are applied to a single piece of qualitative data (Miles et al., 2014). An excerpt of the actual coding spreadsheet is available as **Appendix E**.

### 3.4.2 Data Analysis

Once the coding process was complete, the dataset was analysed using a statistical software program, SPSS. Each response was assigned to a particular identification number for record keeping purposes. Each step of the analysis is detailed in this section.

#### 3.4.2.1 Descriptive Analysis

The descriptive statistics function on SPSS is used to explore, summarise, and describe the data (Coakes, 2013). To explore the dataset, the mean, standard deviation, and median of X are calculated, along with the distribution of frequency. For this research, descriptive statistics were useful in providing general observations about the coded data.

Brand prominence, the dependent variable and first focal variable of the analysis, is a measure of the brands that were considered most prominent in the shopping environment (see **Section 3.3.1).** To obtain a brand prominence figure, the percentage of respondents that selected each of the displayed brands was calculated. This was achieved using a frequencies distribution, which is a display of the frequency of occurrence of any value (Coakes, 2013). This formed the basis of all subsequent coding activities.

The independent variable and second focal variable, visual elements, assess the key visual elements that contributed to the brand prominence (see **Section 3.3.2**). A frequency distribution was run to obtain the percentage of responses for each visual element as identified in the coding process. Results were drawn by product category to detect potential differences across categories.

A contingency table or cross-tabulation was also produced to analyse the relationship between multiple variables (Coakes, 2013). A cross-tabulation was used when gathering insights for RQ2, in determining the variation of results between the online and shelf shopping environments.

#### 3.4.2.2 Statistical Significance

Once the general observations for brand prominence and visual elements were drawn from the data, further analysis was conducted. Regarding RQ1, an objective was to determine whether the top scoring elements were mentioned significantly more often than the succeeding visual elements within each category. For example, the top scoring element was compared with the second, the second compared with the third, and so forth. To achieve this, a Pearson's chi-square test for independence (significance test) was used (Coakes, 2013). A statistically significant $p$ value of <.05 signifies that there is 95% confidence that the given result is not due to sampling error.

Significance testing was also used in the analysis for RQ2 and RQ3, to examine potential variances between shopping environments and brands. The significant findings revealed the instances in which results vary, identifying both general and category specific findings.

#### 3.4.2.3 Correlation

Spearman's rho correlation (Spearman's correlation) was used to determine whether similar results applied across product categories in a consistent rank order, in answer to RQ1. Spearman's correlation is a calculation which measures the strength and relationship between two variables. The test involves the computation of a coefficient value, denoted as $\rho$, and its associated $p$ value, to assist in the interpretation of results (Coakes, 2013). Spearman's correlation was selected as the analysis can address rank order differences, which is appropriate for RQ1 as the ranking of elements is a key interest.

Pearson's correlation was used to determine whether results varied between online and shelf shopping environments, in answer to RQ2. The test involves the computation of a coefficient value, denoted as $r$, which measures the strength and direction of the two variables (Coakes, 2013). As RQ2 focuses on both the size of the difference and rank order, Pearson's correlation was deemed the most suitable test.

#### 3.4.2.4 Linear Regression

To understand the effect of penetration on brand prominence in answer to RQ3, a linear regression analysis was run. R-Squared (also referred to as $R^2$ or the coefficient of determination) is a statistical measure in the linear regression model that determines the proportion of variance in the dependent variable (brand prominence) that can be explained by the independent variable (penetration). In other words, r-squared shows how well the data fits the regression model (the goodness of fit).

The adjusted r-squared value corrects positive bias to provide a value that would be expected in the population (Coakes, 2013). Put simply, the adjusted r-squared is a figure that better reflects the sample size. Thus, the adjusted r-squared is the principal value in interpreting the results from the linear regression analysis.

#### 3.4.2.5 Fisher Z-Transformation

In line with RQ3, to determine whether penetration was a better estimator of brand prominence in any one shopping environment i.e., online or shelf, a Fisher Z-Transformation test was used. The test assesses whether there is a significant difference between two correlation coefficients, by calculating a z-score and its associated *p* value (Coakes, 2013). A significant *p* value denotes similarity between the online and shelf display in terms of the influence of penetration on brand prominence.

## 3.5 Data Reduction – Presentation of Results

Data reduction principles (Ehrenberg, 1975) have been applied to the presentation of results. The overarching data reduction principles within this thesis include:

- Rounding numbers to two significant figures.
- Calculating averages to summarise data and improve readability.
- Using columns for figure comparisons.
- Ordering average rows by size for clearer observing.

## 3.6 Chapter Summary

This chapter presents the research method used to obtain the data and conduct the necessary analyses to answer the research questions.

The online survey for the research was conducted through Toluna.com across 11 product categories in the US and UK over one year (2020-2021). The data contains responses of the brands selected as most prominent, along with reasons behind this. Respondents largely attribute prominence to a particular visual element. However, the open-ended nature of the survey allowed for measurement of additional elements such as prior familiarity and usage, providing a complete picture of the factors influencing brand prominence at the analysis stage. Testing across multiple countries, product categories, and shopping environments helps to explore the generalisation to other markets and products, identified through repeating patterns.

The chapter concludes by briefly discussing the data reduction principles used in the presentation of results. The next chapter reveals the research findings.

# CHAPTER 4: Research Findings

This chapter presents the findings of the research, first revealing the visual elements that contribute to brand prominence in e-commerce. It then highlights the differences in visual element prominence across shopping environments. Presented thereafter is an investigation of the relationship between brand size and prominence. The chapter concludes with a section providing supplementary findings.

## 4.1 Prominence of Visual Elements – Online

The prominence of visual elements in e-commerce shopping environments is now addressed, in response to RQ1, *'Which visual elements are the most prominent in an e-commerce environment?'*. A hypothesis is linked to this research question, that '*Colour will be more commonly associated with higher prominence than other visual elements'.* Accordingly, the section will explore whether this hypothesis is supported or not. The results from the first stage of data analysis are presented in **Table 4** and **5** and discussed in the following section.

**Table 4: Visual Elements Contributing to Brand Prominence Online**

| | Colour | Design | Text | Image | Logo |
|---|---|---|---|---|---|
| **Crisps** | 48 | 30 | 9 | 4 | 2 |
| **Chocolate** | 41 | 26 | 9 | 7 | 2 |
| **Spread** | 40 | 29 | 8 | 3 | 13 |
| **Canned Fruit** | 39 | 24 | 10 | 21 | 3 |
| **Water** | 31 | 30 | 8 | 3 | 10 |
| **Biscuits** | 31 | 24 | 12 | 11 | 2 |
| **Salad Dressing** | 28 | 41 | 9 | 2 | 11 |
| **Egg** | 26 | 12 | 5 | 2 | 0 |
| **Coffee** | 25 | 34 | 8 | 6 | 5 |
| **Dog Food** | 23 | 11 | 10 | 15 | 3 |
| **Paper Towel** | 16 | 8 | 5 | 6 | 1 |
| ***Average*** | ***32*** | ***24*** | ***8*** | ***7*** | ***5*** |

*% of respondents that mentioned visual element in online environment*

***In e-commerce, colour is the most prominent visual element.***

**Table 5: The Top Mentioned Visual Elements by Product Category**

| | First Scoring Element | Second Scoring Element | Statistical Significance of Colour Compared with other Elements | Statistical Significance of Design compared with other Elements |
|---|---|---|---|---|
| **Egg** | Colour | Design | $p$<.001* from 4/4 elements | $p$<.001* from 3/3 elements |
| **Paper Towel** | Colour | Design | $p$<.001* from 4/4 elements | $p$=.03* from 2/3 elements |
| **Crisps** | Colour | Design | $p$<.001* from 4/4 elements | $p$<.001* from 3/3 elements |
| **Dog Food** | Colour | Image | $p$=.01* from 4/4 elements | $p$<.001* from 1/2 elements |
| **Canned Fruit** | Colour | Design | $p$=.01* from 4/4 elements | $p$<.001* from 2/3 elements |
| **Chocolate** | Colour | Design | $p$=.01* from 4/4 elements | $p$<.001* from 3/3 elements |
| **Spread** | Colour | Design | $p$=.07# from 4/4 elements | $p$<.001* from 3/3 elements |
| **Salad Dressing** | Design | Colour | $p$<.001* from 3/4 elements | $p$=.03* from 4/4 elements |
| **Coffee** | Design | Colour | $p$<.001* from 3/4 elements | $p$<.001* from 3/4 elements |
| **Water** | Colour | Design | $p$<.001* from 3/4 elements | $p$<.001* from 3/3 elements |
| **Biscuits** | Colour | Design | $p$<.001* from 3/4 elements | $p$=.01* from 3/3 elements |

*statistically significant at p<.05; #marginally significant at p≤.07

***Colour is the most prominent visual element in nine of eleven product categories, while Design is most prominent in the two remaining product categories.***

In answer to RQ1, colour was found to dominate the responses relating to brand prominence within an e-commerce shopping environment, followed by design. The first hypothesis, '*Colour will be more commonly associated with higher prominence than other visual elements*', is therefore supported.

To determine whether colour was mentioned significantly more often than other visual elements within each category, a significance test was used (Coakes, 2013). The results of the significance test are documented in **Table 5**. In interpretation of the results, colour was the top scoring element in nine of eleven product categories. In the two remaining categories where colour was not the most prominent element, it came in second place after design.

### 4.1.1 Influence of Design

On average, design was the second most attributed element to brand prominence across eleven product categories. The design coding criteria included mentions of the overall packaging aesthetic, including the structural design features of shape and size.

Design surpassed colour as the top scoring element in two product categories, *Salad Dressing* and *Coffee*, demonstrating the significant influence of packaging design on prominence.

### 4.1.2 Influence of Other Elements

Aside from colour and design, other visual elements such as text, image, and logo also contribute to brand prominence. Noteworthily, logo responses are low, with mentions of all other elements significantly higher than logo, at $p < .001$ across categories. This suggests that intricate elements, including text, image, and logo, may be more difficult to identify on a digital screen, as later discussed in **Chapter 5**.

### 4.1.3 Correlation across Categories

Testing across multiple product categories helped to explore the generalisability across other products and markets. A Spearman's correlation tested the relationship between each product category. The aim of the analysis was to determine whether similar results applied across categories in terms of the visual elements mentioned as most prominent.

The results from the correlation analysis are documented in **Table 6** and discussed in the following section.

**Table 6: Correlation between Product Categories**

| | Egg | Dog Food | Paper Towel | Crisps | Salad Dressing | Canned Fruit | Coffee | Spread | Water | Biscuits |
|---|---|---|---|---|---|---|---|---|---|---|
| **Dog Food** | .70 | | | | | | | | | |
| **Paper Towel** | .90* | .90* | | | | | | | | |
| **Crisps** | 1.00* | .70 | .90* | | | | | | | |
| **Salad Dressing** | .60 | *.10* | .50 | .60 | | | | | | |
| **Canned Fruit** | .90* | .90 | 1.00* | .90* | .50 | | | | | |
| **Coffee** | .90* | .50 | .80 | .90* | .70 | .80 | | | | |
| **Spread** | .70 | *.30* | .60 | .70 | .90* | .60 | .60 | | | |
| **Water** | .70 | *.30* | .60 | .70 | .90* | .60 | .60 | 1.00* | | |
| **Biscuits** | 1.00* | .70 | .90* | 1.00* | .60 | .90* | .90* | .70 | .70 | |
| **Chocolate** | 1.00* | .70 | .90* | 1.00* | .60 | .90* | .90* | .70 | .70 | 1.00* |

*statistically significant at $p<.05$; italics indicate weaker correlation of ≤.30

***The visual elements selected as most prominent are largely similar across categories, with an average correlation of .75.***

In interpretation of the correlation, the coefficient value and its associated significant value was examined. As visible in **Table 6**, most product categories are moderately (.5) or strongly (.6 to 1) positively correlated, with strength of association guidelines obtained from Cohen (1988). In other words, the visual elements selected by respondents are largely similar across categories.

The categories with the strongest relationships, passing the statistical significance threshold of p<.05, are indicated with an asterisk in the table. Multiple category comparisons received perfect positive correlations of ($r = 1.00, p = < .001$), including *Crisps* and *Egg, Biscuits* and *Egg, Chocolate* and *Egg, Paper Towel* and *Canned Fruit, Crisps* and *Biscuits, Crisps* and *Chocolate, Spread* and *Water* and *Biscuits* and *Chocolate*.

There are three exceptions in which weaker relationships are evident. The weak relationships have a correlation coefficient of 0.3 or below, visible in italics in **Table 6**. The weak relationships suggest that deviations to the colour pattern are evident, with lower scoring elements more prominent in very few categories. Across categories, the average correlation is $r = .75$. This signifies that on average, a strong correlation across categories is present. In order words, the ranking of prominent elements is largely similar across categories.

## 4.2 Prominence of Visual Elements – Online and Shelf Compared

The first research question explored the e-commerce shopping environment in isolation. In this section, the in-store results are introduced and compared to the e-commerce results. Specifically, RQ2, *'Does visual element prominence vary between e-commerce and in-store shopping environments?'*, is answered. Firstly, a comparison of the visual elements contributing to brand prominence across shopping environments is presented in **Table 7**.

**Table 7: Visual Elements Contributing to Brand Prominence across Shopping Environments**

| | Colour | | Design | | Text | | Image | | Logo | | *r* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **O** | **S** | **O** | **S** | **O** | **S** | **O** | **S** | **O** | **S** | |
| **Crisps** | 48 | 51 | 30 | 19 | 9 | 7 | 4 | 3 | 2 | 2 | .97* |
| **Chocolate** | 41 | 39 | 26 | 27 | 9 | 7 | 7 | 2 | 2 | 1 | .99** |
| **Spread** | 40 | 50 | 29 | 15 | 8 | 3 | 3 | 2 | 13 | 7 | .91* |
| **Canned Fruit** | 39 | 29 | 24 | 22 | 10 | 6 | 21 | 11 | 3 | 10 | .88* |
| **Water** | 31 | 31 | 30 | 28 | 8 | 12 | 3 | 2 | 10 | 6 | .97** |
| **Biscuits** | 31 | 45 | 24 | 22 | 12 | 8 | 11 | 8 | 2 | 1 | .95* |
| **Salad Dressing** | 28 | 29 | 41 | 34 | 9 | 7 | 4 | 3 | 11 | 2 | .98** |
| **Egg** | 26 | 35 | 12 | 19 | 5 | 7 | 2 | 1 | 0 | 1 | .99** |
| **Coffee** | 25 | 25 | 34 | 34 | 8 | 8 | 6 | 2 | 5 | 4 | .99** |
| **Dog Food** | 23 | 31 | 11 | 13 | 10 | 5 | 15 | 13 | 3 | 3 | .94* |
| **Paper Towel** | 16 | 27 | 8 | 8 | 5 | 5 | 6 | 6 | 1 | 2 | .97* |
| ***Average*** | ***32*** | ***36*** | ***24*** | ***22*** | ***8*** | ***7*** | ***7*** | ***5*** | ***5*** | ***4*** | ***.96*** |

% of respondents that mentioned visual element in online and shelf environments (o=online, s=shelf); correlation between online and shelf environments displayed through Pearson correlation (r); *statistically significant at $p \leq .05$, **statistically significant at $p \leq .01$

***Colour is the most prominent visual element across both shopping environments. There is little variance in terms of the visual elements contributing to brand prominence, with an average correlation of .96.***

Colour is revealed as the top mentioned element on shelf, as previously seen for the online environment. On average, the order of visual elements, namely colour, design, text, image and logo, is ranked the same in both shopping environments. This implies that the visual elements that attract attention are largely similar across shopping environments. However, to test any potential category specific variances between online and shelf, correlation and significance testing are used. The results from such analyses are documented in the following sections.

### 4.2.1 Correlation between Online and Shelf Shopping Environments

All categories are strongly positively correlated, with an average correlation of .96 across categories as seen in **Table 7**. The strongest correlations are evident for the *Coffee, Egg,* and *Chocolate* categories, with strong, positive correlations of ($r = .99, p < .001$) between online and shelf displays.

The correlations for the remaining categories are also strong and positive, ranging from $r = .98$ to $r = .88$, at varying significant $p$ values. These results suggest that generally, there is little variance between the online and shelf displays across categories in terms of the visual elements contributing to brand prominence. The implications of such findings are discussed in **Chapter 5**.

### 4.2.2 Significance Testing

In support of the above findings, differences in responses across shopping environments were tested for their significance (Coakes, 2013). The comparisons of online and shelf results are documented in **Table 8** and **9** and discussed in the following section.

### Table 8: Comparison of Online and Shelf Results for Colour and Design

| | Colour | | | Design | | |
|---|---|---|---|---|---|---|
| | O | S | Δ | O | S | Δ |
| **Crisps** | 48 | 51 | *-3* | 30* | 19 | *11* |
| **Chocolate** | 41 | 39 | *2* | 26 | 27 | *-1* |
| **Spread** | 40 | 50# | *-10* | 29* | 15 | *14* |
| **Canned Fruit** | 39* | 29 | *10* | 24 | 22 | *2* |
| **Water** | 31 | 31 | *0* | 30 | 28 | *2* |
| **Biscuits** | 31 | 45* | *-14* | 24 | 22 | *2* |
| **Salad Dressing** | 28 | 29 | *-1* | 41 | 34 | *7* |
| **Egg** | 26 | 35* | *-9* | 12 | 19* | *-7* |
| **Coffee** | 25 | 25 | *0* | 34 | 34 | *0* |
| **Dog Food** | 23 | 31* | *-8* | 11 | 13 | *-2* |
| **Paper Towel** | 16 | 27* | *-11* | 8 | 8 | *0* |
| ***Average*** | ***32*** | ***36*** | ***-4*** | ***24*** | ***22*** | ***3*** |

% of respondents that mentioned visual element in online and shelf environments (o=online, s=shelf, Δ=difference);

*statistically significant difference online from shelf (or shelf from online) at $p$<.05, #marginally significant at $p$≤.11

***Colour is sometimes more important on shelf, while no one shopping environment dominates for Design.***

### Table 9: Comparison of Online and Shelf Results for Text, Image, and Logo

| | Text | | | Image | | | Logo | | |
|---|---|---|---|---|---|---|---|---|---|
| | O | S | Δ | O | S | Δ | O | S | Δ |
| **Biscuits** | 12 | 8 | *4* | 11 | 8 | *3* | 2 | 1 | *1* |
| **Dog Food** | 10* | 5 | *5* | 15 | 13 | *2* | 3 | 3 | *0* |
| **Canned Fruit** | 10 | 6 | *4* | 21* | 11 | *10* | 3 | 10* | *-7* |
| **Crisps** | 9 | 7 | *2* | 4 | 3 | *1* | 2 | 2 | *0* |
| **Salad Dressing** | 9 | 7 | *2* | 4 | 3 | *1* | 11* | 2 | *9* |
| **Chocolate** | 9 | 7 | *2* | 7 | 2 | *5* | 2 | 1 | *1* |
| **Coffee** | 8 | 8 | *0* | 6 | 2 | *4* | 5 | 4 | *1* |
| **Spread** | 8 | 3 | *5* | 3 | 2 | *1* | 13 | 7 | *6* |
| **Water** | 8 | 12 | *-4* | 3 | 2 | *1* | 10 | 6 | *4* |
| **Egg** | 5 | 7 | *-2* | 2 | 1 | *1* | 0 | 1 | *-1* |
| **Paper Towel** | 5 | 5 | *0* | 6 | 6 | *0* | 1 | 2 | *-1* |
| ***Average*** | ***8*** | ***7*** | ***2*** | ***7*** | ***5*** | ***3*** | ***5*** | ***4*** | ***1*** |

% of respondents that mentioned visual element in online and shelf environments (o=online, s=shelf, Δ=difference);

*statistically significant difference online from shelf (or shelf from online) at $p$<.05

***No one shopping environment dominates for Text, Image, and Logo.***

### 4.2.3 Commonly Mentioned on Shelf – Colour

As earlier discussed, colour is the element most attributed to brand prominence in both online and shelf shopping environments. Comparing the results by shopping environment uncovers the finding that colour received slightly more mentions on shelf, statistically significant in four categories and marginally significant in one further category (see **Table 8**).

In a further 3 categories, there are also higher number of colour-related responses for shelf, albeit not significant. *Canned Fruit* is the significant exception to the pattern, with the online display receiving more colour mentions, at $p = .01$.

### 4.2.4 Category Specific Variances – Design, Text, Image, Logo

Category specific variances for the visual elements of design, text, image, and logo can be identified in **Table 8** and **9**. For the element of design, there are category specific instances in which one shopping environment received significantly more mentions. First, design received more recognition online for the *Crisps* and *Spread* categories, significant at $p = .05$ and $p = .01$ respectively. Simultaneously, mentions of design for the *Egg* category were higher for shelf at $p = .01$. Thus, there is no clear pattern of one shopping environment dominating for design.

Similarly, the visual elements of text, image and logo received a similar number of mentions, on average, across shopping environments. Some category specific variances are evident, for example, image was more commonly mentioned online for *Canned Fruit* at $p = .03$. However, the overarching pattern is that these visual elements are not more important in any one shopping environment.

## 4.3 The Influence of Brand Size on Brand Prominence

The previous sections revealed the visual elements contributing to brand prominence in online and shelf environments. This section builds on the previous findings, by testing whether a brand with more users is more likely to be selected as prominent. Specifically, RQ3, *'To what degree does brand size explain brand prominence in an e-commerce* *environment?*' is answered. H2, '*There will be a strong relationship between brand size and brand prominence in an e-commerce environment.*' will also be investigated.

As explained in **Chapter 3, Section 3.2.2.2**, brand size is operationalised through the measure of penetration. A linear regression analysis was conducted to understand the effect of penetration on brand prominence. The results from the analysis are presented in **Table 10** and discussed in the following section.

**Table 10: Relationship between Penetration and Brand Prominence**

| | Egg | | Dog Food | | Paper Towel | |
|---|---|---|---|---|---|---|
| | **Online** | **Shelf** | **Online** | **Shelf** | **Online** | **Shelf** |
| **Adjusted $R^2$** | 32 % | 22 % | 72 % | 80 % | 55 % | 42 % |
| **P value** | .03 | .06 | < .001 | < .001 | .003 | .01 |
| **F** | F(1,11) = 6.53 | F(1,11) = 4.38 | F(1,10) = 29.24 | F (1,10) = 44.39 | F(1,10) = 14.52 | F(1,10) = 8.86 |
| **Regression equation** | Prominence = 2.20 + (0.48 x Penetration) | Prominence = 2.62 + (0.45 x Penetration) | Prominence = 1.53 + (0.39 x Penetration) | Prominence = -0.18 + (0.48 x Penetration) | Prominence = 1.71 + (0.27 x Penetration) | Prominence = .05 + (0.31 x Penetration) |

***There is a positive relationship between penetration and brand prominence.***

To answer RQ3, brand size significantly estimates prominence across categories, except for *Egg* (shelf). H2, '*There will be a strong relationship between brand size and brand prominence in an e-commerce environment',* is therefore largely supported, in that high penetration brands are more prominent in all cases except *Egg* (shelf), which falls just outside the bounds of $p = .05$. However, deviations are evident, suggesting that factors other than penetration also influence brand prominence. These deviations are introduced in **Section 4.3.2**.

To best interpret the analysis, the results for one shopping environment (*Egg* online) are now discussed. This interpretation of results for the *Egg* online display can be applied to any of the other categories and shopping environments.

For *Egg* online, penetration statistically significantly estimated brand prominence, $\mathrm{F}(1,11) = 6.53, p = .03$. The adjusted $R^2$ is 32% between penetration and brand prominence.

Using the regression equation, prominence is estimated based on a brand's penetration score. For example, the expected prominence for Eggland's Best, with a penetration of 46%, is calculated as: $prominence = 2.202 + (0.48 \text{ x penetration}) = 24$. In other words, a 1% increase in penetration would mean an 0.48% increase in prominence for *Egg* online. The expected prominence values across brands are reported in **Section 4.3.2**.

### 4.3.1 Difference Between Online and Shelf

To investigate whether penetration was a better predictor of brand prominence in either the e-commerce or in-store shopping environment, a Fisher Z-Transformation test was run.

**Table 11: Fisher Z-Transformation Results**

| | Egg | | Dog Food | | Paper Towel | |
|---|---|---|---|---|---|---|
| | **Online** | **Shelf** | **Online** | **Shelf** | **Online** | **Shelf** |
| **N (sample)** | 323 | 317 | 130 | 288 | 590 | 292 |
| **Z** | 1.4 | | -1.8 | | 2.4 | |
| **P value (one tailed)** | .08 | | .03 | | .008 | |

***Penetration does not explain brand prominence better in any single shopping environment.***

In interpretation of the Fisher Z-Transformation in **Table 11**, there is a statistically significant association between online and shelf for *Dog Food* ($p = .03$) and *Paper Towel* ($p = .008$). The association for *Egg* is marginally significant at $p = .08$. Given the consistent pattern between online and shelf across categories, it can be concluded that penetration is not a better explanation for brand prominence in any one shopping environment.

### 4.3.2 Brand Deviations

Brand deviations were identified through both visual examination of the scatterplot and the analysis of residuals. The analysis of residuals is determined through the error calculation: *expected* - *actual* prominence. The brand deviation denotes how much the brand's observed prominence deviates from its expected prominence, given its brand size. The deviations are discussed by product category in the following sections.

