UNIVERSITY OF STIRLING

Packaging as a marketing tool:

Adolescents' perceptions of branded and plain tobacco packaging

A PhD submitted to the University of Stirling for the Degree of Doctor of Philosophy

By

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Declaration

I declare that this thesis has been composed by myself and that it embodies the results of my own research. It does not contain material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning. Publications resulting from or related to research findings have been acknowledged in the text. For these publications I am the lead, but not sole author. I took the lead in writing these publications with advice from my co-authors who are members of my supervisory team. The publications present the findings from this thesis, for which I led the research design and data analysis. I also conducted the fieldwork for the exploratory focus groups and survey development stage.

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Abstract

Plain packaging first appeared on the UK policy agenda in the Department of Health's 2008 'Consultation on the Future of Tobacco Control'. Since then, plain (or standardised) packaging has been framed through the potential benefit to young people. Within the period of this thesis, plain packaging has been actively debated and draft plain packaging regulations were published in June 2014.

An extended literature review of academic and practitioner marketing literature, internal tobacco company documents and public health packaging research, establishes that the research informing the policy debate, while consistent in its approach and findings, fails to recognise the strategic nature of pack design, the full extent of the influence that branded design can have on consumer responses, and the importance of product design as a marketing tool. This thesis attempts to address these gaps in the plain packaging evidence base. It explores if, and how, adolescents engage with different styles of packaging and product design, whether or not an association between tobacco packaging and adolescent smoking exists, and whether it is possible to observe cognitive, affective and behavioural responses to packaging.

The study uses a sequential exploratory mixed methodology design with two stages of research. First, focus groups were conducted with 15 year olds (n=48) to explore adolescent responses to tobacco packaging and product design. The findings show that adolescents are most appreciative of 'novelty' pack designs. These 'novelty' packs, for instance with innovative structures or distinctive designs and colours, generated positive user imagery and influenced affective feelings among participants. Cigarettes with slim diameters, white tips and decorative designs increased appeal and communicated a weaker tasting and less harmful product. Conversely, a plain pack eliminated positive perceptions and feelings, and exposed tobacco as harmful, dirty and not for young people. The qualitative findings were used to develop measures and hypotheses which were tested in a quantitative survey.

The second stage of research utilised a cross-sectional in-home survey (n=1373) with 11 to 16 year olds. Respondents were asked to rate three different pack styles - 'novelty', 'regular' and 'plain' - on 11 pack ratings items and four pack feelings items. The findings show adolescents hold 'novelty' packaging in higher regard than 'regular' packaging across pack ratings items. There were fewer differences between 'novelty' and 'regular' packaging for the pack feelings items. Plain packaging was consistently rated most negatively across all survey items. Logistic regressions, controlling for factors known to influence youth smoking, showed that susceptibility to smoke was associated with positive appraisal and also receptivity for 'novelty' packaging. There was no association with pack appraisal or receptivity for the plain pack. While susceptibility is not a direct behavioural response it is a reasonable predictor of future tobacco use.

Collectively the findings show that 'novelty' packaging and product design holds greatest appeal for adolescents. Plain packaging limits the opportunity for tobacco companies to communicate with, mislead and influence consumers. Based upon the role of packaging for consumer goods in general, and tobacco in particular, plain packaging would effectively reduce the promotional role of packaging.

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Chapter 1: Background, objectives and thesis overview

1.1 Background

It is now firmly established that children are influenced by different modes of tobacco marketing. Observational and longitudinal studies have consistently demonstrated a robust association between exposure to, and appreciation of, tobacco advertising and promotions and youth smoking (DiFranza et al., 2006; Lovato, Watts & Stead, 2011; National Cancer Institute, 2008). Recently, a similar association has been found with point-of-sale (POS) displays of tobacco products (MacKintosh, Moodie & Hastings, 2012; Paynter & Edwards, 2009; Spanopoulos et al., 2014). This evidence has helped to inform tobacco control policy, resulting in bans on advertising, promotions, sponsorship and the open display of tobacco products at the POS in the UK and elsewhere, to protect young people from the harmful influence of these types of marketing.