### 4.3.2.1 Egg

The brand deviations for *Egg* are visible in **Table 12.**

**Table 12: Impact of Penetration on Brand Prominence for Brands in the Egg Category**

| | Penetration % | Online Prominence % | Online Expected Prominence % | Online Error* | Shelf Prominence % | Shelf Expected Prominence % | Shelf Error* |
|---|---|---|---|---|---|---|---|
| **Eggland's Best** | 45 | 30 | 24 | 7 | 25 | 23 | 2 |
| **Land O Lakes** | 25 | 5 | 14 | -9 | 7 | 14 | -7 |
| **Organic Valley** | 20 | 8 | 12 | -3 | 5 | 12 | -6 |
| **Simple Truth** | 12 | 5 | 8 | -3 | 1 | 8 | -7 |
| **Happy Egg** | 10 | 30 | 7 | 23 | 31 | 7 | 23 |
| **Vital Farms** | 6 | 9 | 5 | 4 | 11 | 5 | 5 |
| **Blue Sky** | 6 | 2 | 5 | -3 | 2 | 5 | -3 |
| **Pete & Gerry's** | 6 | 2 | 5 | -4 | 3 | 5 | -3 |
| **The Farmer's Hen** | 5 | 2 | 5 | -3 | 3 | 5 | -2 |
| **Nellie's** | 5 | 2 | 5 | -3 | 3 | 5 | -2 |
| **Handsome Brook** | 5 | 2 | 5 | -3 | 6 | 5 | 1 |
| **Nest Fresh** | 3 | 3 | 4 | -1 | 2 | 4 | -2 |
| **Carol's** | 3 | 1 | 4 | -2 | 2 | 4 | -2 |
| ***Average*** | ***12*** | ***8*** | ***8*** | ***0*** | ***8*** | ***8*** | ***0*** |

*error = expected – actual prominence; highlighted are deviations that pass statistical and/or managerial significance (i.e., ≥5 percentage-point deviation)

***Across shopping environments, Happy Egg is more prominent than expected. Meanwhile, Land O Lakes is less prominent than expected.***

Happy Egg is more prominent than expected online and on shelf with a deviation of 23. Looking at the shelf display alone, Vital Farms is more prominent than expected with a deviation of 5. The relative novelty of the Happy Egg and Vital Farms packaging, when compared with the category, is later discussed in **Chapter 5** as a potential explanation for the heightened prominence. Online, Eggland's Best is more prominent than expected with a deviation of 7. However, this is not unusual given Eggland's Best position as the largest brand in the category. This reiterates the finding that larger brands have a prominence advantage, in line with RQ3. The presence of multiple deviations for *Egg*, particularly on shelf, explains the low adjusted $R^2$ for the *Egg* category as earlier explained in **Section 4.3**.

Meanwhile, Land O Lakes is less prominent than expected online and on shelf, with deviations of -9 and -7 respectively. Again, looking at the shelf display alone, Organic Valley and Simple truth are less prominent than expected, with deviations of -6 and -7. Interpretations of these deviations, which include themes such as packaging prototypicality and private label brands, are introduced in **Chapter 5**.

#### 4.3.2.2 Dog Food

The identified deviations for *Dog Food* are displayed in **Table 13.**

**Table 13: Impact of Penetration on Brand Prominence for Brands in the Dog Food Category**

| | Penetration % | Online | | | Shelf | | |
|---|---|---|---|---|---|---|---|
| | | Prominence % | Expected Prominence % | Error* | Prominence % | Expected Prominence % | Error* |
| **Pedigree** | 43 | 17 | 18 | -1 | 22 | 20 | 2 |
| **Purina** | 42 | 15 | 18 | -3 | 22 | 20 | 2 |
| **Blue Buffalo** | 35 | 23 | 15 | 8 | 17 | 17 | 1 |
| **Natural Balance** | 24 | 6 | 11 | -5 | 3 | 11 | -8 |
| **Merrick** | 13 | 9 | 7 | 3 | 5 | 6 | -2 |
| **American Journey** | 12 | 5 | 6 | -2 | 4 | 6 | -1 |
| **Wellness** | 11 | 6 | 6 | 0 | 4 | 5 | -1 |
| **Dave's** | 8 | 5 | 5 | 0 | 10 | 4 | 6 |
| **Earthborn Holistic** | 8 | 7 | 5 | 2 | 4 | 4 | 0 |
| **Holistic Select** | 7 | 1 | 4 | -4 | 5 | 3 | 1 |
| **Canidae** | 6 | 4 | 4 | 0 | 3 | 3 | 0 |
| **Weruva** | 4 | 3 | 3 | 0 | 2 | 2 | 0 |
| ***Average*** | ***18*** | ***8*** | ***8*** | ***0*** | ***8*** | ***8*** | ***0*** |

*error = expected – actual prominence; highlighted are deviations that pass statistical and/or managerial significance (i.e., ≥5 percentage-point deviation)

***Natural Balance is less prominent than expected for its size across both shopping environments.***

Blue Buffalo experiences higher than expected prominence online, with a deviation of 8. Meanwhile, with a deviation of 6, Dave's is more prominent than expected on shelf.

Natural Balance is less prominent than expected across shopping environments, with deviations of -5 and -8. Potential explanations of these deviations are presented in **Chapter 5** and include the topics of distribution and familiarity.

#### 4.3.2.3 Paper Towel

**Table 14** displays the deviations for the *Paper Towel* category.

**Table 14: Impact of Penetration on Brand Prominence for Brands in the Paper Towel Category**

| | | Online | | | Shelf | | |
|---|---|---|---|---|---|---|---|
| | Penetration % | Prominence % | Expected Prominence % | Error* | Prominence % | Expected Prominence % | Error* |
| **Bounty** | 73 | 22 | 21 | 1 | 27 | 23 | 4 |
| **Brawny** | 36 | 16 | 11 | 5 | 14 | 11 | 3 |
| **Great Value** | 36 | 5 | 11 | -7 | 4 | 11 | -7 |
| **Scott** | 32 | 6 | 10 | -5 | 8 | 10 | -2 |
| **Sparkle** | 28 | 8 | 9 | -2 | 4 | 9 | -4 |
| **Viva** | 27 | 5 | 9 | -4 | 4 | 8 | -4 |
| **Charmin** | 24 | 16 | 8 | 8 | 24 | 7 | 16 |
| **Bravo** | 16 | 4 | 6 | -2 | 3 | 5 | -2 |
| **Kleenex** | 14 | 3 | 5 | -3 | 3 | 4 | -2 |
| **Up&Up** | 10 | 8 | 4 | 3 | 3 | 3 | 0 |
| **Seventh Generation** | 8 | 4 | 4 | 0 | 3 | 2 | 0 |
| **White Cloud** | 5 | 4 | 3 | 1 | 3 | 2 | 1 |
| ***Average*** | ***26*** | ***8*** | ***9*** | ***0*** | ***8*** | ***8*** | ***0*** |

*error = expected – actual prominence; highlighted are deviations that pass statistical and/or managerial significance (i.e., ≥5 percentage-point deviation)

***Charmin experiences higher-than-expected prominence online and on shelf. Conversely, Great Value has lower than expected prominence across shopping environments.***

Charmin is more prominent than expected in online and shelf displays, with deviations of 8 and 16 respectively. Likewise, Brawny is more prominent than expected online with a deviation of 5. This higher prominence may be attributed to Charmin and Brawny's use of Distinctive Assets, as further discussed in **Chapter 5.**

Scott is identified as less prominent than expected online, with a deviation of -5. Similarly, Great Value is less prominent than expected across both shopping environments, with a deviation of -7. In **Chapter 5**, Great Value's status as a private label brand is discussed as a potential influencing factor on its lack of prominence.

## 4.4 Supplemental Findings – Additional Elements

Separate to the visual elements, additional elements of brand usage, familiarity, marketing/advertising, brand/product attribute, price, and position were also expressed by respondents as reasons for brand prominence.

These elements were considered important to include in the coding process for completeness, while accounting for memory-based processes such as familiarity and usage (Gregory, 1970). The additional elements contributing to brand prominence are documented in **Table 15**.

**Table 15: Additional Elements Contributing to Brand Prominence**

| | Price | | Usage | | Familiar with overall pack or brand | | Brand/Product Attribute | | Marketing/ Advertising | | Position | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | O | S | O | S | O | S | O | S | O | S | O | S |
| **Crisps** | 30* | 4 | N/A | N/A | N/A | N/A | 9 | 4 | 1 | 0 | 0 | 2 |
| **Salad Dressing** | 24 | 29 | N/A | N/A | N/A | N/A | 5 | 5 | 1 | 1 | 1 | 1 |
| **Canned Fruit** | 22# | 13 | N/A | N/A | N/A | N/A | 16* | 9 | 0 | 1 | 0 | 3 |
| **Coffee** | 21 | 18 | N/A | N/A | N/A | N/A | 11 | 8 | 1 | 0 | 0 | 2 |
| **Chocolate** | 21 | 14 | N/A | N/A | N/A | N/A | 11 | 7 | 0 | 0 | 1 | 7* |
| **Biscuits** | 20 | 14 | N/A | N/A | N/A | N/A | 9 | 10 | 1 | 1 | 0 | 3 |
| **Spread** | 19 | 19 | N/A | N/A | N/A | N/A | 6 | 11 | 0 | 1 | 0 | 2 |
| **Water** | 18 | 16 | N/A | N/A | N/A | N/A | 6 | 3 | 1 | 2 | 0 | 3 |
| **Egg** | N/A | N/A | 19* | 12 | 15* | 9 | 17 | 20 | 0 | 1 | 0 | 1 |
| **Dog Food** | N/A | N/A | 14 | 11 | 20 | 15 | 11 | 9 | 2 | 2 | 1 | 1 |
| **Paper Towel** | N/A | N/A | 23 | 22 | 22 | 21 | 11* | 6 | 3 | 4 | 1 | 2* |
| ***Average*** | **22** | ***16*** | ***19*** | ***15*** | ***19*** | ***15*** | ***10*** | ***8*** | ***1*** | ***1*** | ***0*** | ***3*** |

% of respondents that mentioned element in online and shelf shopping environments (o=online, s=shelf, N/A=coding criteria excluded from study); *significant difference online from shelf (or shelf from online) at $p<.05$, #marginal significant difference online from shelf (or shelf from online) at $p<.10$

***Price and Brand Familiarity/Usage are the top additional elements contributing to brand prominence.***

An overview of the results for each additional element is documented below. Potential implications of the results are presented in **Chapter 5**.

### 4.4.1 Brand Familiarity and Usage

To distinguish between brand users and those familiar with the packaging/brand, two separate coding frameworks were created, familiarity and usage. As discussed in

**Chapter 2, Section 2.3.2**, brand users are likely to be familiar with the packaging/brand. However, by the same token, a shopper may be familiar with the packaging/brand without necessarily being a brand user. The brands in *Study 1: 'Real Shop'* were not local to the sample country, so respondents were unlikely to be familiar with all of the brands, as earlier explained. Thus, familiarity and usage are tested for three categories included in *Study 2: 'Mock-up Shop'*.

The coding criteria of familiarity included mentions such as 'The carton is white, and it seems familiar to me' and 'It is a very recognizable package and brand'. As discussed, brand familiarity influences choice online (Danaher et al., 2003; Degeratu et al., 2000; Park & Stoel, 2005; Saini & Lynch Jr, 2016). Additionally, higher loyalty levels can be observed online, particularly that of higher share brands (Chu et al., 2010; Danaher et al., 2003; Huang, 2011).

Responses relating to using or having previously used the brand were accounted for in the coding criteria of usage. Mentions included '*I've bought this brand before, so my eyes gravitated to it'* and *'My dog eats this canned dog food'.* As discussed, higher attention is paid towards used brands (Romaniuk & Nicholls, 2006). Moreover, shoppers are less responsive to visual elements (stimulus-based factor) after having used a brand as their personal experience drives attention (Bridges et al., 2006).

Mentions of familiarity and usage trended higher in the online environment across three product categories for *Study 2: 'Mock-up Shop'* but was only statistically significant for the *Egg* category at $p = .02$.

### 4.4.2 Brand/Product Attribute

The coding criteria of brand/product attribute included comments involving the quality, freshness, perceived health, or other features intrinsic to the product. Mentions included 'Cage free eggs', 'Ingredients' and 'Taste'. The results find mentions of brand/product attribute to be significantly higher in the online environment for *Paper Towel* and *Canned Fruit*, at $p = .02$ and $p = .01$ respectively.

### 4.4.3 Price

Price was significantly higher in the online environment in the *Crisps* category ($p =<$ .001), marginally significant for *Canned Fruit* ($p = .07$) and trended towards online in a further four categories (see **Table 15**). Mentions included '*The red bar on top and red box around it, and the yellow bar on top*' and '*The label (that reads) prices dropped*'. Notably, the coding criteria of price was excluded from the three categories used in *Study 2: 'Mock-up Shop'*, as price information was not presented in the shelf display and received little to no mentions.

### 4.4.4 Position

The coding criteria of position included any mentions relating to the positioning of the product online or on shelf. The results suggest that position is slightly more important on shelf, significant in the *Paper Towel* ($p = .03$) and *Chocolate* categories ($p < .001$).

### 4.4.5 Marketing/Advertising

Mentions of marketing/advertising were often tied to product knowledge. Mentions included *'Prior marketing, brand recognition'* and *'I love the commercials'*. Responses relating to this coding criteria were relatively low across categories.

## 4.5 Chapter Summary

This chapter presents the results that address the three research questions regarding the relationship between visual elements and brand prominence. The findings indicate that colour is a significant contributor to prominence in e-commerce and in-store, with slightly more influence in-store. Brand size is a significant predictor of brand prominence across both shopping environments; however, deviations are evident. The study also reveals that brand size is not a better predictor of prominence in any one shopping environment.

The supplementary findings also highlight the importance of several additional elements that impact brand prominence, including familiarity, usage, and price, with slightly more influence observed in e-commerce. The next chapter will discuss the practical implications and potential explanations for the key findings.

# CHAPTER 5: Key Findings & Discussion

In this chapter, the key findings of the study are summarized, surrounding the impact of visual and additional elements on brand prominence. The chapter also discusses the relationship between brand size and brand prominence.

## 5.1 Key Findings

This research sought to gain an understanding of the prominent visual elements in e-commerce environments, using a split sample experimental design. The findings advance the research stream and inform practitioner decision making in terms of improving brand prominence online. Three questions were investigated: 1) Which visual elements are the most prominent in e-commerce shopping environments?, 2) Does this differ to what we observe in-store?, and 3) To what degree does brand size explain brand prominence?

This chapter identifies 6 key findings from the two studies, which are presented in the following section.

### Key Finding 1: Colour is the most prominent visual element in e-commerce and in store, and it is sometimes more important in-store.

The first finding uncovers the crucial role that colour plays in building brand prominence in e-commerce. Previous in-store research found colour to be the most prominent element on shelf (Gaillard et al., 2006; Pinero De Plaza et al., 2015). This thesis extends prior studies to the e-commerce environment, providing evidence that the fundamental colour finding is generalisable to e-commerce. This finding suggests that, regardless of shopping environment, the benefit of using colour as a visual element largely remains the same. Colour is the top scoring element in nine of eleven product categories. In the two remaining categories where colour is not the most prominent element, it is mentioned second.

As demonstrated through this research, the use of colour in cluttered e-commerce and in-store environments supports brand prominence. For a brand to benefit from colour in the long term, an aim should be to develop the colour into a Distinctive Asset for the brand (Romaniuk, 2018b), as explained. The brand will benefit from associations being made between the colour and brand name in shopper memory. For example, when a shopper notices a flash of pink in the cleaning aisle, Vanish may instantly come to mind. Vanish then not only benefits from the use of the bright pink colour, but the learnt associations the shopper has with the brand.

However, colour is difficult to build as a Distinctive Asset that uniquely signals the brand (Hoek & Gendall, 2010; Major, 2014; Romaniuk, 2018a; Ward et al., 2020). This is largely because there are a limited number of colours that a brand can choose from, and as such it is difficult for a brand to select a colour that is entirely unique (Hoek & Gendall, 2010). Also, colour can be used to signal both categories and product variants (Garber, Hyatt, et al., 2000; B. Piqueras-Fiszman et al., 2012; Zampini et al., 2008). Using a previous example, red signals the ketchup category, while green signals mint flavoured chocolate. Colour associations can also vary by location or cultural context (Madden et al., 2000). For these reasons, colour is a difficult element for a brand to build as a unique brand identifier. Bundling colour with a design element, such as shape, is one way for a brand to build a colour element. This colour-and-design combination has potential to be more valuable for a brand than an individual colour alone (Romaniuk, 2018a).

Adding to the above, while colour is the top performing element in both environments, it is sometimes more important in-store. Colour is more commonly mentioned on shelf in four of eleven product categories and is marginally significant in one additional category. A potential explanation for the higher responses for the shelf display is colour blocking. As introduced in **Chapter 2, Section 2.2.7.1**, colour blocking is a technique in which multiple facings of a single brand are placed together on shelf, creating a substantial block of colour which contrasts effectively with surrounding products (Aglo, 2019; Kahn, 2017; Vermeulen, 2013; Young, 2003).

This has implications for the way in which colour is prioritised in different shopping environments. For example, the use of colourful, well-branded shelf displays becomes a valuable initiative in-store. Although colour blocking is not achievable in e-commerce as each product image is displayed individually, the use of colour online is equally important. For example, the use of colour as a Distinctive Asset across all product variants can help the shopper recognize the brand through learnt brand associations (Romaniuk, 2018b).

### Key Finding 2: Design is the second most prominent visual element in e-commerce and in-store, demonstrating the importance of an appealing package design.

Overall, design is the second most prominent visual element across shopping environments. As mentioned, the criteria of design included mentions of the overall packaging aesthetic, including the structural design features of shape and size. Design is the second scoring element in eight of eleven product categories. In two categories, design is the top scoring element. This demonstrates the importance of an appealing package design in terms of the overall aesthetic.

A potential explanation for this finding is that visual elements on packaging can be processed holistically rather than separately (Romaniuk, 2018a). For example, colour used in a logo may be processed by the shopper as an integrated design feature rather than a separate colour linked to the brand. This suggests that a combination of visual elements on packaging, rather than one in isolation, has the potential to increase prominence.

It also suggests that the shape and size of the packaging impacts brand prominence. As mentioned in **Chapter 2, Section 2.2.7.3**, shape and size typically remains consistent across brands in a category, with shoppers able to quickly identify the brand as a member of the category (Mocanu, 2015). As such, minor modifications in shape and size, to create a unique structural design, may assist in drawing attention.

While the potential for structural design features (i.e., shape and size) to draw attention is acknowledged, it should be noted that practicality and usability are important roles of packaging (Ambrose & Harris, 2011; Underwood, 2003). As earlier explained, the packaging shape must serve the purpose of protecting the product during transportation (Underwood, 2003). Moreover, unusual packaging shapes and sizes are often costly and difficult to store (Rundh, 2009; Twede, 1992). Therefore, modifications to packaging design may be detrimental if at the expense of easy transportation, storage, and use (Rundh, 2009).

This finding highlights the importance of creating an appealing visual design on packaging, particularly if colour options are limited. This may be achieved using a combination of visual elements, ideally incorporating the brand's Distinctive Assets (Romaniuk, 2018b). It also acknowledges the potential for shape and size to draw attention. However, modifications to structural design may not be feasible, if it does not support the practicality and usability of the product.

### Key Finding 3: Larger brands are more likely to be prominent than smaller brands in e-commerce and in-store. However, small brands can achieve the prominence of a large brand.

The third finding reveals that larger brands are more prominent than smaller brands in e-commerce and in-store. This finding suggests that larger brands have an advantage regardless of the shopping environment, in that they capture the most attention.

There are multiple potential explanations for this finding. Evidence finds that familiarity and usage heighten brand prominence (Ahluwalia, 2002; Chandon et al., 2009; Hickman et al., 2020; Kent & Allen, 1994; Pechmann & Stewart, 1990) and influence brand choice (Alba et al., 1991; Alba & Marmorstein, 1987; Park & Stoel, 2005). Given larger brands inherently have higher levels of familiarity and usage, in line with the law of Double Jeopardy (Ehrenberg et al., 1990), it is expected that brand size also positively influences prominence.

This finding corroborates research which suggests larger brands have an advantage in e-commerce and in-store (Ehrenberg et al., 2004; Nenycz-Thiel et al., 2021; Sharp & Romaniuk, 2016; Shehzad et al., 2014). It provides the unique finding that larger brands are more likely to be prominent in both shopping environments.

However, the research also finds that brand size is not the sole contributor to prominence. Deviations were identified, in which case several brands performed better than expected given their penetration. In other words, small brands have the opportunity of achieving the prominence of a large brand. **Section 5.2** discusses this in more detail.

### Key Finding 4: Private label brands are less prominent than national brands of the same size in e-commerce and in-store.

Private label brands were included in the product categories in *Study 2: 'Mock-up Shop'* to test the generalisability of the results across national and private label brands. Simple Truth, Great Value, and Natural Balance are private label brands in the *Egg, Paper Towel* and *Dog Food* categories. All three private label brands received lower than expected prominence scores when benchmarked against their penetration. These deviations are detailed in **Section 5.2**.

Historically, private label brands do not advertise at the level to which national brands do (Baltas et al., 1997; Cunningham et al., 1982). Prior research finds that advertised national brands benefit from a higher level of knowledge amongst their non-users than do private labels (Nenycz-Thiel & Romaniuk, 2014). The lack of advertising by private label brands is one plausible explanation for the lower perceived prominence of these brands. This being as visual elements and other distinctive features of the packaging are not showcased to shoppers, and as such, shoppers may be unfamiliar with the brand when they encounter it in shopping environments. This finding suggests that advertising helps to build prominence.

Moreover, private label brands typically have selective distribution by limiting their availability to the retailer that owns them (Kumar & Steenkamp, 2007). Consequently, smaller private label brands face a significant challenge due to the twofold impact of low penetration and low prominence.

This finding demonstrates the advantage that national brands have over private labels. It suggests the lack of advertising amongst private label brands is detrimental to success. Consequently, private label brands are less 'mentally available' to the shopper, so do not benefit from as great familiarity as national brands do. To increase the likelihood of being prominent, private label brands can prioritise building familiarity with visual elements. This can be achieved by enforcing a coherent visual design across all products within the brand's portfolio, across different product categories (Boatwright et al., 2009; Nguyen et al., 2018). Cross-category coherency means implementing a coherent visual design, using visual elements, across all categories the brand is present in (Romaniuk, 2018e). For example, Cadbury use the iconic purple colour for products in the chocolate, instant drinking chocolate and ice-cream categories, which helps shoppers recognise Cadbury regardless of the category. Cross-category coherency can be useful for private label brands that operate in multiple categories, as they can leverage existing mental structures amongst shoppers and further build familiarity with the packaging (Romaniuk, 2018e).

Securing a favourable shelf position in-store, such as on the top or middle shelves (Chandon et al., 2009), can further contribute to building packaging familiarity amongst shoppers. Moreover, showcasing the packaging in advertising can enhance the prospects of private label brands gaining prominence.

### Key Finding 5: Familiarity and Usage influence brand prominence, with slightly more influence in e-commerce.

The finding suggests that familiarity and usage play a role in attracting attention, with slightly higher influence in an e-commerce environment. As explained in **Chapter 3, Section 3.2.2.2**, familiarly and usage were tested in *Study 2: 'Mock-up Shop'*, where brands were local to the sample country. In two of three categories, a pattern of higher familiarity and usage mentions is evident in e-commerce, statistically significant in one of the two categories.

This finding has multiple implications. First, it highlights the value of using familiar visual elements in the product image, such the brand's Distinctive Assets (see **Chapter 2, Section 2.2.5** for a review) (Romaniuk, 2018b). This way, shoppers can use familiarity to locate the brand online. Similarly, building on **Key Finding 1**, a brand should aim to use colours it can own rather than adhering to category colour prototypes (Velasco & Spence, 2019). However, in the absence of familiar elements, strong colour use is recommended to help the brand stand out in the cluttered environment.

To enhance prospects of familiarity in e-commerce, a brand should build and use these familiar elements prior to listing in online stores. In line with this, packaging awareness should be built outside of the e-commerce environment, such as in advertising.

Further, this finding identifies the danger of changing the visual design of a brand online without a re-education process outside of the e-commerce environment, similar to recommendations for packaging changes (Aaker, 2014; Beverland et al., 2015; Romaniuk, 2018c). It also reinforces the risk of making drastic changes to the online product image. For example, changes include oversimplification of the logo or implementing a 'Hero Image' design (see **Chapter 2, Section 2.1.4** for a review).

#### Key Finding 6: The visual elements of Text, Image and Logo have a relatively low influence on brand prominence in e-commerce and in-store.

Notably, mentions of text, image and logo were relatively low across categories. As earlier detailed, the criteria of text included mentions of the brand name, font, and any word/s. In a prior in-store study conducted by (Piñero et al., 2010), mentions of brand name and text were the second and third ranked elements that shoppers attributed to brand prominence. As discussed, the use of the brand name is important, influencing online purchase decisions (Shehzad et al., 2014). Shoppers are said to rely on the larger, well-known brand in e-commerce where less product information is available (Danaher et al., 2003; Degeratu et al., 2000; Saini & Lynch Jr, 2016). This research finding suggests that text is less important than previously understood.

A potential explanation for this finding is the intricacy of these elements, which may have been too detailed to identify on a digital screen. Across studies, respondents were tasked to view the entire environment, as a shopper naturally would when choosing between brands in a real shopping environment. There was no option to enlarge specific product images for further inspection. Therefore, some smaller text, image and logos on the packaging may have been overlooked.

Therefore, it can be speculated that the elements of text, image and logo require closer examination, and may be less useful in attracting attention online. However, there are several categories in which image and logo were more commonly mentioned. These category specific deviations are now discussed.

### 5.1.1 Deviations - Image

The *Canned Fruit* and *Dog Food* categories received notably more image mentions across both shopping environments, more than 10 percentage points over the average in both shopping environments. One potential explanation for this is the nature of the packaging in these categories. Typically, brands in these categories use a very similar packaging design, a cylindrical metal can (see **Figure 17**) (Mocanu, 2015). Shoppers therefore rely on the visuals on packaging to identify the product type.

Images on packaging, including those of the product itself and other visuals such as animals and faces, serve as devices to assist the shopper in identifying the product variant. This finding suggests that, in categories where the packaging is more prototypical, such as dog food (Mocanu, 2015), or in cases where the product itself cannot be seen, images are highly effective attention devices.

**Figure 17: Use of Image in the Dog Food and Canned Fruit Categories**


Pictured: Pedigree, Brand in Dog Food Category; Dole, Brand in Canned Fruit Category

### 5.1.2 Deviations - Logo

In the e-commerce environment, logo mentions were higher than average for the *Spread, Salad Dressing* and *Water* categories*.* On shelf, the same trend is apparent for *Salad Dressing* and *Canned Fruit.* These categories received prominence scores at least 10 percentage points over the average.

A common theme is the similarity of the packaging size and shape across these three categories, with the product typically encased in a thin, cylindrical package. The logo takes up most of the packaging space, given the small packaging size (see **Figure 18**). Therefore, the logo acts as a key focal point on the packaging, in which the brand can prominently be signalled to the shopper. This is a potential explanation for the higher frequency of logo responses for these categories.

This finding suggests that the use of a logo may be more important in categories where there is typically less packaging space, and the logo can effectively be used as a key focal point. Overall, this finding suggests that the prominence of visual elements varies between product categories.

**Figure 18: Prominent Logo Use in the Spread, Salad Dressing, and Water Categories**


Pictured: Vegemite, Brand in Spread Category; Made With Plants, Brand in Salad Dressing Category; Pump Spring Water, Brand in Water Category

## 5.2 Further Exploration of Key Finding 3 – Small Brands Can Achieve the Prominence of a Large Brand

**Key Finding 3** revealed that brand size largely explains prominence in e-commerce and in-store, with larger brands more prominent than smaller brands. However, deviations are evident, with several brands either more or less prominent than expected given their size. Smaller brands therefore have the opportunity to achieve the prominence of a larger brand.

The following section details the brand deviations. Delving deeper on a brand-by-brand basis, the reason why each brand was chosen as most prominent is incorporated in the discussion. As a reminder, penetration was only measured for *Study 2: 'Mock-up Shop'*. Therefore, the three product categories included in this study are discussed below.

### 5.2.1 Egg

In the *Egg* category, the Happy Egg and Land O Lakes brands are identified as deviations across both shopping environments. Specifically, Happy Egg is more prominent than expected given its penetration, with a deviation of 23 online and 24 on shelf.

Colour was the element most attributed to Happy Egg's prominence across both shopping environments. The Happy Egg packaging utilises a strong use of colour on packaging relative to competitor brands in the category. Three different coloured Happy Egg packages were displayed in each shopping display, a red, blue, and yellow/green package. The red package was most frequently selected as being prominent, with no significant difference between online and shelf shopping environments. The blue package received more mentions online, while the yellow received more mentions on shelf, in both cases significant at $p < .001$.

Adding to this, Vital Farms is more prominent than expected on shelf, with a deviation of 6. Like Happy Egg, Vital Farms use unique colour, with the core product range comprising of a predominantly black colour scheme (see **Figure 19**).

**Figure 19: Happy Egg and Vital Farms Packaging**


(Happy Egg, 2023; Vital Farms, 2023)

Both Happy Egg and Vital Farms packaging can be considered relatively novel amongst the ordinarily prototypical packaging that is common within the *Egg* category (see **Figure 20**). Novelty can assist in a brand standing out on shelf (Velasco & Spence, 2019), as explained. The incongruency of the Happy Egg and Vital Farms packaging relative to the category may be a driver of these brands being selected as more prominent than competitor brands.

**Figure 20: Typical Egg Display on Shelf in AU Supermarket**

Conversely, Land O Lakes, the second largest *Egg* brand tested, is less prominent than expected across shopping environments, with deviations of -11 and -5 respectively. Looking at the shelf display alone, Simple Truth is less prominent than expected with a deviation of -6. Simple Truth is a Kroger-owned private label, exclusively sold at Kroger stores and on Kroger.com. Since Kroger has broad distribution, with stores located all around the US, Simple Truth is a larger private label brand and enjoys high penetration.

One likely explanation for Simple Truth's low prominence is its status as a private label brand, as uncovered in **Key Finding 4**. As explained, the lack of advertising amongst private label brands is a potential contributor to the lower perceived prominence (Nenycz-Thiel & Romaniuk, 2014).

### 5.2.2 Dog Food

Of the *Dog Food* brands, Blue Buffalo is more prominent than expected online, with a deviation of 8. Blue Buffalo is the third largest brand in the category, with the highest prominence score. The reason attributed to Blue Buffalo's prominence is familiarity, closely followed by colour. As mentioned in **Chapter 2, Section 2.3.3**, familiar brands are more commonly chosen in online shopping environments (Park & Stoel, 2005), with familiarity heightening brand prominence and influencing decisions (Ahluwalia, 2002; Alba & Marmorstein, 1987; Hickman et al., 2020; Kent & Allen, 1994; Pechmann & Stewart, 1990). Blue Buffalo's brightly coloured packaging is likely to have influenced its prominence (see **Figure 21**), in line with prior research which shows attention is guided towards online product images with bright colour (Maros et al., 2019). Another possible explanation for Blue Buffalo's prominence is distribution, with respondents potentially familiar with the brand due to its widespread presence, both in e-commerce and in-store (Wall, 2019).

Meanwhile, Natural Balance is less prominent than expected online and on shelf, with deviations of -5 and -8 respectively. Natural Balance's status as a private label brand (Kerwin, 2022) is a potential reason for its lower prominence, as previously seen for Simple Truth in the *Egg* category (see **Section 5.1, Key Finding 4** for a review).

**Figure 21: Blue Buffalo and Natural Balance Packaging**


## 5.2.3 Paper Towel

In the *Paper Towel* category, Charmin is more prominent than expected both online and on shelf, with deviations of 8 and 16 respectively. Online, Brawny also experiences higher than expected prominence with a deviation of 5. One potential explanation for this is Charmin and Brawny's use of Distinctive Assets (Romaniuk, 2018c), the Charmin bear character and Brawny flannel shirt image (see **Figures 22** and **23**). The brands prominently display these assets on packaging and in advertising.

The reason most attributed to Charmin's prominence is familiarity, closely followed by colour. One way in which familiarity may have been built for Charmin is using the Charmin bear, effectively working as a Distinctive Asset for the brand and subsequently strengthening Charmin's brand identity (see **Figure 22**). As earlier explained, Distinctive Assets help the brand to be found in shopping environments, by evoking the brand name using the asset (Keller, 2003; Romaniuk, 2018b). This finding highlights the importance of building and using familiar brand elements.

**Figure 22: Charmin's Distinctive Asset, the Charmin Bear Character**


Pictured: Charmin Bear on Packaging; Charmin Bear in Advertising (Charmin, 2023)

The element most attributed to Brawny's prominence is colour, followed by image. Brawny quite noticeably uses the image of the red flannel shirt across packaging and advertising efforts (see **Figure 23**). Previous research has demonstrated the importance of a brand's colour being 'incorporated into a consistent design feature' (Ward et al., 2020). In Brawny's case, the image acts as the consistent design feature. The combination of the red colour and flannel shirt image is likely assisting in creating a more distinct brand identity for Brawny (Zaichkowsky, 2010 #17918; Romaniuk, 2018 #83300}, subsequently increasing its prominence.

**Figure 23: Brawny's Distinctive Asset, the Red Flannel Shirt Image**


Pictured: Brawny Red Flannel Shirt on Packaging; Brawny Red Flannel Shirt in Advertising (Brawny, 2023)

On the other hand, Great Value is less prominent than expected, with deviations evident both online and on shelf, at -6 and -8 respectively. Great Value is a Walmart-owned private label, exclusively sold at Walmart stores and on Walmart.com. Great Value is a larger private label given Walmart's broad distribution strategy. However, Great Value lacks prominence for a brand of its size.

As previously identified for Simple Truth and Natural Balance, a potential explanation for Great Value's prominence deficit is its status as a private label brand (see **Section 5.1, Key Finding 4** for a review). This finding, identified in three of three tested categories, reiterates the difficulty faced by private label brands in achieving brand prominence. To enhance prospects of being prominent, private label brands should aim to build familiarity with packaging visual elements, as later advised in **Chapter 6**.

## 5.3 Chapter Summary

In summary, this thesis contributes 6 key findings to academia and practice:

- **Key Finding 1:** Colour is the most prominent visual element in e-commerce and in-store, and it is sometimes more important in-store.
- **Key Finding 2:** Design is the second most prominent visual element in e-commerce and in-store, demonstrating the importance of an appealing package design.
- **Key Finding 3:** Larger brands are more likely to be prominent than smaller brands in e-commerce and in-store. However, small brands can achieve the prominence of a large brand.
- **Key Finding 4:** Private label brands are less prominent than national brands of the same size in e-commerce and in-store.
- **Key Finding 5:** Familiarity and Usage influence brand prominence, with slightly more influence in e-commerce.
- **Key Finding 6:** The visual elements of Text, Image and Logo have a relatively low influence on brand prominence in e-commerce and in-store.

In line with **Key Finding 3**, the chapter explores how a small brand can achieve the prominence of a large brand, through an examination of deviations. In summary:

- **Using colour to be 'novel' relative to the category may increase prominence**, as seen for Happy Egg and Vital Farms in the *Egg* category.
- **Being familiar is important for enhancing prospects of prominence**, as observed for Blue Buffalo in the *Dog Food* category. This may be achieved by

building familiar elements, perhaps through advertising, while ensuring wide distribution to increase shelf presence.

- **Distinctive Assets enhance prominence**, as evident for Charmin and Brawny in the *Paper Towel* category. Both brands prominently using Distinctive Assets on packaging and in advertising.
- Across three categories, **private label brands are less prominent than expected given their penetration**. The observed pattern applies to all tested private label brands, Simple Truth, Natural Balance, and Great Value.

Regarding **Key Finding 6**, while mentions are low on average, there are several categories in which image and logo are often mentioned (10 percentage points above average). In summary:

- Image was most mentioned for prominence in the *Canned Fruit* and *Dog Food* categories. This finding suggests that **images may be important in categories where the product itself is not visible through the packaging**, or the packaging within the category is more prototypical, such as *Dog Food* (Mocanu, 2015).
- Logo was more often mentioned in the *Spread, Salad Dressing, Water,* and *Canned Fruit* categories. This suggests that **a logo may be more important in categories where there is less packaging space**, and it is typical to use the logo as a key focal point.

# PART FOUR: CONCLUSION

# CHAPTER 6: Contributions, Limitations & Future Research

The final chapter has four main sections. The first two sections discuss the contribution of the thesis to academic literature and its implications for marketing practice. The third section acknowledges the limitations of this research. The final section discusses potential avenues for future research.

## 6.1 Academic Contribution

Prior studies analysing brand prominence largely focus on the in-store shopping environment, given the infancy of e-commerce as a shopping environment. Of the available e-commerce research, studies largely focus on one or two element types (Barrett & Barrington, 2005; Chitturi et al., 2019; Huang et al., 2022; Kohli et al., 2007; Mohebbi, 2014; O'Connor, 2015; Underwood & Klein, 2002), or merely categorise elements into visual and verbal groups (Kim & Lennon, 2008; Townsend & Kahn, 2014), as discussed.

This thesis provides a unique contribution. It addresses the impact of multiple visual elements (stimulus-based) on prominence, while considering the influence of non-visual elements (memory-based) such as familiarity and usage, which unites both stimulus-based and memory-based processing (Orquin et al., 2020; Still & Masciocchi, 2012).

Further, the research takes a multi-channel approach, in that it explores both e-commerce and in-store shopping environments. The research extends prior in-store research to the e-commerce environment (Gaillard et al., 2006; Pinero De Plaza et al., 2015). Furthermore, the research was tested across 11 product categories, each comprising of several brands of different size. The selected brands spanned national and private label, consumable and non-consumable, and hedonic and utilitarian options. The above-mentioned strengths of the research assist in testing the generalisability and improving the robustness of the research.

### 6.1.1 Extends prior work to the e-commerce shopping environment, supporting the finding that colour is the most prominent element.

This thesis contributes to academic knowledge in that it builds upon prior in-store findings (Gaillard et al., 2006; Pinero De Plaza et al., 2015). The first finding, that colour is the top performing element online and in-store, effectively supports and expands in-store research to the e-commerce environment. Several in-store CPG studies are also supported, which demonstrate the importance of colour and design on packaging due to its impact on attention and choice (Kovač et al., 2019; Purwaningsih et al., 2019; Raheem et al., 2014; Wulansari, 2019). Further, the research supports prior e-commerce studies which find colour is a key influencing factor on purchase decisions online (Al-Samarraie et al., 2019), and attention is heightened towards brightly coloured product images (Maros et al., 2019).

The research also reveals an interesting discovery, that colour is sometimes more prominent when used in-store, with the advantage of using colour blocking as a potential explanation (Aglo, 2019; Kahn, 2017; Vermeulen, 2013; Young, 2003). This is a fundamental finding which warrants further replication to test its generalisability and robustness across different conditions.

### 6.1.2 Provides evidence to researchers interested in 'Hero Images', that the visual elements of colour and design are most prominent, and as such should be retained in online product images.

As earlier introduced, ‘Hero Images’ are digitally enhanced product images that remove visual elements on packaging to enhance legibility. ‘Hero Images’ retain the visual elements of colour, design, and shape, as the designers consider these to be key elements that assist in brand recognition (GS1, 2022). The findings of this research support the idea that the colour and design (including shape and size) of the original product image should be retained in the enhanced ‘Hero Image’ to improve prospects of brand prominence.

However, more research is required to understand the impact of 1) enlarging text size and 2) removing images and other distinctive packaging features, such as characters.

### 6.1.3 Supports prior research which identified the potential for smaller brands with prominent packaging to be chosen over larger, well-known brands.

This thesis finds large brands are more prominent than small brands in e-commerce and in-store. However, it also identifies the potential for smaller brands to achieve the prominence of a larger brand. In a CPG laboratory experiment, Reimann (Reimann et al.) found that smaller brands with attractive packaging are chosen over larger, well-known brands with comparatively plain packaging. In the study, Reimann (Reimann et al.) examined one product category using just four product images. As such, this thesis supports the prior findings, while expanding the study to multiple brands, categories, and shopping environments.

In a similar light, this thesis identified that being familiar with or using a brand increases its prominence, supporting prior research (Ahluwalia, 2002; Chandon et al., 2009; Hickman et al., 2020; Kent & Allen, 1994; Macdonald & Sharp, 1995; Nenycz-Thiel et al., 2021; Pechmann & Stewart, 1990; Pieters et al., 2002). Moreover, it supports research which suggests that shoppers are likely to select the familiar brand from a selection of brands (Nenycz-Thiel et al., 2021). Studies which demonstrate the impact of brand familiarity on attention and choice (Ahluwalia, 2002; Hickman et al., 2020; Macdonald & Sharp, 1995), are also supported.

Further, research in the realms of in-store supermarket choice and advertising is supported and expanded to the e-commerce environment (Chandon et al., 2009; Kent & Allen, 1994; Pechmann & Stewart, 1990; Pieters et al., 2002). For example, the work of (Chandon et al., 2009) found brand usage increases attention to brands on the supermarket shelf.

### 6.1.4 National brands are more prominent than private label brands of the same size, supporting evidence which suggests advertising helps to build prominence for national brands.

Finally, the research contributes to evidence surrounding the variability between national and private label brands. Specifically, this study observes lower than expected prominence of private label brands, when compared with national brands of the same size. As earlier mentioned, the prominence deficit experienced by private label brands may be attributed to a lack of advertising amongst private label brands (Baltas et al., 1997; Cunningham et al., 1982), where visual elements cannot be showcased to build brand familiarity amongst shoppers.

This finding demonstrates the advantage that national brands have over private label brands, supporting prior research which suggested that well-branded advertising increases the prospects of a shopper noticing a brand (Nenycz-Thiel & Romaniuk, 2014).

## 6.2 Managerial Implications

For marketing practice, this research aims to provide practitioners with insights regarding the elements best prioritised to increase brand prominence in e-commerce and in-store. The widespread adoption of 'Hero Images' by brands has resulted in the removal of visual elements to achieve a more streamlined product image. However, the new trend lacks an empirical framework that informs best practice for product image redesigns. The insights gained from this thesis will provide practitioners with valuable information regarding visual element prominence, enabling them to make informed decisions when redesigning product images.

### 6.2.1 Colour based visual elements should be prioritised in e-commerce and in-store.

The primary finding is that colour is the most prominent visual element in e-commerce and in-store. In line with Distinctive Asset theory (Romaniuk, 2018b), practitioners should prioritise using colours the brand can own rather than adhering to category colour prototypes (Velasco & Spence, 2019). If the brand is successful in creating a strong colour Distinctive Asset, it can be used as a device to uniquely signal the brand in shopper memory, as explained in **Chapter 2, Section 2.2.5**. Importantly, using this colour across all products within the brand portfolio will assist in creating a coherent visual brand identity (Nguyen et al., 2018), ultimately enhancing brand prominence (Boatwright et al., 2009; Nguyen et al., 2018).

However, it has proven difficult for a brand to own a colour asset. A colour must pass three obstacles to be considered a potential Distinctive Asset for a brand. It must not signal a category, a subcategory, or another brand (Romaniuk, 2018a). If the colour passes these obstacles, it may be considered a potential option for the brand to build. If the brand cannot find a suitable colour to build, using a colour combination or merging colour and design together are other explorable options. For example, bundling colour with a design element, such as shape, is one way for a brand to build a colour element. This colour-and-design combination has potential to be more valuable for a brand than an individual colour alone (Romaniuk, 2018a).

In the absence of a colour as a Distinctive asset, it is still advisable to use bold colour to assist the brand in standing out. Practitioners should be reminded of the importance of avoiding colour changes, given the powerful impact of colour as a way for shoppers to find brands (Gaillard et al., 2006; Pinero De Plaza et al., 2015; Romaniuk, 2018a)

Further, practitioners may be guided by the finding that colour is sometimes more prominent in-store, likely due to the potential to use colour blocking as a tactic on shelf. Therefore, a colourful, well-branded shelf display is a valuable in-store initiative. Practitioners may prioritise acquiring more retailer shelf space to benefit from the positive effects of colour blocking. In e-commerce, the use of colour is just as valuable. For example, having a visually cohesive portfolio which leverages distinctive use of colour is important online, as shoppers are more likely to recognize the brand through learnt brand associations (Romaniuk, 2021).

### 6.2.2 Design is an important feature on packaging in e-commerce and in-store.

The design of a brand's packaging can attract attention in e-commerce and in-store shopping environments. Therefore, when creating 'Hero Image' designs or simplifying logos for online use, designers should keep in mind that retaining the design and colour can greatly enhance their chances of achieving prominence.

This finding is particularly useful for logo simplification decision makers. As earlier discussed, brands worldwide have been influenced by the trend of logo simplification, enforcing a minimalistic design at the expensive of brand distinctiveness (Benoni, 2019). Often, the original logo colour is removed, or the entire design is simplified (Benoni, 2019; Peate, 2022). This thesis indicates that colour and design are the most prominent visual elements on packaging. As such, designers should prioritize retaining these elements, rather than sacrificing them. Moreover, instead of simplifying a brand's visual identity, it is advisable to retain as many Distinctive Assets as possible to increase the likelihood of recognition in the shopping environment (Romaniuk, 2018b).

### 6.2.3 Smaller brands can achieve the prominence of a larger brand, by building and using strong visual elements on the packaging.

The thesis finds that larger brands are more prominent than smaller brands in e-commerce and in-store. In a similar light, the research identified that being familiar with or using a brand increases its prominence, as explained. The importance of familiarity reinforces the danger of changing a brand's visual design without a re-education process, similar to recommendations for packaging redesigns (Aaker, 2014; Beverland et al., 2015; Romaniuk, 2018c).

Notably, the research also finds that small brands have the potential to achieve the prominence of a large brand. This has implications for practitioners involved with small brands. Firstly, building familiarity with visual elements (i.e., Distinctive Assets) and the overall packaging is critical. These familiar elements should be built and used prior to listing in online stores, so that shoppers have learnt associations between the element and the brand before finding it online. This way, the shopper will be more likely to recognise the brand when shopping online.

The observed higher loyalty in e-commerce (Andrews & Currim, 2004; Dawes & Nenycz-Thiel, 2014; Huang, 2011; Romaniuk & Sharp, 2021b) is a potential contributor to the greater prominence amongst larger brands. This higher loyalty online is advantageous for large brands and detrimental for small brands (Chu et al., 2010; Danaher et al., 2003; Huang, 2011), as it is inherently more challenging for smaller brands to enter shopper repertoires online (Romaniuk & Sharp, 2021b). This is particularly true for CPG brands where buying is largely habitual (Nenycz-Thiel et al., 2021; Romaniuk & Sharp, 2021b; Wood & Neal, 2009). Small brands can tackle this challenge by building brand familiarity, such as using advertising to showcase the packaging prior to listing their brand online. This strategy aims to increase the chances of smaller brands being included in more shopper repertoires, making it a sensible goal for practitioners to pursue.

### 6.2.4 Private label brands underperform relative to their size in e-commerce and in-store. As such, private label brands should prioritise building familiarity with visual elements and the overall packaging.

National brands, particularly larger in share, have a prominence advantage in e-commerce and in-store. Consequently, practitioners involved with private label brands can draw upon these learnings. For private label brands to effectively compete with national brands, building familiarity with visual elements and the overall packaging should be a key managerial objective. Private label brands should be guided by the above-mentioned recommendations for smaller brands in **Section 6.2.3**, in pursuit of building familiarity with visual elements and the overall packaging.

Private label brands, given their long-known lack of advertising (Baltas et al., 1997; Cunningham et al., 1982), may consider showcasing their packaging in advertising as a principal route of familiarity building. Practitioners involved with private label brands should consider enforcing a coherent visual design across the brand portfolio (Boatwright et al., 2009; Nguyen et al., 2018), to maximise the potential for familiarity with visual elements to be built. For private label brands that operate in multiple categories, or plan to expand into a new category, cross-category coherency can increase the chance that the brand is recognised in its shopping environment (Romaniuk, 2018e). As earlier discussed, cross-category coherency means using a consistent visual design, leveraging familiar visual elements, across all categories that the brand is present in (Romaniuk, 2018e). Further, securing a favourable shelf position in-store, such as on the top or middle shelves (Chandon et al., 2009), can increase the visibility and prominence private label brands. Overall, gaining widespread exposure amongst category buyers is a sensible objective that practitioners may be led by.

### 6.2.5 Price, as a clutter element, can detract attention away from brands in e-commerce.

The additional finding that price attracts attention can act as a knowledge tool for practitioners. Price is seemingly more influential in e-commerce, highlighting the usefulness of price as an attention device online.

White space is typically used in e-commerce environments to separate each brand's product image, potentially drawing more attention to highlighted price information. This is congruent with prior evidence that marketers use white space to focus attention on brands (Olsen et al., 2012). Practitioners may consider the use of price as an attention device when their brand is displayed in online retailers that use white space.

## 6.3 Methodological Limitations

Firstly, it is recognised that testing a physical in-store shelf using an online study may be a limitation. *Study 1: 'Real Shop'* used an image of an actual in-store shelf taken in an AU supermarket, while *Study 2: 'Mock-up Shop'* involved the use of a mock-up in-store shelf. Nonetheless, both studies were conducted online, meaning the in-store environment was not tested in its physical state. This has implications for the way in which visual elements are interpretated. For example, text on a package that can be easily read in-store, becomes a challenge to interpret in a digital image.

Price labels were not included in the shelf display for *Study 2: 'Mock-up Shop'*. Subsequently, the coding criteria of price was excluded from the analysis for one of two studies. Although the effect of price was not a key interest of this research, this is identified as a limitation.

Furthermore, it should be noted that the research exclusively examined CPG brands and was conducted in only two countries, which may be considered a limitation. Lastly, the study did not control for Distinctive Assets, which is another potential limitation. The following section suggests potential avenues for further investigation.

## 6.4 Future Research

### 6.4.1 Extend the Scope of the Study

This thesis identified important patterns between visual elements and prominence, whilst considering external conditions such as brand familiarity and usage. These findings are exploratory and extensive replication is required before these patterns are recognised as generalisable. A strength of this research is its exploration across two markets: US and UK, spanning 11 CPG product categories, including consumable/non-consumable, hedonic/non-hedonic, and private label/national brands. Nonetheless, the research should be replicated across different markets, categories, and time periods to understand its robustness, whilst identifying boundary conditions to the findings.

CPG brands were selected for this research given their widespread use of online product images across multiple categories. It is acknowledged that the principles identified through this research may also apply to services, durables, and luxury goods. Extension into these categories provides an exciting avenue for future research. For example, future research may investigate brand prominence across service brands, analysing online versus in-store shopping environments. Moreover, the research may extend to difference e-commerce environments, such as m-commerce, investigating prominence in the app environment.

In addition, using eye tracking as a measurement tool to capture visual attention could offer valuable insights into brand prominence, making it a promising avenue for future research.

### 6.4.2 In-Depth Analysis of Colour and Optimal Visual Element Combinations

This research identified colour as the top performing element in e-commerce and in-store. There are several potential avenues for future research in this field. For example, prior research suggests colour cues in multicoloured packages are harder to verbalise than that of single-coloured packages, making colour harder to discriminate (Hynes, 2009; Warlop et al., 2005). It may be worth investigating the prominence of single-coloured packaging compared to multi-coloured packaging, to determine if one type is considered more prominent.

Moreover, the impact of colour-flavour and variant expectations (Velasco et al., 2014) on brand prominence could be explored. Additionally, further investigation into the extent to which colour prominence is attributed to a brand's Distinctive Assets and its unique ability to signal the brand may yield valuable insights.

Lastly, future research could aim to identify the optimal combination of visual elements that enhance brand prominence. For instance, it could explore whether combining colour with another visual element, such as shape or text, results in heightened prominence.

### 6.4.3 Investigate the Role of Distinctive Assets in Prominence

Distinctive Assets are known to increase brand prominence and help shoppers find brands in shopping environments (Romaniuk, 2018b). Consequently, a shopper may perceive a brand as prominent due to its use of Distinctive Assets, even though they may not explicitly mention the Distinctive Asset as the reason for recognition. This ambiguity highlights the need for further research to determine the extent to which Distinctive Assets contribute to brand prominence. Such research could involve explicit testing of Distinctive Assets in e-commerce environments, leading to exciting opportunities for deeper insights into brand prominence.

### 6.4.4 Examine the Interaction Between Stimulus-Based and Memory-Based Processing

Future research could measure the interaction between stimulus based (i.e., visual elements) and memory-based (i.e., usage) processing. The research focus of this thesis was to identify the visual elements that contribute to brand prominence in e-commerce environments. The findings identified that, along with visual elements, the memory-based elements of familiarity and usage also influence brand prominence. A natural progression of this work is to identify the extent to which these memory-based elements influence brand prominence. Specifically, does memory-based dominate stimulus-based processing in e-commerce environments? For example, can we assume that if a shopper uses Brand A, it will always be perceived as more prominent than an equally prominent but unused Brand B? Also, what can Brand B do to attract the attention of the shopper?

### 6.4.5 Explore the Relationship Between Brand Prominence and Choice

Further research could explore the overall impact of brand prominence on brand choice. Existing research suggests that attention plays a critical role in brand choice, with shoppers more likely to purchase the brand they looked at the most (Gidlöf et al., 2017; Janiszewski et al., 2013; Milosavljevic et al., 2012). While this thesis supports the idea that brand prominence influences brand choice, the specific influence of individual visual elements on brand choice is yet to be fully understood. This presents an exciting opportunity for future research in this area.

## 6.5 Chapter Summary

This thesis makes significant contributions to both academia and practice, providing novel insights into the concept of prominence in e-commerce and in-store environments. The study uses a robust research method that considers real-world challenges to produce findings that are relevant to both academia and industry.

The research extends prior in-store studies to the e-commerce environment, examining the impact of visual elements (stimulus-based) on brand prominence. Moreover, the impact of additional elements such as familiarity and usage (memory-based), are considered, given the interaction of both stimulus-based and memory-based processing in influencing brand choice (Orquin et al., 2020; Still & Masciocchi, 2012). This research contributes unique findings on the impact of both visual brand identity and prior shopper knowledge on brand prominence.

The findings regarding the influence of colour, design, familiarity, and price largely support prior in-store studies (Al-Samarraie et al., 2019; Bogomolova et al., 2020; Chandon et al., 2009; Gaillard et al., 2006; Hickman et al., 2020; Pinero De Plaza et al., 2015). The research provides the unique contribution that larger brands are more prominent than smaller brands in e-commerce and in-store, highlighting the potential for small brands to achieve the prominence of a large brand. Moreover, is supports evidence of the hindered potential of private label brands (Baltas et al., 1997; Cunningham et al., 1982; Nenycz-Thiel & Romaniuk, 2014), by uncovering the finding that private label brands are less prominent than national brands of the same size.

The research findings presented in this thesis provide a promising avenue for future research, to explore the extent to which they hold true across other markets, categories, and environments. The practical implications of this study are significant, as they can inform best practices for online product image and packaging presentation. Furthermore, this thesis expands on established knowledge in branding by extending in-store research to the e-commerce environment and shedding new light on the interplay between visual brand identity and prior shopper knowledge. The fundamental and ancillary findings advance the knowledge realm of e-commerce and prominence, acting as a cornerstone for future research in this field.

# REFERENCES


Aaker, D. (2014). *Aaker on branding: 20 principles that drive success*. Morgan James Publishing.

Adîr, G., Adîr, V., & Pascu, N. E. (2012). Logo design and the corporate identity. *Procedia-Social and Behavioral Sciences*, *51*, 650-654. https://doi.org/10.1016/j.sbspro.2012.08.218

Aglo. (2019). *Visual Merchandising: The Value of Colour Blocking*. A. R. P. Ltd.

Ahluwalia, R. (2002). How prevalent is the negativity effect in consumer environments? *Journal of Consumer Research*, *29*(2), 270-280.

Al-Samarraie, H., Eldenfria, A., Dodoo, J. E., Alzahrani, A. I., & Alalwan, N. (2019). Packaging design elements and consumers' decision to buy from the Web: A cause and effect decision-making model. *Color Research & Application*, *44*(6), 993-1005. https://doi.org/https://doi.org/10.1002/col.22427

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of Consumer Research*, *13*(4), 411-454. https://doi.org/https://doi.org/10.1086/209080

Alba, J. W., Hutchinson, J. W., & Lynch, J. G. (1991). Memory and decision making. In H. Kassarjian & T. Robertson (Eds.), *Handbook of Consumer Theory and Research* (pp. 1-49). Prentice Hall.

Alba, J. W., & Marmorstein, H. (1987). The effects of frequency knowledge on consumer decision making. *Journal of Consumer Research*, *14*, 14-25.

Ambrose, G., & Harris, P. (2011). *Packaging the Brand*. AVA Publishing SA.

Andrews, R., & Currim, I. (2004). Behavioural differences between consumers attracted to shopping online versus traditional supermarkets: implications for enterprise design and marketing strategy. *International Journal of Internet Marketing and Advertising*, *1*(1), 38-61.

Anesbury, Z., Nenycz-Thiel, M., Dawes, J., & Kennedy, R. (2016). How do shoppers behave online? An observational study of online grocery shopping. *Journal of Consumer Behaviour*, *15*(3), 261-270. https://doi.org/10.1002/cb.1566

Ares, G., & Deliza, R. (2010). Studying The Influence Of Package Shape And Colour On Consumer Expectations Of Milk Desserts Using Word Association And Conjoint

Analysis. *Food Quality and Preference*, *21*(8), 930-937. https://doi.org/10.1016/j.foodqual.2010.03.006

Ashler, J. (2017). *Overcoming the Hurdles of E-Commerce*. P. Stratergies.

Askarifar, K., Nekooeezadeh, M., & Jahanbakhsh Tehrani, P. (2021). The Effect of Visual Elements in Direct Print Advertising of Diary Products on the Consumers' Recall: An Experimental Field Study. *Journal of Business Management*, *12*(4), 1050-1068.

Asprey Creative. (2022). *M&M's Project*. http://www.aspreycreative.com.au/mms

Atalay, A. S., Bodur, H. O., & Rasolofoarison, D. (2012). Shining in the center: Central gaze cascade effect on product choice. In *Journal of Consumer Research* (Vol. 39, pp. 848-866).

Bajaj, K. K., & Nag, D. (2005). *E-Commerce - The Cutting Edge of Business*. Tata McGraw-Hill Education.

Baltas, G., Doyle, P., & Dyson, P. (1997). A model of consumer choice for national vs private label brands. *Journal of Operational Research Society*, *48*(10), 988-995.

Banelis, M., Riebe, E., & Rungie, C. (2013). Empirical evidence of repertoire size. *Australasian marketing journal*, *21*(1), 59-65.

Barrett, A. W., & Barrington, L. W. (2005). Is a picture worth a thousand words?: Newspaper photographs and voter evaluations of political candidates. *Harvard International Journal of Press/Politics*, *10*(4), 98-113. https://doi.org/10.1177/1081180x05281392

Benn, Y., Webb, T. L., Chang, B. P. I., & Reidy, J. (2015). What information do consumers consider, and how do they look for it, when shopping for groceries online? *Appetite*, *89*, 265-273. https://doi.org/https://doi.org/10.1016/j.appet.2015.01.025

Benoni, E. (2019). *Is simplification of brands a consequence of digitisation?* https://medium.com/mission-insight/is-simplification-of-brands-a-consequence-of-digitisation-388cf969a865

Beverland, M. B., Wilner, S. J. S., & Micheli, P. (2015). Reconciling the tension between consistency and relevance: design thinking as a mechanism for brand ambidexterity. *Journal of the Academy of Marketing Science*, *43*(5), 589-609. https://doi.org/10.1007/s11747-015-0443-8

Bloch, P. H. (1995). Seeking the ideal form: Product design and consumer response. *The Journal of Marketing*, 16-29.

Boatwright, P., Cagan, J., Kapur, D., & Saltiel, A. (2009). A step-by-step process to build valued brands. *Journal of Product & Brand Management*, *18*(1), 38-49. https://doi.org/10.1108/10610420910933353

Boerman, S. C., Smit, E. G., & van Meurs, L. (2011). Attention battle; the abilities of brand, visual, and text characteristics of the ad to draw attention versus the diverting power of the direct magazine context. In *Advances in Advertising Research (Vol. 2)* (1 ed., Vol. 2, pp. 295-310). Springer Gabler. https://doi.org/https://doi.org/10.1007/978-3-8349-6854-8_19

Bogomolova, S., Oppewal, H., Cohen, J., & Yao, J. (2020). How the layout of a unit price label affects eye-movements and product choice: An eye-tracking investigation. *Journal of Business Research*, *111*, 102-116. https://doi.org/10.1016/j.jbusres.2018.10.049

Brawny. (2023). *Brawny*. https://www.brawny.com

Bridges, E., Briesch, R. A., & Yim, C. K. B. (2006). Effects of prior brand usage and promotion on consumer promotional response. *Journal of Retailing*, *82*(4), 295-307.

Buil, I., Catalán, S., & Martínez, E. (2016). The importance of corporate brand identity in business management: An application to the UK banking sector. *BRQ Business Research Quarterly*, *19*(1), 3-12. https://doi.org/10.1016/j.brq.2014.11.001

Burke, R. R., & Leykin, A. (2014). Identifying the drivers of shopper attention, engagement, and purchase. In D. Grewal, J. Nordfalt, & A. L. Roggeveen (Eds.), *Shopper marketing and the role of in-store marketing* (Vol. 11, pp. 147-187). Emerald Group Publishing Limited.

Cahyorini, A., & Rusfian, E. Z. (2012). The effect of packaging design on impulsive buying. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *18*(1), 11-21.

Campbell, M. C., & Keller, K. L. (2003). Brand familiarity and advertising repetition effects. *Journal of Consumer Research*, *30*(2), 292-304.

Caruso, W., Tan, P. J., Bogomolova, S., Sharp, A., Corsi, A., Cohen, J., & Lockshin, L. (2018). *Endcap Insights – Visual Reach and Sales* (Report 77 for Corporate Sponsors, Issue.

Chandon, P., Hutchinson, J. W., Bradlow, E. T., & Young, S. H. (2009). Does in-store marketing work? Effects of the number and position of shelf facings on brand attention and evaluation at the point of purchase. *Journal of Marketing*, *73*(6), 1-17. https://doi.org/https://doi.org/10.1509/jmkg.73.6.1

Chandon, P., & Ordabayeva, N. (2009). Supersize in one dimension, downsize in three dimensions: Effects of spatial dimensionality on size perceptions and preferences. *Journal of Marketing Research*, *46*(6), 739-753. https://doi.org/https://doi.org/10.1509/jmkr.46.6.739_JMR6C

Chandon, P., Wesley Hutchinson, J., Bradlow, E. T., & Young, S. H. (2007). *Measuring the value of point-of-purchase marketing with commercial eye-tracking data*. INSEAD-Wharton Alliance Center for Global Research and Development.

Chapple, L., Fong, C., Kuska, M., Pacchia, M. L., & Sivaeva, T. (2021). *High growth, low profit: the e-commerce dilemma for CPG companies*. M. Company.

Charmin. (2023). *Charmin*. https://www.charmin.com/en-us

Chaudhuri, A., Messina, P., Kokkula, S., Subramanian, A., Krishnan, A., Gandhi, S., Magnani, A., & Kandaswamy, V. (2018, 2018). A smart system for selection of optimal product images in e-commerce.

Chen, M. C., Anderson, J. R., & Sohn, M. H. (2001). What can a mouse cursor tell us more? Correlation of eye/mouse movements on web browsing. CHI'01 extended abstracts on Human factors in computing systems, Yokohama, Japan.

Childers, T. L., & Houston, M. J. (1984). Conditions for a picture-superioritye effect on consumer memory. *Journal of Consumer Research*, *11*(September), 643-654.

Chitturi, R., Londono, J. C., & Amezquita, C. A. (2019). The influence of color and shape of package design on consumer preference: The case of orange juice. *International Journal of Innovation and Economic Development*, *5*(2), 42-56. https://doi.org/http://dx.doi.org/10.18775/ijied.1849-7551-7020.2015.52.2003

Chocarro, R., Cortiñas, M., & Villanueva, A. (2022). Attention to Product Images in an Online Retailing Store: An Eye-tracking Study Considering Consumer Goals and Type of Product. *Journal of Electronic Commerce Research*, *23*(4).

Chu, J., Arce-Urriza, M., Cebollada-Calvo, J.-J., & Chintagunta, P. (2010). An empirical analysis of shopping behavior across online and offline channels for grocery products: The moderating effects of household and product characteristics. *Journal of Interactive Marketing*, *24*, 251-268.

Chute Gerdeman. (2023). *M&M's World: Create a magical retail space for an iconic brand*. https://www.chutegerdeman.com/portfolio/mms/

Clement, J. (2007). Visual influence on in-store buying decisions: An eye-track experiment on the visual influence of packaging design. *Journal of Marketing Management*, *23*(9-10), 917-928.

Coakes, S. J. (2013). *SPSS: Analysis without anguish : Version 20 for windows*. John Wiley and Sons Australia. https://books.google.com.au/books?id=NZ2BMAEACAAJ

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Lawrence Erlbaum Associates

Corbetta, M., Patel, G., & Shulman, G. L. (2008). The reorienting system of the human brain: from environment to theory of mind. *Neuron*, *58*(3), 306-324. https://doi.org/10.1016/j.neuron.2008.04.017

Creusen, M. l. E. H., & Schoormans, J. P. L. (2005). The Different Roles of Product Appearance in Consumer Choice. *Journal of Product Innovation Management*, *22*(1), 63-81. http://search.epnet.com/login.aspx?direct=true&db=buh&an=15440496

Cunningham, I., Hardy, A., & Imperia, G. (1982). Generic Brands versus National Brands and Store Brands. *Journal of Advertising Research*, *22*(5), 25-32.

Danaher, P. J., Wilson, I. W., & Davis, R. A. (2003). A Comparison of Online and Offline Consumer Brand Loyalty. *Marketing Science*, *22*(4), 461-476.

Danger, E. (1987). *The colour handbook: how to use colour in commerce and industry*. Gower Technical Press.

Dawes, J. (2006). Interpretation of brand penetration figures that are reported by sub-groups. *Journal of Targeting, Measurement and Analysis for Marketing*, *14*(2), 173-183.

Dawes, J., & Nenycz-Thiel. (2014). Comparing retailer purchase patterns and brand metrics for in-store and online grocery purchasing. *Journal of Marketing Management*, *30*(3-4), 364-382. https://doi.org/10.1080/0267257X.2013.813576

de Sousa, M. M. M., Carvalho, F. M., & Pereira, R. G. F. A. (2020). Colour and shape of design elements of the packaging labels influence consumer expectations and hedonic judgments of specialty coffee. *Food Quality and Preference*, *83*, 103902. https://doi.org/https://doi.org/10.1016/j.foodqual.2020.103902

Degeratu, A. M., Rangaswamy, A., & Jianan, W. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing*, *17*(1), 55-78. http://ezlibproxy.unisa.edu.au/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=11943754&site=ehost-live

Deliza, R., & MacFie, H. (2001). Product packaging and branding. *Food, people and society: A European perspective of consumers' food choices*, 55-72. https://doi.org/https://doi.org/10.1007/978-3-662-04601-2_5

Deloitte. (2013). *Global Powers of Retailing 2013: Retail Beyond*.

Deng, L., & Poole, M. S. (2012). Aesthetic design of e-commerce web pages – Webpage Complexity, Order and preference. *Electronic Commerce Research and Applications*, *11*(4), 420-440. https://doi.org/http://dx.doi.org/10.1016/j.elerap.2012.06.004

Dickson, P. R., & Sawyer, A. G. (1990). The price knowledge and search of supermarket shoppers. *Journal of Marketing*, *54*(3), 42-53. http://www.jstor.org/stable/1251815

Drèze, X., Hoch, S. J., & Purk, M. E. (1994). Shelf management and space elasticity. *Journal of Retailing*, *70*(4), 301-326. https://doi.org/http://dx.doi.org/10.1016/0022-4359(94)90002-7

East, R., Wright, M., & Vanhuele, M. (2008). *Consumer Behaviour: Applications in Marketing*. Sage. www.sagepub.co.uk/east

Edell, J. A., & Staelin, R. (1983). The Information Processing of Pictures in Print Advertisements. *Journal of Consumer Research*, *10*(June), 45-61.

Ehrenberg, A. (1975). *Data Reduction*. Wiley.

Ehrenberg, A. (2000). Repeat-buying: facts, theory and applications. *Journal of Empirical Generalisations in Marketing Science*, *5*(2), 392-770.

Ehrenberg, A., Goodhardt, G., & Barwise, T. P. (1990). Double Jeopardy revisited. *Journal of Marketing*, *54*(3), 82-91. https://doi.org/10.1177/002224299005400307

Ehrenberg, A., Uncles, M. D., & Goodhardt, G. J. (2004). Understanding brand performance measures: using dirichlet benchmarks. *Journal of Business Research*, *57*(12), 1307-1325. https://doi.org/10.1016/j.jbusres.2002.11.001

Ensor, T. M., Surprenant, A. M., & Neath, I. (2019). Increasing word distinctiveness eliminates the picture superiority effect in recognition: Evidence for the physical-distinctiveness account. *Memory & cognition*, *47*(1), 182-193. https://doi.org/https://doi.org/10.3758/s13421-018-0858-9

Farris, P., Bendle, N., Pfeifer, P. E., & Reibstein, D. J. (2016). *Marketing metrics: The manager's guide to measuring marketing performance* (3 ed.). Pearson.

Fiske, S., & Taylor, S. (1991). *Social Cognition*. Mcgraw-Hill Book Company.

Gaillard, E. (2007). *How brand distinctiveness is communicated, from a consumer's perspective* University of South Australia]. Adelaide.

Gaillard, E., Romaniuk, J., & Sharp, A. (2005, 5-7 December). *Exploring consumer perceptions of visual distinctiveness* ANZMAC, The University of Western Australia, Fremantle, WA.

Gaillard, E., Sharp, A., & Romaniuk, J. (2006). Measuring brand distinctive elements in an in-store packaged goods consumer context. European Marketing Academy Conference (EMAC), Athens, Greece.

Ganesh, J., Reynolds, K. E., Luckett, M., & Pomirleanu, N. (2010). Online shopper motivations, and e-store attributes: an examination of online patronage behavior and shopper typologies. *Journal of Retailing*, *86*(1), 106-115.

Garber Jr, L. L., Hyatt, E. M., & Boya, Ü. Ö. (2008). The mediating effects of the appearance of nondurable consumer goods and their packaging on consumer behavior. *Product experience*, 581-602. https://doi.org/https://doi.org/10.1016/B978-008045089-6.50028-9

Garber, L. L., Burke, R. R., & Jones, J. M. (2000). *The role of package color in consumer purchase consideration and choice*. Marketing Science Institute.

Garber, L. L., Hyatt, E. M., & Starr, R. G. (2000). The effects of food color on perceived flavor. *Journal of Marketing Theory and Practice*, *8*(4), 59-72.

Ghosh, T., Sreejesh, S., & Dwivedi, Y. K. (2022). Brand logos versus brand names: A comparison of the memory effects of textual and pictorial brand elements placed in computer games. *Journal of Business Research*, *147*, 222-235. https://doi.org/https://doi.org/10.1016/j.jbusres.2022.04.017

Gibson, J. J., & Carmichael, L. (1966). *The senses considered as perceptual systems* (Vol. 2). Houghton Mifflin Boston.

Gidlöf, K., Anikin, A., Lingonblad, M., & Wallin, A. (2017). Looking is buying. How visual attention and choice are affected by consumer preferences and properties of the supermarket shelf. *Appetite*, *116*, 29-38. https://doi.org/http://dx.doi.org/10.1016/j.appet.2017.04.020

Glaholt, M. G., & Reingold, E. M. (2009). Stimulus exposure and gaze bias: A further test of the gaze cascade model. *Attention, Perception, & Psychophysics*, *71*(3), 445-450.

Gofman, A., Moskowitz, H., Fyrbjork, J., Moskowitz, D., & Mets, T. (2009). Extending Rule Developing Experimentation to Perception of Food Packages with Eye Tracking. *Open Food Science Journal*, *3*, 66-78.

Goodman-Deane, J., Waller, S., Bradley, M., Bradley, O., & Clarkson, J. (2018). *Using inclusive design to drive usability improvements through to implementation* Cambridge Workshop on Universal Access and Assistive Technology,

Grange, C., Benbasat, I., & Burton-Jones, A. (2019). With a little help from my friends: Cultivating serendipity in online shopping environments. *Information & Management*, *56*(2), 225-235. https://doi.org/https://doi.org/10.1016/j.im.2018.06.001

Gravetter, F., & Forzano, L.-A. (2012). *Research methods for the behavioral sciences* (4th ed.). Cengage Learning.

Gregory, R. L. (1970). The intelligent eye.

Grewal, D., Roggeveen, A., & Runyan, R. C. (2013). Retailing in a connected world. *Journal of Marketing Management*, *29*(3-4), 263-270.

Grewal, D., Roggeveen, A. L., & Nordfält, J. (2017). The Future of Retailing. *Journal of Retailing*, *93*(1), 1-6. https://doi.org/https://doi.org/10.1016/j.jretai.2016.12.008

GS1. (2022). *GS1 Mobile Ready Hero Images Guideline*. GS1.Org. Retrieved 25 October from https://www.gs1.org/standards/mobile-ready-hero-image/1-0#qsg

Guenther, R. K., Klatzky, R. L., & Putnam, W. (1980). Commonalities and differences in semantic decisions about pictures and words. *Journal of Verbal Learning and Verbal Behavior*, *19*(1), 54-74.

Hagberg, J., Sundstrom, M., & Egels-Zandén, N. (2016). The digitalization of retailing: an exploratory framework. *International Journal of Retail & Distribution Management*, *44*(7), 694-712. https://doi.org/https://doi.org/10.1108/IJRDM-09-2015-0140

Hammett, E. (2019, 17 June). *P&G puts focus on reach: It's a more important measure than spend*. MarketingWeek. Retrieved 6 January from https://www.marketingweek.com/pg-reach-ad-spend/

Happy Egg. (2023). *Happy Egg*. https://happyegg.com

Hartnett, N., & Romaniuk, J. (2008). *Is brand distinctiveness a separate facet of brand knowledge?* ANZMAC, Sydney, Australia.

Heatherly, M., Dein, M., Munafo, J. P., & Luckett, C. R. (2019). Crossmodal correspondence between color, shapes, and wine odors. *Food Quality and Preference*, *71*, 395-405. https://doi.org/https://doi.org/10.1016/j.foodqual.2018.08.019

Helfman, J. I., & Holland, J. D. (1999). *Image representations for access and similarity-based organization of web information* (Department of Cognitive Science, Issue. CiteSeer.

Henderson, p. W., & Cote, J. A. (1998). Guidelines for Selecting or Modifying Logos. *Journal of Marketing*, *62*(April), 14-30.

Hickman, E., Kharouf, H., & Sekhon, H. (2020). An omnichannel approach to retailing: demystifying and identifying the factors influencing an omnichannel experience. *The International Review of Retail, Distribution and Consumer Research*, *30*(3), 266-288. https://doi.org/https://doi.org/10.1080/09593969.2019.1694562

Hicks, J. M., & Still, J. D. (2019, 20 November). *Examining the Effects of Clutter and Target Salience in an E-Commerce Visual Search Task* Human Factors and Ergonomics Society Annual Meeting,

Hoek, J., & Gendall, P. (2010). Colors, brands, and trademarks: The marketing (and legal) problem of establishing distinctiveness. *Journal of Advertising Research*, *50*(3), 316-322.

Hoyer, W. D. (1984). An examination of consumer decision making for a common repeat purchase product. *Journal of Consumer Research*, *11*(3), 822-829.

Huang, C. Y. (2011). Excess Loyalty in Online Retailing. *International Journal of Electronic Commerce*, *16*(2), 115-134.

Huang, J., Wang, L., & Chan, E. Y. (2022). Larger= more attractive? Image size on food packages influences purchase likelihood. *Psychology & Marketing*, *39*(6), 1257-1266. https://doi.org/https://dopi.org/10.1002/mar.21644

Hussein, R. S., & Kais, A. (2021). Multichannel behaviour in the retail industry: evidence from an emerging market. *International Journal of Logistics Research and Applications*, *24*(3), 242-260. https://doi.org/https://doi.org/10.1080/13675567.2020.1749248

Hynes, N. (2009). Colour and meaning in corporate logos: An empirical study. *The Journal of Brand Management*, *16*(8), 545-555.

Jain, R. (2017). Basic Branding Concepts: Brand Identity, Brand Image and Brand Equity. *International Journal of Sales & Marketing Management Research and Development (IJSMMRD)*, *7*(4), 1-8.

Janelle, C. M. (2002). Anxiety, arousal and visual attention: A mechanistic account of performance variability. *Journal of Sports Sciences*, *20*(3), 237-251. https://doi.org/https://doi.org/10.1080/026404102317284790

Janiszewski, C., Kuo, A., & Tavassoli, N. T. (2013). The influence of selective attention and inattention to products on subsequent choice. *Journal of Consumer Research*, *39*(6), 1258-1274.

Kahn, B. E. (2017). Using Visual Design to Improve Customer Perceptions of Online Assortments. *Journal of Retailing*, *93*(1), 29-42. https://doi.org/http://dx.doi.org/10.1016/j.jretai.2016.11.004

Kauppinen-Räisänen, H. (2014). Strategic use of colour in brand packaging. *Packaging Technology and Science*, *27*(8), 663-676. https://doi.org/10.1002/pts.2061

Kaur, H., & Kaur, K. (2019). Connecting the dots between brand logo and brand image. *Asia-Pacific Journal of Business Administration*, *11*(1), 68-87. https://doi.org/10.1108/APJBA-06-2018-0101

Keller, K. L. (2003). Brand synthesis: The multidimensionality of brand knowledge. *Journal of Consumer Research*, *29*(4), 595-601.

Keller, K. L., & Lehmann, D. R. (2006). Brands and branding: Research findings and future priorities. *Marketing Science*, *25*(6), 740-759.

Kellogg's. (2019). *Coco Pops*. https://www.kelloggs.com.au/en_AU/brands/coco-pops.html

Kent, R. J., & Allen, C. T. (1994). Competitive interference effects in consumer memory for advertising: the role of brand familiarity. *Journal of Marketing*, *58*(3), 97-105. https://doi.org/https://doi.org/10.1177/002224299405800307

Kerwin, N. (2022). *Natural Balance showcased new product packaging, dog foods at Global Pet Expo*. Pet Food Processing. https://www.petfoodprocessing.net/articles/15667-natural-balance-showcased-new-product-packaging-dog-foods-at-global-pet-expo#:~:text=The%20new%20packaging%20features%20clean,executive%20officer%20of%20Natural%20Balance

Kim, M., & Lennon, S. (2008). The effects of visual and verbal information on attitudes and purchase intentions in internet shopping. *Psychology & Marketing*, *25*(2), 146-178. https://doi.org/https://doi.org/10.1002/mar.20204

Kohli, C., Leuthesser, L., & Suri, R. (2007). Got slogan? guidelines for creating effective slogans. *Business Horizons*, *50*(5), 415-422.

Kollmann, T., Kuckertz, A., & Kayser, I. (2012). Cannibalization or synergy? Consumers' channel selection in online–offline multichannel systems. *Journal of Retailing and Consumer Services*, *19*(2), 186-194. https://doi.org/10.1016/j.jretconser.2011.11.008

Kotler, P., & Alexander Rath, G. (1984). Design: A Powerful but Neglected Strategic Tool. *Journal of business strategy*, *5*(2), 16-21. https://doi.org/10.1108/eb039054

Kotler, P., & Keller, D. L. (2012). *A Framework for Marketing Management* (5 ed.). Pearson Prentice Hall.

Kovač, A., Kovačević, D., Bota, J., & Brozović, M. (2019). Consumers' preferences for visual elements on chocolate packaging. *Journal of Graphic Engineering and Design*, *10*(1), 13-18. https://doi.org/0.24867/JGED-2019-1-013

Kovačević, D., & Brozović, M. (2018). Noticeability and recall of visual elements on packaging.

Kumar, N., & Steenkamp, J.-B. E. M. (2007). *Private label strategy: How to meet the store brand challenge* (Illustrated ed.). Harvard Business Press.

Kuvykaite, R., Dovaliene, A., & Navickiene, L. (2009). Impact of package elements on consumer's purchase decision. *Economics and management*(14), 441-447.

Kwok, S., & Uncles, M. (2005). Sales promotion effectiveness: the impact of consumer differences at an ethnic-group level. *Journal of Product & Brand Management*, *14*(3), 170-186. https://doi.org/https://doi.org/10.1108/10610420510601049

Lam, S. Y., Chau, A. W.-l., & Wong, T. J. (2007). Thumbnails as online product displays: How consumers process them. *Journal of Interactive Marketing*, *21*(1), 36-59. https://doi.org/https://doi.org/10.1002/dir.20073

Lohse, G. L. (1997). Consumer eye movement patterns on Yellow Pages advertising. *Journal of Advertising*, *26*(1), 61-73. http://www.jstor.org/stable/4189027

Lutz, K. A., & Lutz, R. J. (1977). Effects of interactive imagery on learning: Application to advertising. *Journal of Applied Psychology*, *62*(4), 493-498. https://doi.org/10.1037/0021-9010.62.4.493

Macdonald, E., & Sharp, B. (1995). Brand Awareness Effects on Decision-Making Time for a Commonly Purchased Product. INFORMS Marketing Science Conference, Sydney.

Madden, T. J., Hewett, K., & Roth, M. S. (2000). Managing images in different cultures: a cross-national study of color meanings and preferences. *Journal of International Marketing*, *8*(4), 90-107.

Major, J. (2014). *Drawing the spotlight? Investigating the attention grabbing potential of distinctive assets* University of South Australia]. Adelaide.

Major, J., Tanaka, A., & Romaniuk, J. (2014). The competitive battleground of colours, logos and taglines in brand identity. In G. Muratovski (Ed.), *Design For Business* (pp. 42-59). Intellect Ltd. http://ebookcentral.proquest.com.access.library.unisa.edu.au/lib/unisa/reader.action?docID=1747045&ppg=64

Maros, A., Belém, F., Silva, R., Canuto, S., Almeida, J. M., & Gonçalves, M. A. (2019, 2019). Image aesthetics and its effects on product clicks in e-commerce search.

Marques da Rosa, V., Spence, C., & Miletto Tonetto, L. (2019). Influences of visual attributes of food packaging on consumer preference and associations with taste and healthiness. *International Journal of Consumer Studies*, *43*(2), 210-217. https://doi.org/https://doi.org/10.1111/ijcs.12500

Marshall, D., Stuart, M., & Bell, R. (2006). Examining the relationship between product package colour and product selection in preschoolers. *Food quality and preference*, *17*(7-8), 615-621.

Martin, N. (2008). *Habit: The 95% of Behavior Marketers Ignore*. Pearson Education, Inc.

Masten, D. L. (1998). Packaging's proper role is to sell the product. *Marketing News*, *22*(2), 16.

Matthews, P., Simmonds, G., & Spence, C. (2019). Establishing boundary conditions for multiple design elements congruent with taste expectations. *Food Quality and Preference*, *78*, 103742. https://doi.org/https://doi.org/10.1016/j.foodqual.2019.103742

McKinsey & Company. (2022). *E-commerce: At the center of profitable growth in consumer goods*. https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/e-commerce-at-the-center-of-profitable-growth-in-consumer-goods#/

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). SAGE Publications.

Milosavljevic, M., Navalpakkam, V., Koch, C., & Rangel, A. (2012). Relative visual saliency differences induce sizable bias in consumer choice. *Journal of Consumer Psychology*, *22*(1), 67-74.

Mocanu, A. (2015). *The prototypicality of consumer packaged goods: An atomistic versus holistic assessment of packaging design* University of South Australia]. Adelaide.

Mohebbi, B. (2014). The art of packaging: An investigation into the role of color in packaging, marketing, and branding. *International Journal of Organizational Leadership*, *3*, 92-102.

Mortimer, N. (2015). *Snickers follows Coke's lead for personalised package design campaign*. The Drum. https://www.thedrum.com/news/2015/09/24/snickers-follows-coke-s-lead-personalised-package-design-campaign

Nancarrow, C., Wright, L., & Brace, I. (1998). Gaining competitive advantage from packaging and labelling in marketing communications. *British Food Journal*, *100*(2), 110-118.

Nelson, D. L., Reed, V. S., & Walling, J. R. (1976). Pictorial superiority effect. *Journal of Experimental Psychology: Human Learning and Memory*, *2*(5), 523-528.

Nenycz-Thiel, M., & Romaniuk, J. (2014). The real difference between consumers' perceptions of private labels and national brands. *Journal of Consumer Behaviour*, *13*(4), 262-269. https://doi.org/DOI: 10.1002/cb.1464

Nenycz-Thiel, M., & Romaniuk, J. (2021). Building Physical Availability: Prominence and Portfolio. In J. Butler (Ed.), *How Brands Grow: Part 2* (2nd ed., pp. 159-172). Oxford University Press.

Nenycz-Thiel, M., Romaniuk, J., & Sharp, B. (2021). Building Physical Availability: Presence. In J. Butler (Ed.), *How Brands Grow: Part 2* (2nd ed., pp. 140-158). Oxford University Press.

Newstead, K. (2014). *Branding element variation: a consumer and industry examination* University of South Australia]. Adelaide.

Nguyen, H. T., Zhang, Y., & Calantone, R. J. (2018). Brand portfolio coherence: Scale development and empirical demonstration. *International Journal of Research in Marketing*, *35*(1), 60-80. https://doi.org/10.1016/j.ijresmar.2017.11.003

Nielsen, J. (2008). *How Little Do Users Read?* N. N. Group.

Nogales, A. F., & Suarez, M. G. (2005). Shelf space management of private labels: a case study in Spanish retailing. *Journal of Retailing and Consumer Services*, *12*(3), 205-216.

O'Connor, Z. (2015). Colour, Contrast and Gestalt Theories of Perception: The Impact in Contemporary Visual Communications Design. *Color Research & Application*, *40*(1), 85-92. https://doi.org/ https://doi.org/10.1002/col.21858

Olsen, G. D., Pracejus, J. W., & O'Guinn, T. C. (2012). Print advertising: White space. *Journal of Business Research*, *65*(6), 855-860. https://doi.org/10.1016/j.jbusres.2011.01.007

One Club. (2022). *Better With Pepsi - 2022 ADC Awards*. https://www.oneclub.org/awards/adcawards/-agency/alma+DDB+[s]+Miami/2022/all/all

Orquin, J. L., Bagger, M. P., Lahm, E. S., Grunert, K. G., & Scholderer, J. (2020). The visual ecology of product packaging and its effects on consumer attention. *Journal of Business Research*, *111*, 187-195. https://doi.org/https://doi.org/10.1016/j.jbusres.2019.01.043

Orquin, J. L., & Lagerkvist, C. J. (2015). Effects of salience are both short-and long-lived. *Acta Psychologica*, *160*, 69-76.

Orquin, J. L., & Loose, S. M. (2013). Attention and choice: a review on eye movements in decision making. *Acta Psychologica*, *144*(1), 190-206. https://doi.org/https://doi.org/10.1016/j.actpsy.2013.06.003

Paivio, A., & Csapo, K. (1973). Picture superiority in free recall: Imagery or dual coding? *Cognitive Psychology*, *5*(2), 176-206.

Pardaz Graphic. (2023). *Shelf Branding*. Pardaz Graphic Creative Advertising. https://www.pardazgraphic.com/en/activities/products/shelf-branding/

Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management*, *33*(2), 148-160. https://doi.org/https://doi.org/10.1108/09590550510581476

Peate, S. (2022). *Oversimplified logos: Clarifying the simplified logo trend*. Fabrik. https://fabrikbrands.com/oversimplified-logos-the-simplified-logo-trend/

Pechmann, C., & Stewart, D. W. (1990). The Effects of Comparative Advertising on Attention, Memory, and Purchase Intentions. *Journal of Consumer Research*, *17*(2), 180-191. https://doi.org/https://doi.org/10.1086/208548

PepsiCo. (2023). *Pepsi Logo*. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:Pepsi_logo_2014.svg

Peschel, A. O., Orquin, J. L., & Loose, S. M. (2019). Increasing consumers' attention capture and food choice through bottom-up effects. *Appetite*, *132*, 1-7. https://doi.org/https://doi.org/10.1016/j.appet.2018.09.015

Peters-Texeira, A., & Badrie, N. (2005). Consumers' perception of food packaging in Trinidad, West Indies and its related impact on food choices. *International Journal of Consumer Studies*, *29*(6), 508-514. https://doi.org/https://doi.org/10.1111/j.1470-6431.2005.00419.x

Phillips, B. J., McQuarrie, E. F., & Griffin, W. G. (2014a). The face of the brand: How art directors understand visual brand identity. *Journal of Advertising*, *43*(4), 318-332. https://doi.org/10.1080/00913367.2013.867824

Phillips, B. J., McQuarrie, E. F., & Griffin, W. G. (2014b). How visual brand identity shapes consumer response. *Psychology & Marketing*, *31*(3), 225-236. https://doi.org/https://doi.org/10.1002/mar.20689

Pieters, R., & Warlop, L. (1999). Visual attention during brand choice: the impact of time pressure and task motivation. *International Journal of Research in Marketing*, *16*(1), 1-16.

Pieters, R., Warlop, L., & Wedel, M. (2002). Breaking through the clutter: Benefits of advertisement originality and familiarity for brand attention and memory. *Management Science*, *48*(6), 765-781. http://www.informs.org

Pieters, R., & Wedel, M. (2004). Attention capture and transfer in advertising: brand, pictorial, and text-size effects. *Journal of Marketing*, *68*(2), 36-50.

Pieters, R., Wedel, M., & Zhang, J. (2007). Optimal feature advertising design under competitive clutter. *Management Science*, *53*(11), 1815-1828.

Pinero De Plaza, M. A., Lockshin, L., Kennedy, R., & Corsi, A. (2015). A behavioural methodology: Measuring the effect of packaging design on shopper's memory. In *Design for Business* (Vol. 3). Academia.

Piñero, M. A., Lockshin, L., Kennedy, R., & Corsi, A. (2010). *Distinctive elements in packaging (FMCG): An exploratory study* ANZMAC, Christchurch.

Piqueras-Fiszman, B., Alcaide, J., Roura, E., & Spence, C. (2012). Is it the plate or is it the food? Assessing the influence of the color (black or white) and shape of the plate on the perception of the food placed on it. *Food Quality and Preference*, *24*(1), 205-208. https://doi.org/doi:10.1016/j.foodqual.2011.08.011

Piqueras-Fiszman, B., Velasco, C., Salgado-Montejo, A., & Spence, C. (2013). Using combined eye tracking and word association in order to assess novel packaging solutions: A case study involving jam jars. *Food Quality and Preference*, *28*(1), 328-338. https://doi.org/10.1016/j.foodqual.2012.10.006

Piqueras-Fiszman, B., Velasco, C., & Spence, C. (2012). Exploring implicit and explicit crossmodal colour–flavour correspondences in product packaging. *Food Quality and Preference*, *25*(2), 148-155.

Poturak, M. (2014). Influence of product packaging on purchase decisions. *European Journal of Social and Human Sciences*, *3*(3), 144-150.

Purwaningsih, I., Surachman, S., Pratikto, P., & Santoso, I. (2019). Influence of packaging element on beverage product marketing. *International Review of Management and Marketing*, *9*(6), 205-210.

Raghubir, P., & Greenleaf, E. A. (2006). Ratios in proportion: what should the shape of the package be? *Journal of Marketing*, *70*(2), 95-107.

Raghubir, P., & Valenzuela, A. (2006). Center-of-Inattention: Position Biases in Decision-Making. *Organizational Behavior and Human Decision Processes*, *99*, 66-80.

Raheem, A. R., Vishnu, P., & Ahmed, A. M. (2014). Impact of product packaging on consumer's buying behavior. *European journal of scientific research*, *122*(2), 125-134. https://doi.org/http://www.europeanjournalofscientificresearch.com/issues/EJSR_122_2.html

Reimann, M., Castaño, R., Zaichkowsky, J., & Bechara, A. (2012). Novel versus familiar brands: An analysis of neurophysiology, response latency, and choice. *Marketing Letters*, *23*(3), 745-759. https://doi.org/https://doi.org/10.1007/s11002-012-9176-3

Reimann, M., Zaichkowsky, J., Neuhaus, C., Bender, T., & Weber, B. (2010). Aesthetic package design: A behavioral, neural, and psychological investigation. *Journal of consumer psychology*, *20*(4), 431-441. https://doi.org/https://doi.org/10.1016/j.jcps.2010.06.009

Romaniuk, J. (2018a). Building Colour-based Distinctive Assets. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 113-121). Oxford University Press.

Romaniuk, J. (2018b). *Building Distinctive Brand Assets*. Oxford University Press.

Romaniuk, J. (2018c). Creating Distinctive Brand Assets. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 5-14). Oxford University Press.

Romaniuk, J. (2018d). Developing a 'sound' strategy. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 153-162). Oxford University Press.

Romaniuk, J. (2018e). Extending Distinctive Assets across Sub-brands and Categories In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 56-64). Oxford University Press.

Romaniuk, J. (2018f). Taglines, Fonts and Other Word-based Assets. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 143-153). Oxford University Press.

Romaniuk, J. (2018 ). Assets that Draw on Shapes and Build Stories. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 122-128). Oxford University Press.

Romaniuk, J. (2021). Leveraging Distinctive Assets. In J. Butler (Ed.), *How Brands Grow: Part 2* (2nd ed., pp. 85-103). Oxford University Press.

Romaniuk, J. (2023). *Better Brand Health*. Oxford University Press.

Romaniuk, J., & Caruso, W. (2018). Building Physical Availability with Distinctive Assets. In J. Romaniuk (Ed.), *Building Distinctive Brand Assets* (pp. 43-55). Oxford University Press.

Romaniuk, J., & Nicholls, E. (2006). Evaluating advertising effects on brand perceptions: Incorporating prior knowledge. *International Journal of Market Research*, *48*(2), 179-192.

Romaniuk, J., & Sharp, B. (2021a). Building Mental Availability. In J. Butler (Ed.), *How Brands Grow: Part 2* (2nd ed., pp. 61-84). Oxford University Press.

Romaniuk, J., & Sharp, B. (2021b). *How Brands Grow: part 2* (J. Butler, Ed. 2nd ed.). Oxford University Press.

Rundh, B. (2009). Packaging design: creating competitive advantage with product packaging. *British Food Journal*, *111*(9), 988-1002.

Saini, Y. K., & Lynch Jr, J. G. (2016). The effects of the online and offline purchase environment on consumer choice of familiar and unfamiliar brands. *International Journal of Research in Marketing*, *33*(3), 702-705. https://doi.org/https://doi.org/10.1016/j.ijresmar.2016.02.003

Schifferstein, H. N. J., Fenko, A., Desmet, P. M. A., Labbe, D., & Martin, N. (2013). Influence of package design on the dynamics of multisensory and emotional food experience. *Food Quality and Preference*, *27*(1), 18-25. https://doi.org/10.1016/j.foodqual.2012.06.003

Sharp, B. (2010). Mental and physical availability. In B. Sharp (Ed.), *How Brands Grow* (pp. 180-213). Oxford University Press.

Sharp, B. (2017). *Marketing: Theory, evidence, practice* (2nd ed.). Oxford University Press.

Sharp, B., & Romaniuk, J. (2016). How brands grow. In J. Romaniuk & B. Sharp (Eds.), *How Brands Grow: Part 2* (pp. 1-22). Oxford University Press.

Sharp, B., & Sorensen, H. (2017). Physical Availability, Retailing, Shopping. In B. Sharp (Ed.), *Marketing: Theory, Evidence, Practice* (pp. 330-356). Oxford University Press.

Shehzad, U., Ahmad, S., Iqbal, K., Nawaz, M., & Usman, S. (2014). Influence of brand name on consumer choice & decision. *Journal of Business and Management*, *16*(6), 72-76. https://doi.org/https://doi.org/10.9790/487X-16637276

Shepard, R. N. (1967). Recognition memory for words, sentences and pictures. *Journal of Verbal Learning and Verbal Behavior*, *6*(1), 156-163.

Shimojo, S., Simion, C., Shimojo, E., & Scheier, C. (2003). Gaze bias both reflects and influences preference. *Nature Neuroscience*, *6*(12), 1317-1322.

Silayoi, P., & Speece, M. (2004). Packaging and purchase decisions: an exploratory study on the impact of involvement level and time pressure. *British Food Journal*, *106*(8), 607-628.

Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*, *41*, 1495-1517. https://doi.org/10.1108/03090560710821279

Silberer, G., Buttner, O., & Gorbach, A. (2007). Exploring Shopping Paths and Attention Behaviour at the Point of Sale. *Marketing Theory and Practise in an Inter-functional World*, *13*, 288-292.

Simmonds, G., & Spence, C. (2017). Thinking inside the box: How seeing products on, or through, the packaging influences consumer perceptions and purchase behaviour. *Food Quality and Preference*, *62*, 340-351. https://doi.org/http://dx.doi.org/10.1016/j.foodqual.2016.11.010

Simmonds, L., Bellman, S., Kennedy, R., Nenycz-Thiel, M., & Bogomolova, S. (2020). Moderating effects of prior brand usage on visual attention to video advertising and recall: An eye-tracking investigation. *Journal of Business Research*, *111*, 241-248. https://doi.org/10.1016/j.jbusres.2019.02.062

Sorensen, H. (2011, 10/27/2011). *The Incredibly Shrinking (In-Store) Audience* Wharton School Future of Advertising Conference,

Sorensen, H. (2016). *Inside the mind of the shopper: The science of retailing* (2 ed.). Pearson Education.

Sorensen, H., Bogomolova, S., Anderson, K., Trinh, G., Sharp, A., Kennedy, R., Page, B., & Wright, M. (2017). Fundamental patterns of in-store shopper behavior. *Journal of Retailing and Consumer Services*, *37*, 182-194. https://doi.org/http://dx.doi.org/10.1016/j.jretconser.2017.02.003

Speier, C. (2006). The influence of information presentation formats on complex task decision-making performance. *International Journal of Human-Computer Studies*, *64*(11), 1115-1131. https://doi.org/https://doi.org/10.1016/j.ijhcs.2006.06.007

Spence, C., & Velasco, C. (2018). On the multiple effects of packaging colour on consumer behaviour and product experience in the 'food and beverage'and 'home and personal care'categories. *Food Quality and Preference*, *68*, 226-237. https://doi.org/https://doi.org/10.1016/j.foodqual.2018.03.008

Starch, D. (1966). How Does the Shape of Ads Affect Readership? *Media/Scope*, *10*, 83-85.

Statista. (2022). *Global gluten-free food market value from 2022 to 2032 (in billion U.S. dollars)**. https://www-statista-com.eu1.proxy.openathens.net/statistics/248467/global-gluten-free-food-market-size/

Statista. (2023). *E-commerce as percentage of total retail sales worldwide from 2015 to 2026*. https://www-statista-com.eu1.proxy.openathens.net/statistics/534123/e-commerce-share-of-retail-sales-worldwide/

Still, J. D. (2017). Web page attentional priority model. *Cognition, Technology & Work*, *19*(2), 363-374. https://doi.org/https://doi.org/10.1007/s10111-017-0411-9

Still, J. D., & Dark, V. J. (2010). Examining working memory load and congruency effects on affordances and conventions. *International Journal of Human-Computer Studies*, *68*(9), 561-571. https://doi.org/10.1016/j.ijhcs.2010.03.003

Still, J. D., & Masciocchi, C. M. (2012). Considering the influence of visual saliency during interface searches. In E. M. Alkhalifa & K. Gaid (Eds.), *Cognitively informed intelligent interfaces: Systems design and development* (pp. 84-97). IGI Global. https://doi.org/10.4018/978-1-4666-1628-8.ch006

Tan, P. J., Corsi, A., Cohen, J., Sharp, A., Lockshin, L., Caruso, W., & Bogomolova, S. (2018). Assessing the sales effectiveness of differently located endcaps in a supermarket. *Journal of Retailing and Consumer Services*, *43*, 200-208. https://doi.org/https://doi.org/10.1016/j.jretconser.2018.03.015

Theeuwes, J. (2010). Top–down and bottom–up control of visual selection. *Acta Psychologica*, *135*(2), 77-99.

Toluna. (2019). *Know what's next: Insights for today's on demand economy*. Toluna. Retrieved August 2018 from https://www.toluna-group.com/en-au

Townsend, C., & Kahn, B. E. (2014). The "visual preference heuristic": The influence of visual versus verbal depiction on assortment processing, perceived variety, and choice overload. *Journal of Consumer Research*, *40*(5), 993-1015. https://doi.org/https://doi.org/10.1086/673521

Twede, D. (1992). The process of logistical packaging innovation. *Journal of Business Logistics*, *13*(1), 69.

Underwood, R. L. (2003). The communicative power of product packaging: creating brand identity via lived and mediated experience. *Journal of Marketing Theory & Practice*, *11*(No. 1), 62-76. https://doi.org/https://doi.org/10.1080/10696679.2003.11501933

Underwood, R. L., & Klein, N. M. (2002). Packaging as brand communication: effects of product pictures on consumer responses to the package and brand. *Journal of Marketing Theory and Practice*, 58-68.

Underwood, R. L., Klein, N. M., & Burke, R. R. (2001). Packaging communication: attentional effects of product imagery. *Journal of Product & Brand Management*, *10*(7), 403-422. https://doi.org/DOI:10.1108/10610420110410531

Varela, M. L. R., Araújo, A. F., Vieira, G. G., Manupati, V. K., & Manoj, K. (2017). Integrated framework based on critical success factors for e-Commerce. *Journal of Information Systems Engineering & Management*, *2*(1), 4. https://doi.org/http://dx.doi.org/10.20897/jisem.201704

Velasco, C., & Spence, C. (2019). *Multisensory packaging: Designing new product experiences*. Springer. https://doi.org/https://doi.org/10.1007/978-3-319-94977-2

Velasco, C., Wan, X., Salgado-Montejo, A., Woods, A., Oñate, G. A., Mu, B., & Spence, C. (2014). The context of colour–flavour associations in crisps packaging: A cross-cultural study comparing Chinese, Colombian, and British consumers. *Food Quality and Preference*, *38*, 49-57. https://doi.org/10.1016/j.foodqual.2014.05.011

Vermeulen, R. (2013). Packaging lifestyle adaptation design: A case study in redesigning the AXE shower gel packaging for a new designated (sophisticated businessmen) lifestyle. *Industrial Design Engineering*, *1*, 1-10.

Vinitha, V. U., Kumar, D. S., & Purani, K. (2021). Biomorphic visual identity of a brand and its effects: a holistic perspective. *Journal of Brand Management*, 1-19. https://doi.org/10.1057/s41262-020-00222-6

Vital Farms. (2023). *3 Ways To Reuse Your Egg Cartons*. https://vitalfarms.com/3-ways-to-reuse-your-egg-cartons/

Wall, T. (2019). *Blue Buffalo plans to double mass market distribution*. Pet Food Industry.com. https://www.petfoodindustry.com/articles/7770-blue-buffalo-plans-to-double-mass-market-distribution

Walter, E., & Gioglio, J. (2020). *The power of visual storytelling: how to use visuals, videos, and social media to market your brand* (1 ed.). McGraw-Hill Education.

Wang, E. S.-T. (2017). Different Effects of Utilitarian and Hedonic Benefits of Retail Food Packaging on Perceived Product Quality and Purchase Intention. *Journal of Food Products Marketing*, *23*(3), 239-250. https://doi.org/10.1080/10454446.2014.885867

Ward, E., Yang, S., Romaniuk, J., & Beal, V. (2020). Building a unique brand identity: measuring the relative ownership potential of brand identity element types. *Journal of Brand Management*, *27*(4), 393-407. https://doi.org/10.1057/s41262-020-00187-6

Warlop, L., Ratneshwar, S., & van Osselaer, S. M. J. (2005). Distinctive brand cues and memory for product consumption experiences. *International Journal of Research in Marketing*, *22*(1), 27-44.

Wedel, M., & Pieters, R. (2006). Eye tracking for visual marketing. *Foundations and Trends in Marketing*, *1*(4), 231-320. https://doi.org/http://dx.doi.org/10.1561/1700000011

Wedel, M., & Pieters, R. (2017). A review of eye-tracking research in marketing. *Review of Marketing Research*, 123-147. https://doi.org/10.4324/9781351550932-5

Wiki, T. A. M. (2021). *Coco the Monkey*. https://admascots.fandom.com/wiki/Coco_the_Monkey

Wolfe, J. M. (1994). Guided search 2.0 a revised model of visual search. *Psychonomic Bulletin & Review*, *1*(2), 202-238.

Wolfe, J. M., Butcher, S. J., Lee, C., & Hyle, M. (2003). Changing your mind: On the contributions of top-down and bottom-up guidance in visual search for feature singletons. *Journal of Experimental Psychology: Human Perception and Performance*, *29*(2), 483-502.

Wood, A. (2011). Multichannel shopping: Crossing the channels. *AdMap*.

Wood, W., & Neal, D. (2009). The habitual consumer. *Journal of Consumer Psychology*, *19*, 579-592.

Woodruff, A., Rosenholtz, R., Morrison, J. B., Faulring, A., & Pirolli, P. (2002). A comparison of the use of text summaries, plain thumbnails, and enhanced thumbnails for Web search tasks. *Journal of the American Society for Information Science and Technology*, *53*(2), 172-185.

Wulansari, A. S. (2019). Food product packaging design as marketing tools in purchase decision. *Journal of Management and Leadership*, *2*(2), 19-30.

Yoo, J., & Kim, M. (2014). The effects of online product presentation on consumer responses: A mental imagery perspective. *Journal of Business Research*, *67*(11), 2464-2472.

Young, S. (2003). Winning At Retail. Research insights to improve the packaging of children's products. *International Journal of Advertising & Marketing to Children*, *5*(No. 1), 17-22.

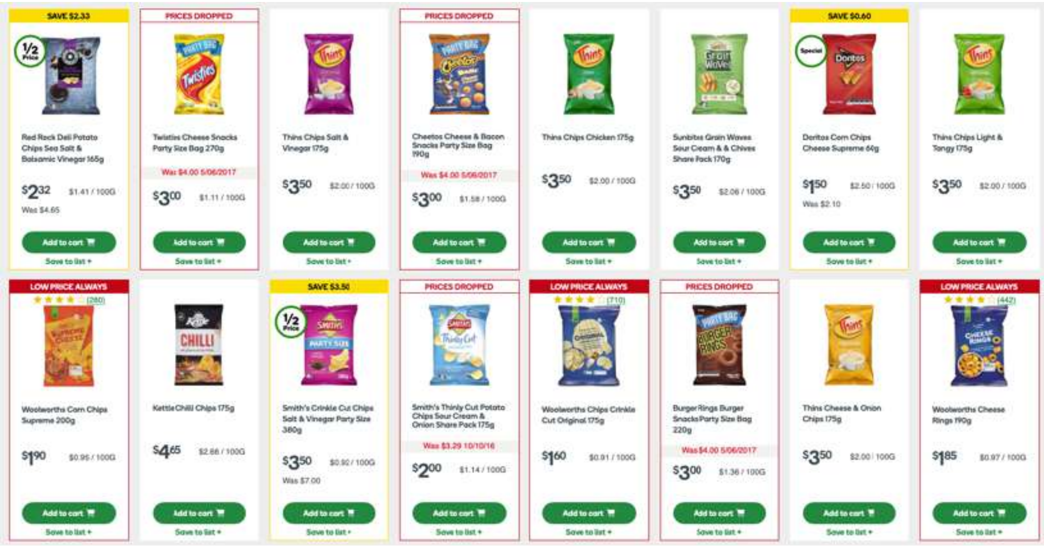
Zaichkowsky, J. L. (2010). Strategies for distinctive brands. *Journal of Brand Management*, *17*(8), 548-560.

Zampini, M., Wantling, E., Phillips, N., & Spence, C. (2008). Multisensory flavor perception: Assessing the influence of fruit acids and color cues on the perception of fruit-flavored beverages. *Food quality and preference*, *19*(3), 335-343.

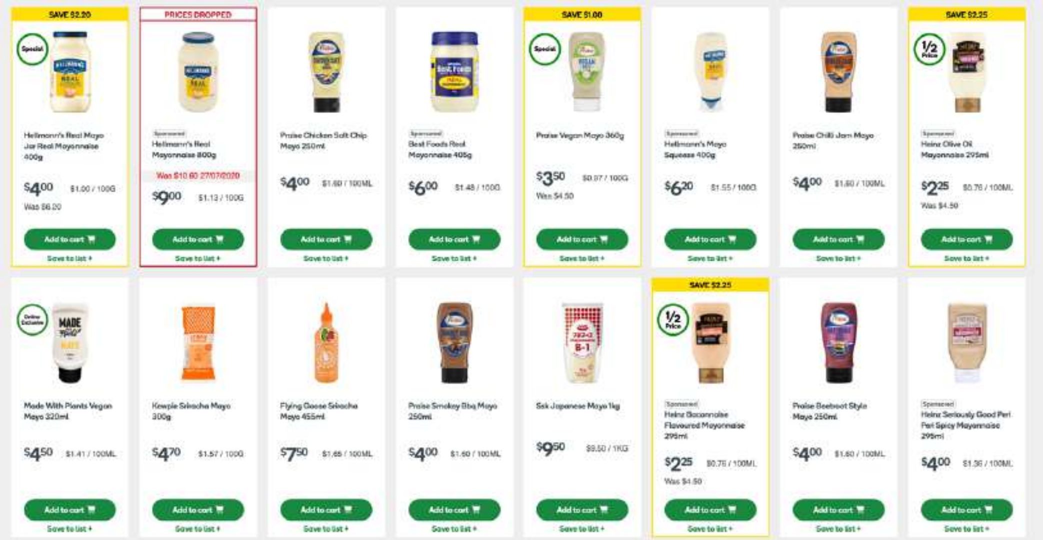
# APPENDICIES

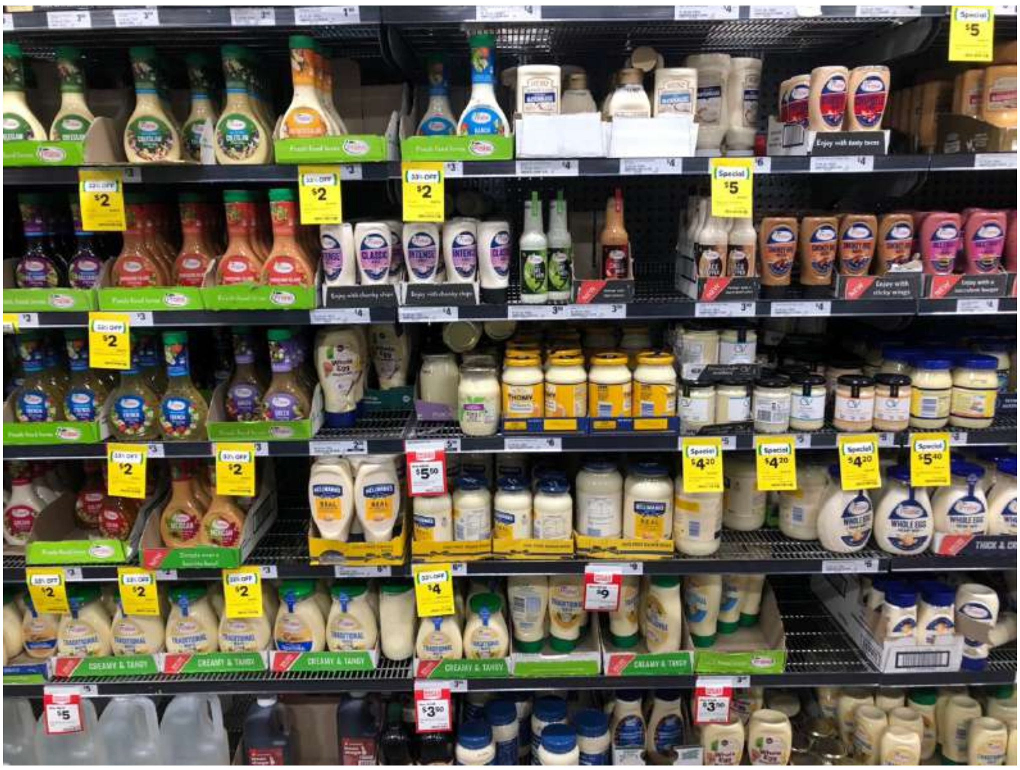
## Appendix A: Shopping Environment Stimuli

**Figure A1: Shopping Environments used in Study 1, 'Real Shop', by Product Category**

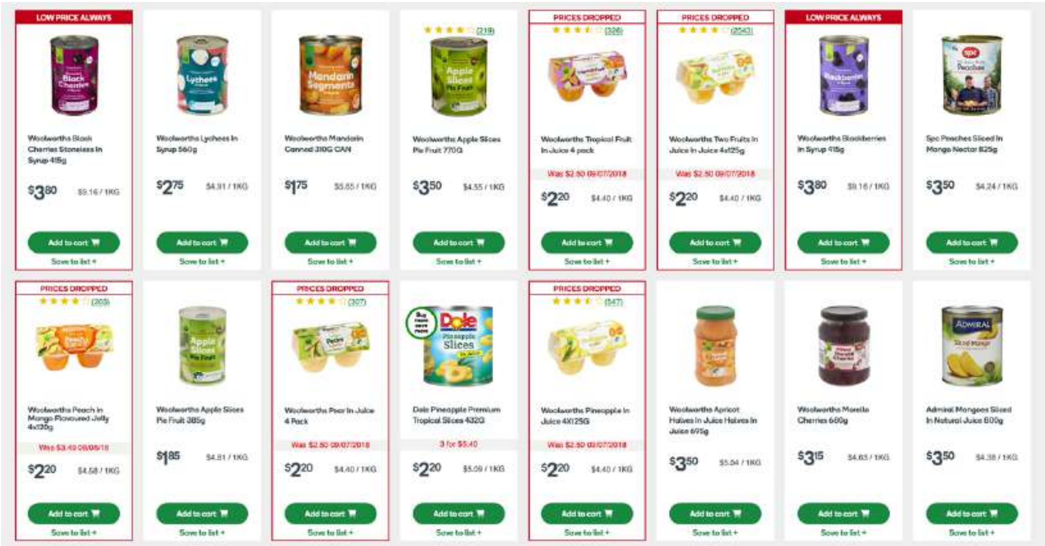


Pictured: Crisps, Online; Crisps, Shelf



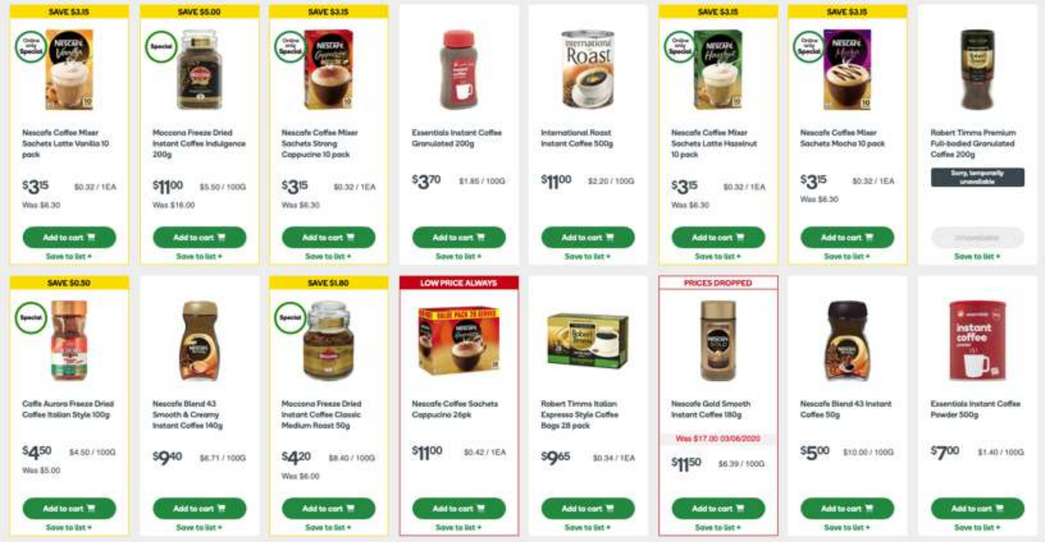



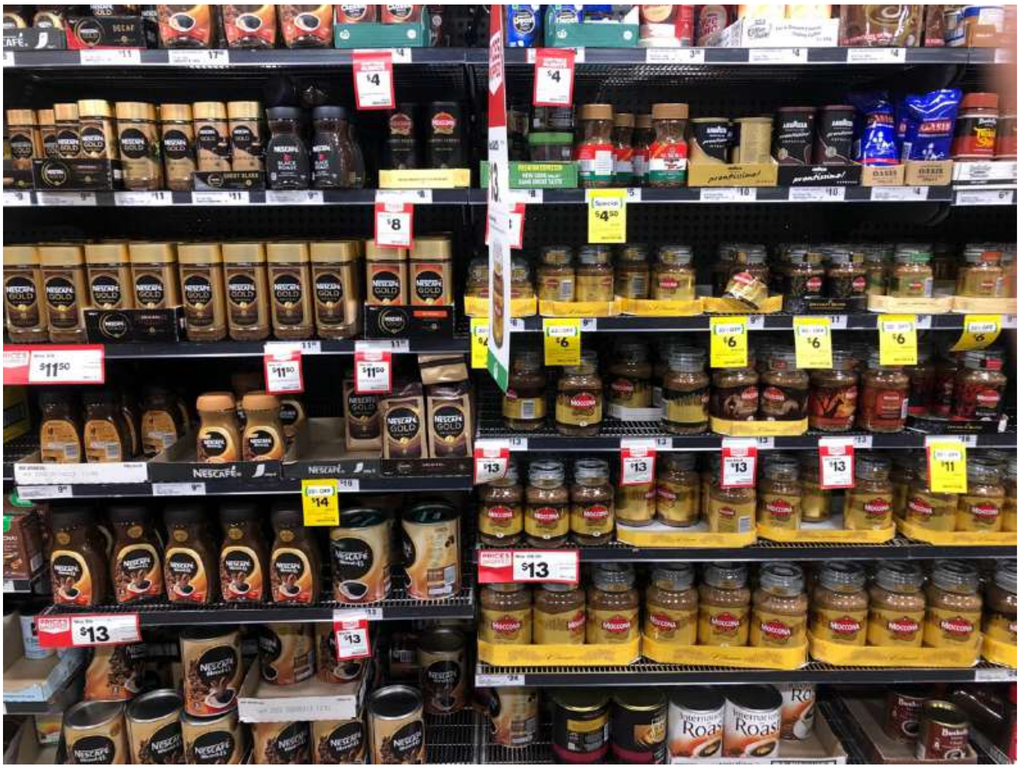
Pictured: Salad Dressing, Online; Salad Dressing, Shelf



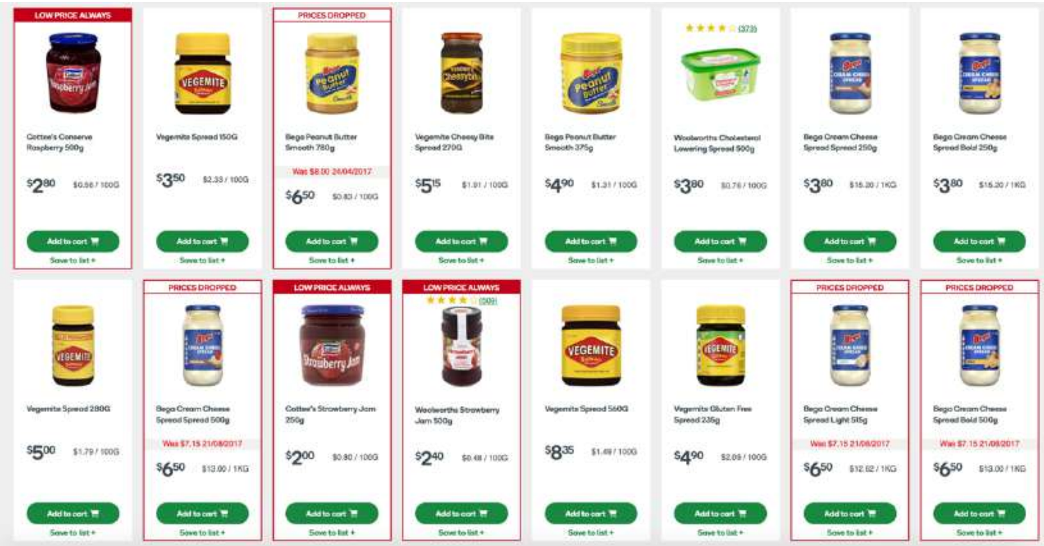


Pictured: Canned Fruit, Online; Canned Fruit, Shelf



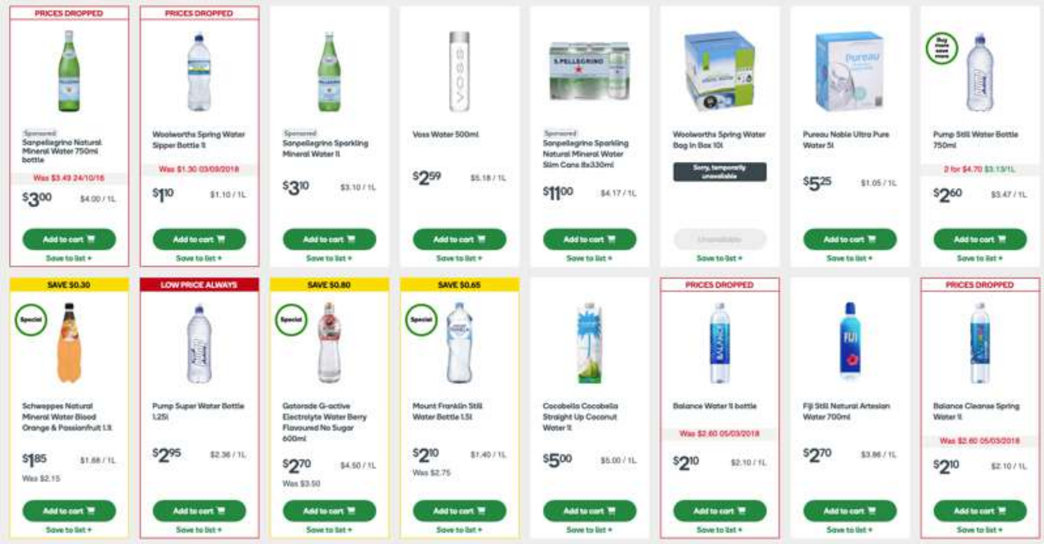



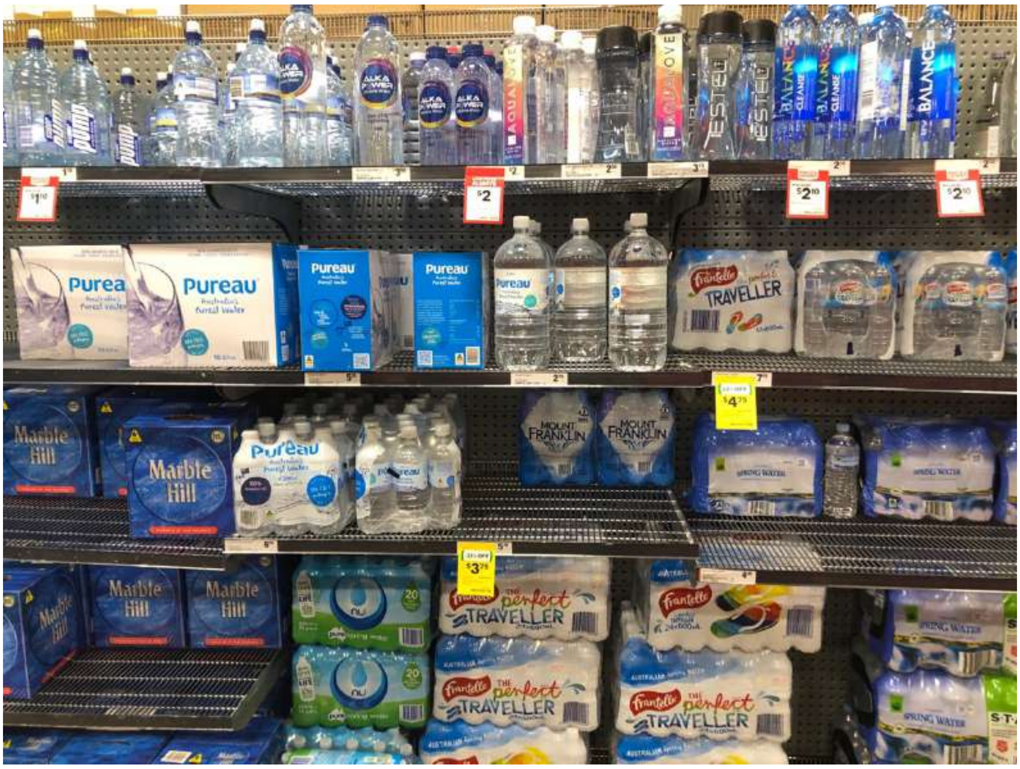
Pictured: Coffee, Online; Coffee, Shelf



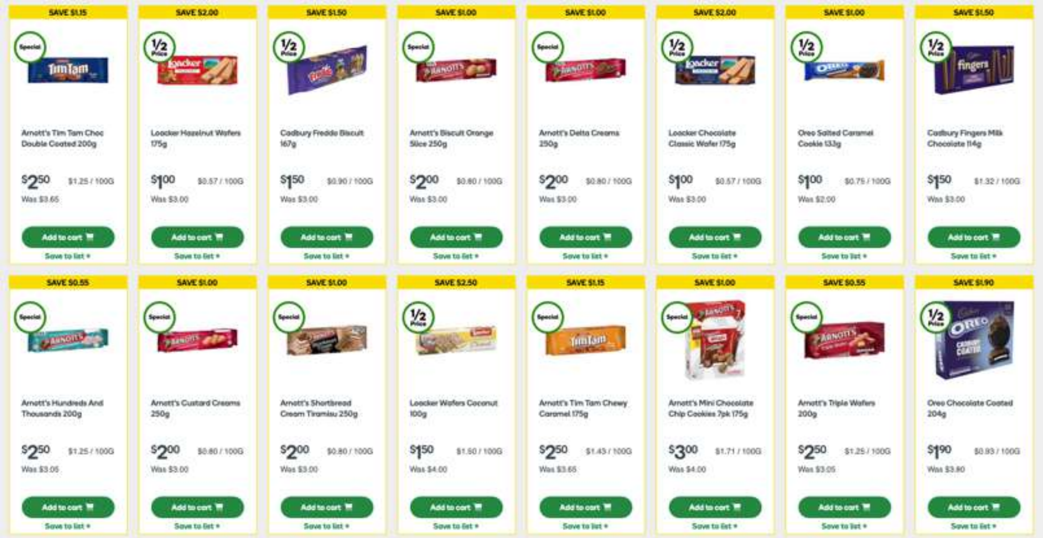


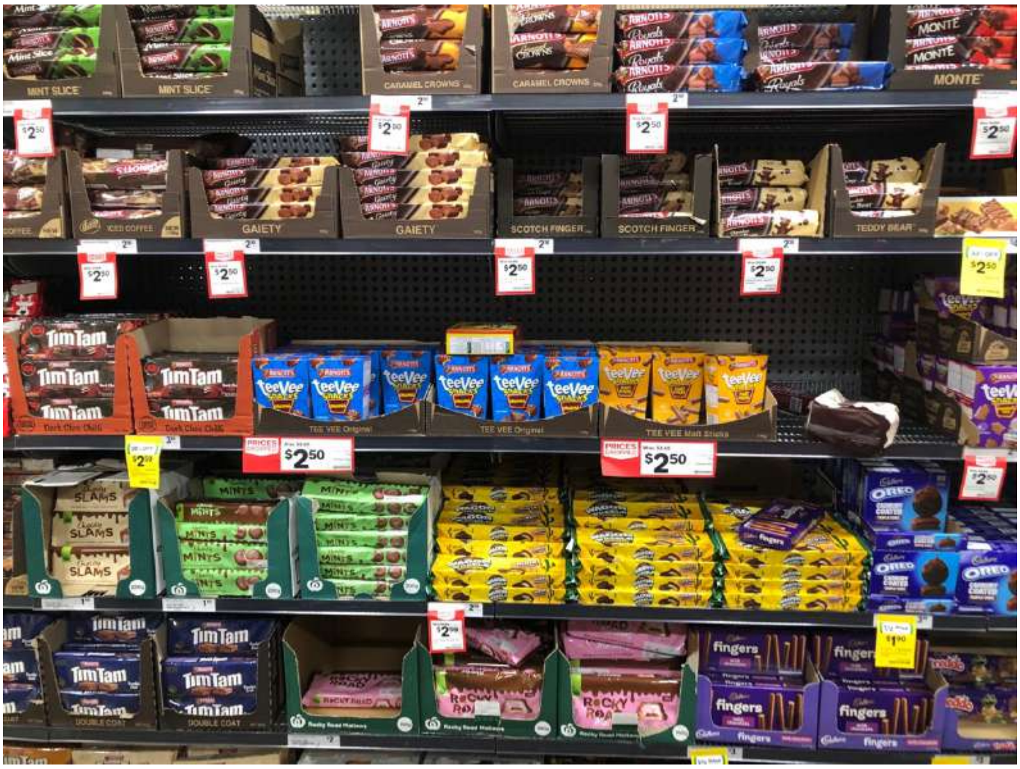
Pictured: Spread, Online; Spread, Shelf



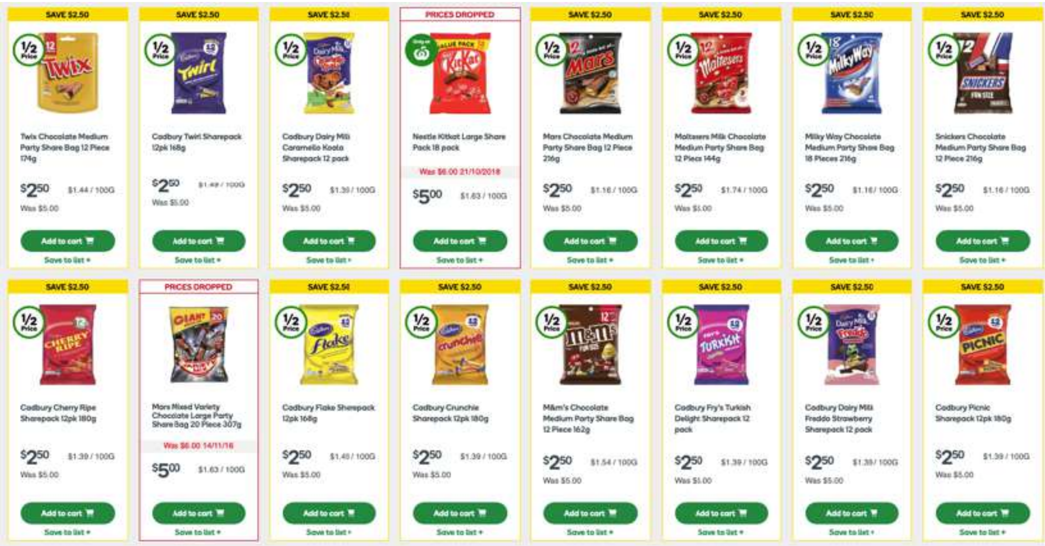



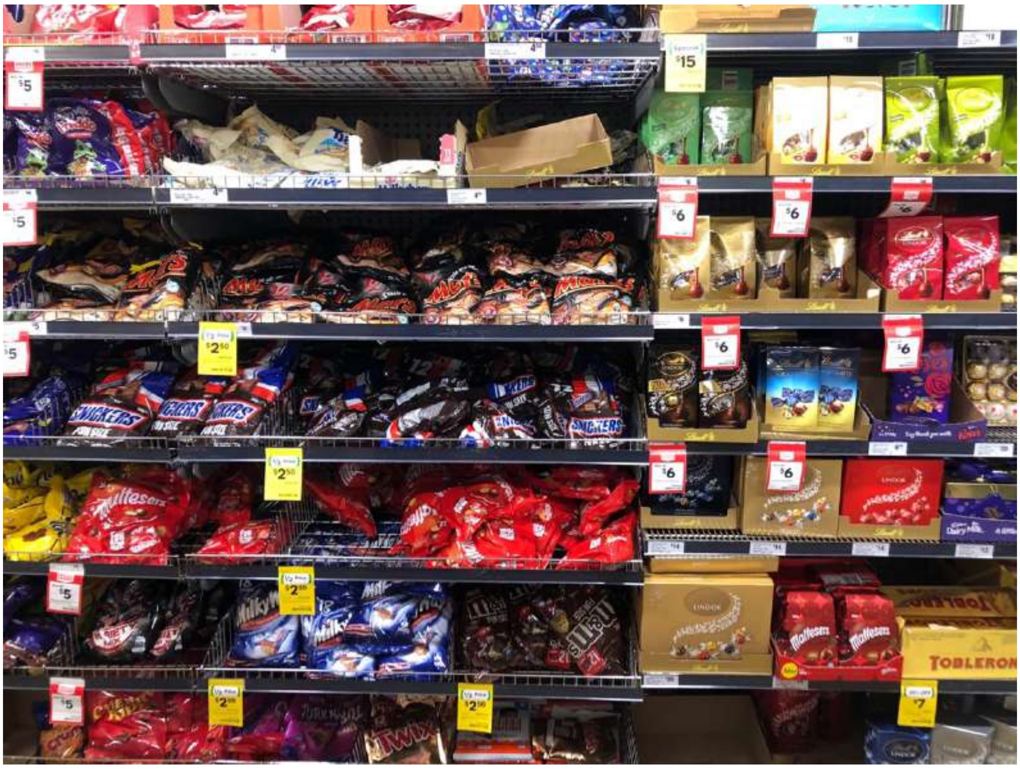

Pictured: Water, Online; Water, Shelf



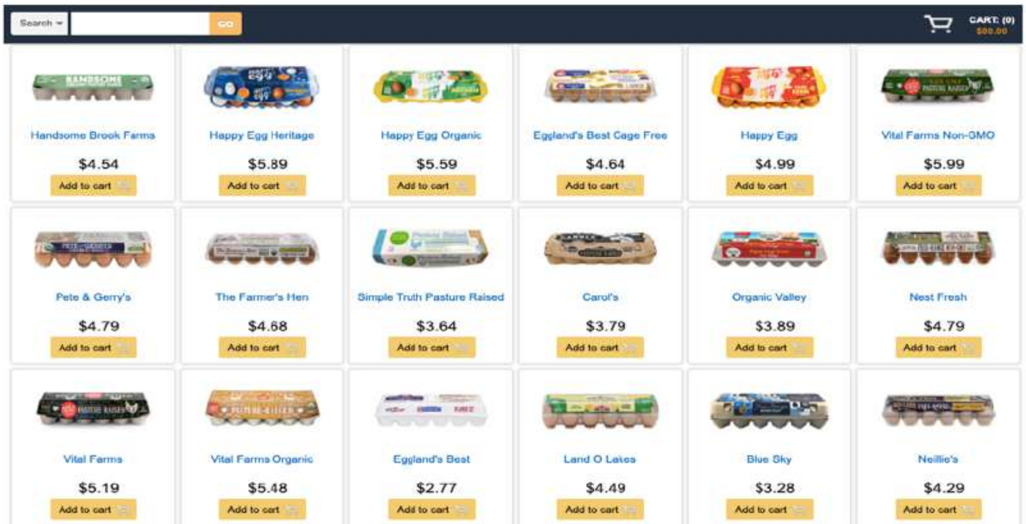

Pictured: Biscuits, Online; Biscuits, Shelf



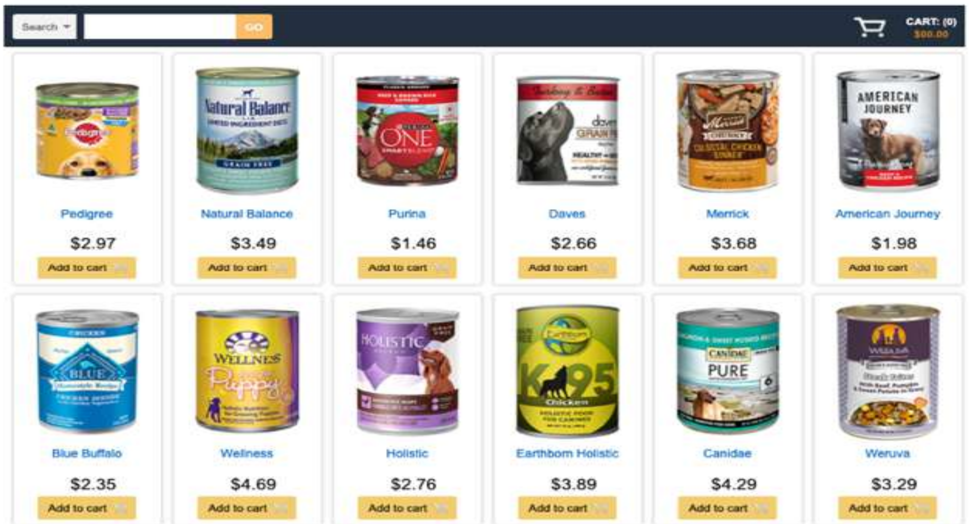



Pictured: Chocolate, Online; Chocolate, Shelf

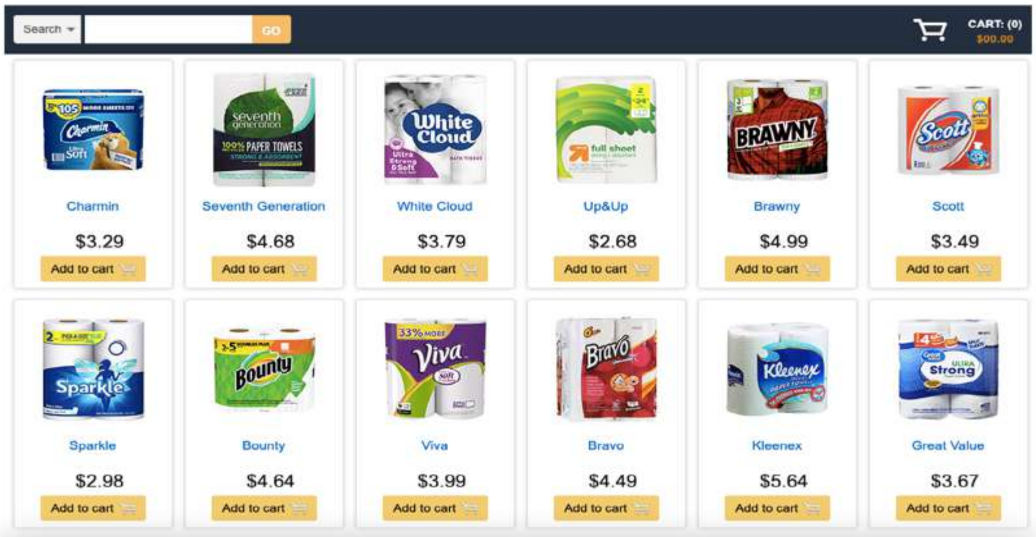
## Figure A2: Shopping Environments used in Study 2, 'Mock-Up Shop', by Product Category




Pictured: Egg, Online; Egg, Shelf




Pictured: Dog Food, Online; Dog Food, Shelf




Pictured: Paper Towel, Online; Paper Towel, Shelf

# Appendix B: Questionnaire Script (Pre-Programming) for Study 1, 'Real Shop'

| PACKAGING PROMINENCE QUESTIONNAIRE |
|---|

Thank you for agreeing to participate in this survey. This survey should take no longer than 15 minutes, and all your responses are kept confidential.

This research is about pack redesigns for consumer-packaged good brands. There are no right or wrong answers; we are just interested in your honest opinions.

Please click the forward arrow to continue.

*By completing and submitting the survey, you will be indicating that you have read and understood the information provided in the Participant Information Sheet and consent to being involved in the research. You can be confident that no one associated with this research project can personally identify you from your answers to the questions.*

*This project has been approved by the University of South Australia's Human Research Ethics Committee. If you have any ethical concerns about the project or questions about your rights as a participant please contact the Executive Officer of this Committee, Tel: +61 8 8302 3118; Email: Vicki.Allen@unisa.edu.au*

**SHOW ALL**

The first questions are about you and are for classification purposes.

**ASK ALL, MR**

| SQ1 Have you purchased from the following categories in the last 6 months?<br>*Please select all that apply.* | CODE |
|---|---|
| Chocolate | 1 |
| Beer | 2 |
| Potato Crisps | 3 |
| Soft Drinks | 4 |
| Water | 5 |
| Breakfast Cereal | 6 |
| Protein Balls | 7 |
| Crackers | 8 |
| Noodles | 9 |
| Protein Milk | 10 |
| Oats | 11 |
| Bread | 12 |
| Tomato Chutney | 13 |
| Cakes/Snacks | 14 |
| Ice Cream | 15 |
| Cider | 16 |
| Salt | 17 |
| Coffee | 18 |
| Confectionary | 19 |
| Have not purchased any of these | 99 |

**ASK ALL, SR [quota 30-50% yes]**

| DEMO1. Have you purchased from an online supermarket in the last 3 months?<br>*Please select one answer* | |
|---|---|
| | CODE |
| Yes | 1 |
| No | 2 |

**ASK ALL, SR [quota 60% female, follow grocer shopper stats]**

| SQ2 Gender Are you…? | CODE |
|---|---|
| Male | 1 |
| Female | 2 |

**ASK ALL, SR**
**TERMINATE IF SQ2AGE = 1 [quota nat rep]**

| SQ3 Age Which of the following age groups do you fall into? | CODE |
|---|---|
| Under 18 years | 1 |
| 18-34 years | 2 |
| 35-54 years | 3 |
| 55-75 years | 4 |
| 76 years or older | 5 |
| Do not want to say | 6 |

**ASK ALL, SR**
**TERMINATE IF SQ4 = 99 [soft quotas for regions]**

| SQ4 Where do you live? | CODE |
|---|---|
| | 1 |
| | 2 |
| | 3 |
| | 4 |
| | 5 |
| | 6 |
| | 7 |
| None of these | 99 |

**SHOW ALL**

On the next screen, you will see some retail layouts for brands in a category. We'd like you to look at the image and click on whatever option immediately stands out/catches your eye.

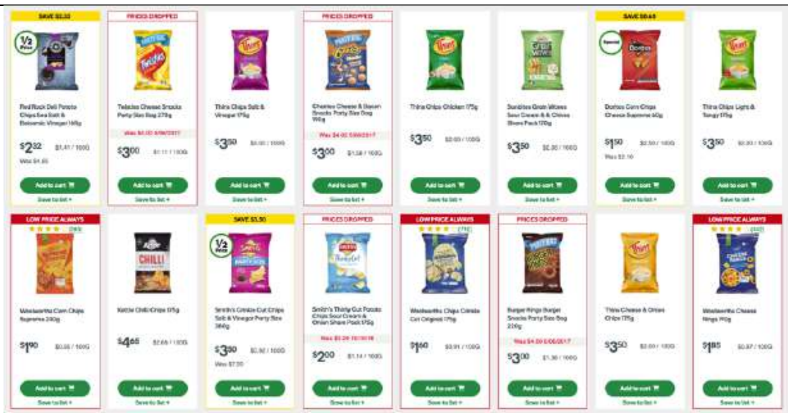
**<PAGE BREAK>**

**Quota (X1) TOTAL SAMPLE N=480 (SHOW ONE QUES DTO1 – DTO8)**

| | QUOTA |
|---|---|
| **DTO1** | (60 respondents) |
| **DTO2** | (60 respondents) |
| **DTO3** | (60 respondents) |
| **DTO4** | (60 respondents) |
| **DTO5** | (60 respondents) |
| **DTO6** | (60 respondents) |
| **DTO7** | (60 respondents) |
| **DTO8** | (60 respondents) |

**DTO1**

| |
|---|
| |



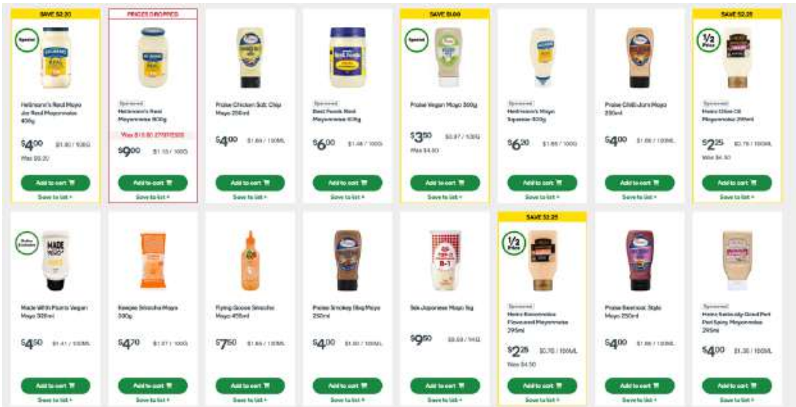
DTO1A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DTO1B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

## DTO2



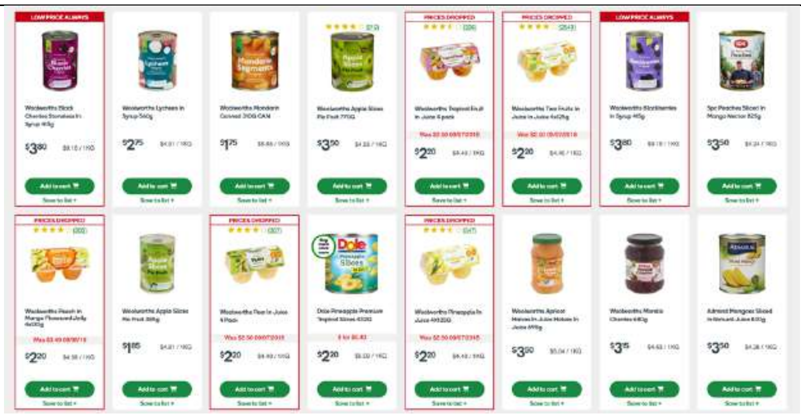
DTO2A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DTO2B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

## DTO3



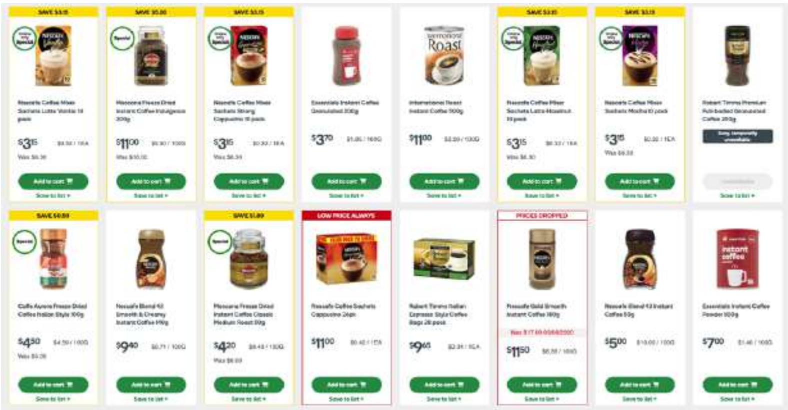
DTO3A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DTO3B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

## DTO4



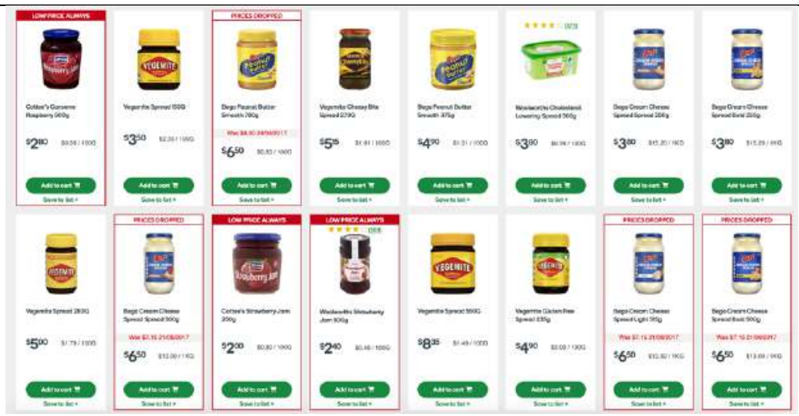
DTO4A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DTO4B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

## DTO5

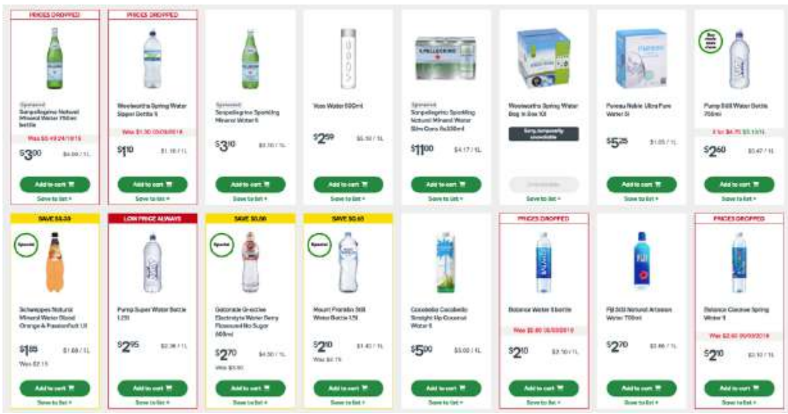


DTO5A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

| **Text Box** |
|---|

| DTO5B. Could you elaborate? Why did that option stand out from the others? *Please type in your answer* |
|---|
| **Text Box** |

**DTO6**

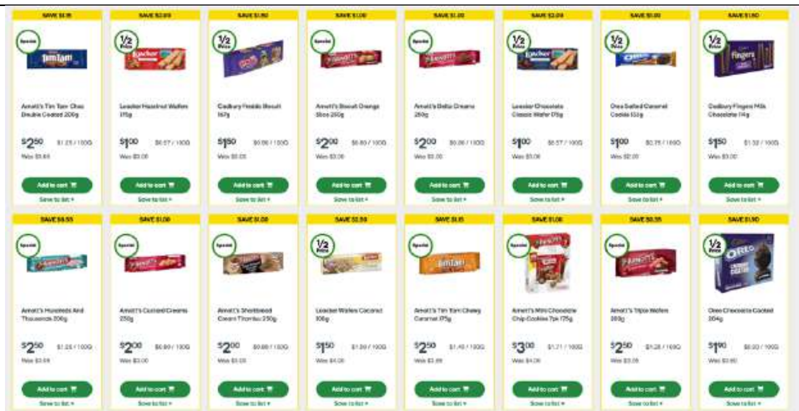


DTO6A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

| **Text Box** |
|---|

| DTO6B. Could you elaborate? Why did that option stand out from the others? *Please type in your answer* |
|---|
| **Text Box** |

**DTO7**

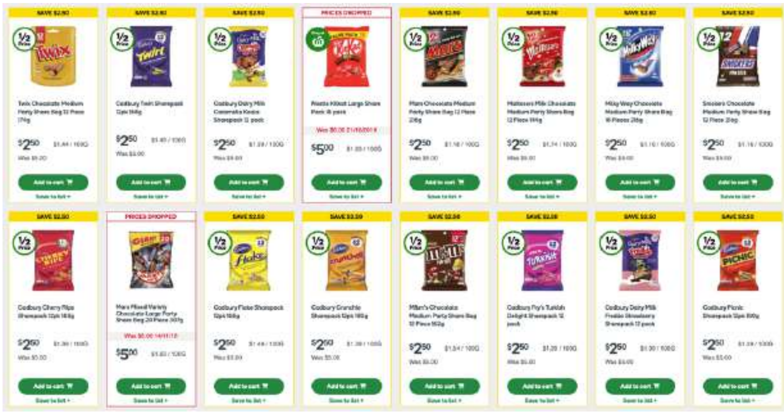


DTO7A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

| **Text Box** |
|---|

| DTO7B. Could you elaborate? Why did that option stand out from the others? *Please type in your answer* |
|---|
| **Text Box** |

**DTO8**



DTO8A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

| **Text Box** |
|---|

| DTO8B. Could you elaborate? Why did that option stand out from the others? *Please type in your answer* |
|---|
| **Text Box** |

**SHOW ALL**

On the next page, you see an image of a supermarket shelf and will be asked questions about what stand out on the shelf, we are after your honest opinions.

**<PAGE BREAK>**

### Quota (DT1) TOTAL SAMPLE N=400 (SHOW ONE QUES DT1 – DT8)

| | QUOTA |
|---|---|
| **DT1** | (60 respondents) |
| **DT2** | (60 respondents) |
| **DT3** | (60 respondents) |
| **DT4** | (60 respondents) |
| **DT5** | (60 respondents) |
| **DT6** | (60 respondents) |
| **DT7** | (60 respondents) |
| **DT8** | (60 respondents) |

### DT1

DT1A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DT1B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

### DT2

DT2A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DT2B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

**DT3**

DT3A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

DT3B. Could you elaborate? Why did that option stand out from the others?
*Please type in your answer*

**Text Box**

**DT4**

DT4A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

| Text Box |
|---|

| DT4B. Could you elaborate? Why did that option stand out from the others?<br>*Please type in your answer* |
|---|
| **Text Box** |

**DT5**

| DT5A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?<br>*Please type in your answer* |
|---|
| **Text Box** |

| DT5B. Could you elaborate? Why did that option stand out from the others?<br>*Please type in your answer* |
|---|
| **Text Box** |

**DT6**

| DT6A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?<br>*Please type in your answer* |
|---|
| **Text Box** |

| DT6B. Could you elaborate? Why did that option stand out from the others?<br>*Please type in your answer* |
|---|
| **Text Box** |

**DT7**

DT7A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

| DT7B. Could you elaborate? Why did that option stand out from the others?<br>*Please type in your answer* |
|---|
| **Text Box** |

**DT8**

DT8A. Please click on the option that immediately stands out/catches your eye. What makes that option stand out?
*Please type in your answer*

**Text Box**

| DT8B. Could you elaborate? Why did that option stand out from the others?<br>*Please type in your answer* |
|---|
| **Text Box** |

**SHOW ALL**

| |
|---|
| We are almost at the end of the survey. All your answers will remain anonymous and confidential. The following questions are about yourself and are for classification purposes only. |

**<PAGE BREAK>**

**ASK ALL, SR**

| DEMO1. Are you the primary shopper in your household?<br>*Please select one answer* | |
|---|---|
| | **CODE** |
| Yes | 1 |
| No | 2 |

**ASK ALL, SR**

| DEMO2. How many people, including yourself, live in your household?<br>*Please select one answer* | |
|---|---|
| | **CODE** |
| One | 1 |
| Two | 2 |
| Three | 3 |
| Four | 4 |
| More than four people | 5 |

**ASK ALL, SR**

| DEMO3. Which of the following best describes your work status?<br>*Please select one answer* | |
|---|---|
| | **CODE** |
| Work full time (30+ hours per week) outside the home | 1 |
| Work part time (Less than 30 hours per week) outside the home | 2 |
| Student | 3 |
| Full time homemaker | 4 |
| Retired | 5 |
| Other | 6 |

**ASK ALL, SR [adapt for UK/USA markets]**

| |
|---|
| DEMO4. Please tell me which of the following categories best represents your total annual personal income?<br>*PLEASE SELECT ONE ANSWER BELOW* |

| | CODE |
|---|---|
| Less than £25,000 | 1 |
| £25,000 to £34,999 | 2 |
| £35,000 to £49,999 | 3 |
| £50,000 to £74,999 | 4 |
| £75,000 to £99,999 | 5 |
| £100,000 or more | 6 |
| Don't know | 7 |
| Prefer not to say | 8 |

**SHOW ALL**

| THANK YOU FOR TAKING THIS SURVEY! |
|---|

# Appendix C: Questionnaire Script (Pre-Programming) for Study 2, 'Mock-Up Shop'

| PACKAGING PROMINENCE QUESTIONNAIRE |
|---|

**INTRODUCTION:**

Thank you for agreeing to participate in this survey. All your responses are kept confidential.

The survey is about your awareness, knowledge, and experiences. There are no right or wrong answers; we are just interested in your experiences and opinions.

The first set of questions are about you, so we can make sure we are speaking to a broad cross-section of the community.

**ASK ALL, SR, NAT REP**

| SQ1Gender Are you…<br>*Please select one response* | **CODE** |
|---|---|
| Male | 1 |
| Female | 2 |

## ASK ALL, SR, NAT REP TERMINATE IF SQ2 = 1, 7 OR 99

| SQ2Age Which of these age categories do you fall into:<br>*Select one response* | CODE |
|---|---|
| Under 18 years | 1 |
| 18-29 years | 2 |
| 30-39 years | 3 |
| 40-49 years | 4 |
| 50-59 years | 5 |
| 60-69 years | 6 |
| 70 years and over | 7 |
| Do not want to say | 99 |

## ASK ALL, (PLEASE ALLOCATE TO CITIES PROPORTIONALLY), TERMINATE IF SQ3LOCATION = 99, SR

| SQ3location Where do you live?<br>*Please select one response* | CODE |
|---|---|
| Atlanta | 1 |
| Baltimore | 2 |
| Boston | 3 |
| Charlotte | 4 |
| Chicago | 5 |
| Cincinnati | 6 |
| Dallas/Ft. Worth | 7 |
| Denver | 8 |
| Detroit | 9 |
| Houston | 10 |
| Indianapolis | 11 |
| Los Angeles | 12 |
| Miami | 13 |
| Nashville | 14 |
| New York City | 15 |
| Orlando | 16 |
| Phoenix | 17 |
| Pittsburgh | 18 |
| Portland | 19 |
| Seattle | 20 |
| Tampa | 21 |
| Washington DC | 22 |
| None of the above | 99 |

## ASK ALL, MR, TERMINATE IF SQ4ALLERGY = 5

| SQ4ALLERGY Do you have any of the following allergies?<br>*Select all that apply* | CODE |
|---|---|
| Celiac disease | 1 |
| Gluten intolerance/allergy | 2 |

| | |
|---|---|
| Lactose intolerance | 3 |
| Peanut allergy | 4 |
| Egg allergy | 5 |
| None of these | 99 |

**ASK ALL, MR, RANDOMISE LIST EXCEPT NONE OF THESE, TERMINATE IF SQ5CATEGORYBUYING ≠ 1, 2,3, 4 or 5**

| SQ5categorybuying Which of the following have you bought in the **last 3 months?** *Select all that apply* | **CODE** |
|---|---|
| Standard Eggs | 1 |
| Free Range Eggs | 2 |
| Cage Free Eggs | 3 |
| Organic Eggs | 4 |
| Pasture Raised Eggs | 5 |
| Eggs for eating from other animals (duck, quail etc) | 6 |
| Whole Milk | 7 |
| Skim Milk | 8 |
| Organic Milk | 9 |
| White bread | 10 |
| Whole grain bread | 11 |
| Gluten free bread | 12 |
| None of these | 99 |

**RANDOMLY ALLOCATE PEOPLE TO ONE OF THREE SAMPLES A, B OR C, N=300 IN EACH SAMPLE**

| **ROUTE ALLOCATION - RANDOMLY ALLOCATE** | **CODE** |
|---|---|
| **SAMPLE A** | **1** |
| **SAMPLE B** | **2** |
| **SAMPLE C** | **3** |

| **ROUTES** | |
|---|---|
| **SAMPLE A** | **Category 1: Shelf (Dog Food); Category 2: Shelf front view: (Egg) Category 3: Online(Paper towel)** |
| **SAMPLE B** | **Category 1: Online (Dog food); Category 2: Shelf side view: (Egg) Category 3: Shelf (Paper towel)** |
| **SAMPLE C** | **Category 1: Shelf (Dog food); Category 2: Online: Category (Egg) 3: Online(Paper towel)** |

| Prominence testing |
|---|

INTRO PAGE SHOW ALL

| |
|---|
| On the next screen you will see some retail layouts for brands in a category. We'd like you to look at the image and click on whatever option immediately stands out/catches your eye. |
| Continue |

SHOW SHELF OPTION, RECORD TIME TAKEN TO MAKE SELECTION

ASK ALL, AFTER CLICKING

| QWHY1: Why did that option stand out from the others?<br>*Please put your response below* | **CODE** |
|---|---|
| OPEN ENDED TEXT BOX 3 LINES DEEP | <OPEN> |

REPEAT FOR ALL THREE TESTS

| Brand Awareness |
|---|

ASK ALL, MR

| QAWARE1: Which of the following paper towel brands have you heard of before today?<br>*Please tick as many responses as appropriate* | **CODE** |
|---|---|
| Bounty | 1 |
| Bravo | 2 |
| Brawny | 3 |
| Charmin | 4 |
| Great Value | 5 |
| Kleenex | 6 |
| Scott | 7 |
| Seventh Generation | 8 |
| Sparkle | 9 |
| Up&Up | 10 |
| Viva | 11 |
| White Cloud | 12 |
| None of these | 99 |

**ASK ALL, MR**

| QAWARE1x1: Which of the following Egg brands have you heard of before today?<br>*Please tick as many responses as appropriate* | CODE |
|---|---|
| Blue Sky | 1 |
| Carol's | 2 |
| Eggland's Best | 3 |
| Great Value Eggs | 4 |
| Handsome Brook Farms | 5 |
| Happy Egg | 6 |
| Land O'Lakes | 7 |
| Lucerne | 8 |
| Nellie's | 9 |
| NestFresh | 10 |
| Organic Valley | 11 |
| Pete & Gerry's | 12 |
| Simple Truth | 13 |
| The Farmer's Hen | 14 |
| Trader Joe's Eggs | 15 |
| Vital Farms | 16 |
| Wholefoods/365 | 17 |
| None of these | 99 |

**ASK ALL, MR**

| QAWARE1x2: Which of the following dog food brands have you heard of before today?<br>*Please tick as many responses as appropriate* | CODE |
|---|---|
| American Journey | 1 |
| Canidae | 2 |
| Dave's | 3 |
| Earthborn Holistic | 4 |
| Holistic Select | 5 |
| Merrick | 6 |
| Natural Balance | 7 |
| Purina | 8 |
| Weruva | 9 |
| Blue Buffalo | 10 |
| Pedigree | 11 |
| Wellness | 12 |
| None of these | 99 |

## Category and brand buying

**ASK ALL, SR, DROPDOWN OF 0 TO 12+ TIMES**

| QCAT1: On how many occasions have you bought the following **in the last 3 months**?<br>*Please tick one response* | CODE |
|---|---|

| | |
|---|---|
| Standard Eggs | <pull down> |
| Free Range Eggs | <pull down> |
| Cage Free Eggs | <pull down> |
| Organic Eggs | <pull down> |
| Pasture Raised Eggs | <pull down> |
| Paper Towels | <pull down> |
| Canned Dog Food | <pull down> |

**ASK ALL QAWARE=1, MR**

| QBRAND1: Which of the following Egg brands have you ever bought? *Please tick as many responses as appropriate* | **CODE** |
|---|---|
| Blue Sky | 1 |
| Carol's | 2 |
| Eggland's Best | 3 |
| Great Value Eggs | 4 |
| Handsome Brook Farms | 5 |
| Happy Egg | 6 |
| Land O'Lakes | 7 |
| Lucerne | 8 |
| Nellie's | 9 |
| NestFresh | 10 |
| Organic Valley | 11 |
| Pete & Gerry's | 12 |
| Simple Truth | 13 |
| The Farmer's Hen | 14 |
| Trader Joe's Eggs | 15 |
| Vital Farms | 16 |
| Wholefoods/365 | 17 |
| None of these | 99 |

**ASK IF QBRAND1 IS NOT 99, IMPORT RESPONSES FROM BRAND1 ONLY, + NONE OF THESE OPTION**

| QBRAND2: Which of the following egg brands have you bought **in the last 3 months**? *Please tick as many responses as appropriate* | **CODE** |
|---|---|
| BRANDS FROM QBRAND1 | |
| None | 99 |

**SHOW BRANDS SELECTED AT QAWARE1 ONLY**
**ASK IF CAT1 PAPER TOWELS >0**

| QBRAND3: Which of the following brands of Paper Towels have you ever bought?<br>*Please tick as many responses as appropriate* | **CODE** |
|---|---|
| Bounty | 1 |
| Bravo | 2 |
| Brawny | 3 |
| Charmin | 4 |
| Great Value | 5 |
| Kleenex | 6 |
| Scott | 7 |
| Seventh Generation | 8 |
| Sparkle | 9 |
| Up&Up | 10 |
| Viva | 11 |
| White Cloud | 12 |
| None of these | 99 |

**ASK IF QBRAND3 IS NOT 99, IMPORT RESPONSES FROM BRAND3 ONLY + NONE OF THESE**

| QBRAND4: Which of the following brands have you bought **in the last 12 months**?<br>*Please tick as many responses as appropriate* | **CODE** |
|---|---|
| BRANDS FROM QBRAND3 | |
| None | 99 |

**SHOW BRANDS SELECTED AT QAWARE1X2 ONLY**
**ASK IF CAT1 DOG FOOD >0**

| QBRAND5: Which of the following brands of Canned Dog Food have you ever bought?<br>*Please tick as many responses as appropriate* | **CODE** |
|---|---|
| American Journey | 1 |
| Canidae | 2 |
| Dave's | 3 |
| Earthborn Holistic | 4 |
| Holistic Select | 5 |
| Merrick | 6 |
| Natural Balance | 7 |
| Purina | 8 |
| Weruva | 9 |
| Blue Buffalo | 10 |
| Pedigree | 11 |
| Wellness | 12 |
| None of these | 99 |

**ASK IF QBRAND5. IS NOT 99, IMPORT RESPONSES FROM BRAND5 ONLY + NONE OF THESE**

| QBRAND6: Which of the following brands have you bought **in the last 3 months**?<br>*Please tick as many responses as appropriate* | **CODE** |
|---|---|
| BRANDS FROM QBRAND5 | |
| None | 99 |

**SHOW CATEGORY IF >0 AT QCAT1**
**ASK ALL, MR EXCEPT DON'T KNOW/CAN'T REMEMBER IS EXCLUSIVE**

| QUSE4: In the last 3 months, where have you bought each category from?<br>*Please select a response* | **Eggs** | **Paper towels** | **Dog food** |
|---|---|---|---|
| Grocery store/supermarket (e.g., Kroger, Publix, Safeway, Albertson's, Giant Foods) | 1 | 1 | 1 |
| Mass merchandiser (e.g., Walmart, Target, Meijer) | 2 | 2 | 2 |
| Club store (e.g., Sam's Club, Costco, BJ's) | 3 | 3 | 3 |
| Convenience/drug store (e.g., Walgreen's, CVS, Duane Reade) | 4 | 4 | 4 |
| Specialty store (e.g., Whole Foods, Sprouts, Trader Joe's, Veterinarian) | 5 | 5 | 5 |
| Online retailer (e.g., Amazon, Walmart.com) | 6 | 6 | 6 |
| Other | 7 | 7 | 7 |
| Have not bought in last 3 months | 99 | 99 | 99 |

**SET RANGE AS 0-99, DO NOT ALLOW RESPONDENTS TO PROCEED IF SUM=0; IF RESPONDENT ANSWER 0 IN ALL, SHOW ERROR MESSAGE ASKING RESPONDENTS TO REVIEW**

| QUSE5: Thinking over the last 3 months, how many times have you shopped in store versus online for your household groceries?<br>*Please enter a number below* | |
|---|---|
| Visited a grocery retailer to select your product yourself | <open> |

| | |
|---|---|
| Went online to select the products to buy and had them delivered | <open> |
| Went online to select the products to buy and went to the store to pick up the already bagged groceries ('click and collect') | <open> |

## Demographics

**We are almost at the end of the survey. All your answers will remain anonymous and confidential. You can be confident that no one associated with this research project can personally identify you from your answers to the questions. The following questions are about yourself and are for classification purposes only.**

**ASK ALL, SR**

| DEMO1. Which of the following best describes your work status?<br><br>*Please select one answer* | **CODE** |
|---|---|
| Work full time (30+ hours per week) | 1 |
| Work part time (Less than 30 hours per week) | 2 |
| Student | 3 |
| Full time homemaker | 4 |
| Retired | 5 |
| Other | 6 |

**ASK ALL, SR**

| DEMO2. How many people, including yourself, live in your household?<br>*Please select one answer* | |
|---|---|
| | **CODE** |
| One | 1 |
| Two | 2 |
| Three | 3 |
| Four | 4 |
| Five | 5 |
| More than five people | 6 |

**ASK IF DEMO2=2-6, SR**

| DEMO3. Do you have any children living with you?<br>*Please select one answer* | |
|---|---|
| | **CODE** |
| Yes | 1 |
| No | 2 |

**ASK IF DEMO3=1, MR**

| DEMO3a. Do you have any children in the following age groups?<br>*Please select all which are appropriate* | |
|---|---|
| | **CODE** |
| 2 years and under | 1 |
| 3 – 11 years | 2 |
| 12 – 17 years | 3 |
| 18 + years | 4 |

**ASK ALL, SR**

| QDEMO5: Please tell me which of the following categories best represents your total annual household income?<br>*Please tick one response* | **CODE** |
|---|---|
| Under $30k | 1 |
| $30k to $59,999 | 2 |
| $60k to $79,999 | 3 |
| $80k to $99,999 | 4 |
| $100k to $149,999 | 5 |
| $150k or more | 6 |
| Don't know | 7 |
| Prefer not to say | 99 |

**THANK AND TERMINATE**

| **THANK YOU FOR TAKING THIS SURVEY** |
|---|

# Appendix D: Brands used in Study 1 and 2

**Table D1: Brands included in Study 1, 'Real Shop'**

| Crisps | Salad Dressing | Canned Fruit | Coffee | Spread | Water | Biscuits | Chocolate |
|---|---|---|---|---|---|---|---|
| Smiths | Praise | Ardmona^ | Nescafe | Vegemite | Mount Franklin | Arnotts | Lindt^ |
| Natural | Thomy^ | Goulburn | International | Bega | Frantelle^ | Cadbury | Cadbury |
| Red rock* | Hellmann's | SPC | Moccona | Dairylea^ | Nu^ | Loacker* | Ferrero |
| Twisties* | Heinz | Golden | Bushells^ | Sanitarium^ | Marble Hill^ | PL^ | Toblerone |
| Kettle* | Best foods* | Dole | Café Aurora | Wowbutter^ | Pureau | | Mars |
| Cheetos* | Ssk* | Admiral* | LavAzza^ | Noya^ | Pump | | Nestle |
| Doritos* | Flying goose* | | Oasis^ | Cottee's* | Alka Power^ | | |
| Sunbites* | Kewpie* | | Robert | | Aqualove^ | | |
| PL | Made With | | PL | | Balance^ | | |
| | | | | | Sanpellegrino* | | |
| | | | | | Schweppes* | | |
| | | | | | Gatorade* | | |
| | | | | | Cocobella* | | |
| | | | | | Voss* | | |

*used online display only, ^used shelf display only

***The brands included in Study 1 were from the Australian market.***

**Table D2: Brands included in Study 2, 'Mock-Up Shop'**

| Egg | Dog Food | Paper Towel |
|---|---|---|
| Eggland's Best | Pedigree | Bounty |
| Land O Lakes | Purina | Great Value |
| Organic Valley | Blue Buffalo | Brawny |
| Simple Truth | Natural Balance | Scott |
| Happy Egg | Merrick | Sparkle |
| Blue Sky | American Journey | Viva |
| Pete & Gerry's | Wellness | Charmin |
| Vital Farms | Dave's | Bravo |
| The Farmer's Hen | Earthborn Holistic | Kleenex |
| Nellie's | Holistic Select | Up&Up |
| Handsome Brook Farms | Canidae | Seventh Generation |
| Carol's | Weruva | White Cloud |
| Nest Fresh | | |

*Sorted by brand penetration %*

***A myriad of US brands, large and small in market share, were included in Study 2.***

# Appendix E: Excel Coding Spreadsheet

**Figure E1: Screenshot of Coding Spreadsheet in Microsoft Excel**

| 1 | RESPID | DTO1A | DTO1B | Colour | Text | Image | Logo | Familiarity | Usage | Marketing/A | Brand/Produ | Design | Price | Position | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 813 | 1/2 price offers | 1/2 price, better value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | 1084 | bright colours and large lettering | because that is what made the products stand o | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 630 | cheetos | the special offer logo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5 | 76 | Cheetos | I dont know, it just catch my eye as soon as I saw | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 6 | 484 | Circled "1/2 Price"; "PRICES DROPPED | The details were highlighted in the ads. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 7 | 462 | colour | bright colour does | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 821 | colour of pack and shape | colour is important as it catches the eye | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 9 | 492 | Colour of the pack the type of letterin | Because that is what catches the potential custo | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 600 | colour, clarity and price | because you requested it | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 11 | 409 | colour, design, size | that's what captures my attention personally | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 12 | 304 | colours | if the colour is bright its going to stand out. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 175 | Colours | Because it's the first you see | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 345 | Colours | Because bright colours stand out | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 137 | colours flavours ingredients | it si what i normally notice | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 16 | 407 | colours font | visual impact | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 245 | colours shapes and images | strong colours and shapes | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 18 | 296 | colours used | I don't understand how to answer | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1015 | colours, size of font, picture | makes me notice it | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 325 | design | looks distinctive | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 21 | 412 | design | na | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 22 | 488 | Discount offers plus the colour and de | Because you asked | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 23 | 292 | dorito | quality | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 24 | 7 | doritos | package | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 25 | 597 | Doritos - lowest price Chilly Kettle ch | price and design | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 26 | 628 | familiar colour | you can tell the branding for doritos and walker | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 78 | good quality packaging, visuals of the | that's how is it for me, I look for all of above whe | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 28 | 313 | Half price is noticeable instantly follo | Because it's the first noticeable thing you see. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 29 | 60 | i think the flavours let it stand out | the flavours stand out look yummy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 30 | 405 | It's the colour scheme that I noticed fi | Because of the question asked of me | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 495 | Its colour | Your eye goes straight to a bright colour | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 342 | Its immediate appeal as well as essenti | It's what makes a big brand durable. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 800 | low prices | i like low prices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 34 | 788 | Nothing. For me, all of this is crap, so | I explained. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 35 | 1030 | Nothing. Apart from colour difference | I did not. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 64 | packaging | because its the first thing you see | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 37 | 1014 | price | because the question asked me to | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 38 | 343 | price drop | because it stands out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 39 | 153 | price dropped | i like reduce price | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 40 | 709 | savings and low price banners | had bright colours | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 41 | 1031 | Special Offers | Because I saw a special offer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 42 | 596 | strong colours simple sensible produc | you asked | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 43 | 370 | the colour | the colour is eye catching | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 397 | The colour | It caught my eye, | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45 | 244 | The colour and design of the packagin | It's what draws you to a product | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Online Shelf +