Young people, however, continue to be exposed to tobacco packaging and product design - key promotional tools (Carpenter, Wayne, & Connnolly, 2005; Freeman, Chapman, & Rimmer, 2008; Wakefield, Morley, Horan, & Cummings, 2002). Audits of recent trends in tobacco pack design have shown increasingly frequent redesign of packs and rising numbers of novelty packaging, including limited-edition packs and innovative pack shapes, textures and methods of openings (Ford, 2012; Moodie, Angus & Ford 2014; Moodie & Hastings, 2011). Tobacco companies also increasingly offer brand variants which feature alternative cigarette diameters, decorative designs and lengths (Ford, 2012; Moodie & Hastings, 2011). For example, the superslims segment, which features slim packs and very slim cigarettes, is reported to have grown ten times faster than the overall market in the past five years (Mapother, 2011). However, little is known outside the tobacco industry about how consumers respond to novel packaging and product designs.

Tobacco industry analysts describe the cigarette as an increasingly important advertising medium for tobacco companies (Mapother, 2012). New pack developments, particularly those pertaining to new pack structures and technological printing advancements, are described as 'ingenious innovations to keep the cigarette or cigar pack as an effective means, indeed the only means, to market the product' (Glogan, 2013, p. 89), while 'a more playful and easy approach to new designs, shapes and colours means 'young consumers feel more catered for' (Helk, 2006). Tobacco industry documents have revealed the appeal of innovative slim, oval, octagonal and booklet pack shapes to young people (Kotnowski, & Hammond, 2013). Bright pack colours and modifications to the appearance of cigarettes have also been used to communicate with this group (Cook, Wayne, Keithly, & Connolly, 2003; Cummings, Morley, Horan, Steger, & Leavell, 2002; Helk, 2007).

While tobacco companies are careful to name young adults as a key target market (Cummings et al., 2002; Hastings & MacFadyen, 2000; Perry, 1999), designers working alongside tobacco companies have outlined the inevitable knock-on effect of tailoring designs for this audience. In 2007, for instance, an updated black and pink pack design for Camel No 9 was said to have a 'Britney Spears Factor...If you want to attract younger women with your design, it will most likely also appeal to underage girls' (Helk, 2007).

The debate on plain packaging - which involves standardisation of pack size, shape, texture, method of opening, base colour and font - first emerged in the UK within the 2008 'Consultation on the Future of Tobacco Control' (Department of Health, 2008). At that time the UK Government decided not to proceed with plain packaging due to a lack of sufficient evidence on the impact of tobacco packaging (Department of Health, 2010). Terminology around plain packaging has varied over time, and has included generic, homogenous, dissuasive and standardised packaging. The terms plain and standardised are now often used interchangeably within academia and policy, and both terms are used throughout the thesis.

Within the publication of 'Healthy Lives, Healthy People: A Tobacco Control Plan for England' in March 2011, the Government committed to consult on options for reducing the promotional impact of packaging, including plain packaging (Department of Health, 2011). The conclusion of the subsequent 'Consultation on Standardised Packaging of Tobacco Products' in 2012 (Department of Health, 2012) was that the Government would await findings from the plain packaging legislation introduced in Australia before making a final decision. At the time of writing Australia remains the only country to have introduced plain packaging.

In November 2013, the Government announced an independent review, to be led by Sir Cyril Chantler, into the public health evidence on plain packaging. The review findings were to inform a decision on plain packaging by the UK Government. The Chantler review concluded that plain packaging would 'very likely lead to a modest but important reduction over time on the uptake and prevalence of smoking and thus have a positive impact on public health' (Chantler, 2014, p. 6). The Government has since committed to introduce plain packaging. Following an amendment to the Children and Families Bill, the Children and Families Act 2014 provides regulation-making powers for the introduction of plain packaging. Draft regulations for plain packaging and a final short consultation were published on June 26th 2014 (Department of Health, 2014).

The debate on plain packaging has typically focused on the potential benefits to young people (Department of Health, 2012). In England, 27% of 11–15 year-olds have tried smoking (Fuller, 2012). In Scotland, 13% of 15 year olds smoke one or more cigarettes a week (Black, Eunson, Sewel, & Murray, 2011). Experimentation has been shown to result in a loss of autonomy over tobacco use and can quickly lead to nicotine dependence (DiFanza et al., 2002; Gervais, O'Loughlin, Meshefedjian, Bancej, & Tremblay, 2006). Plain packaging studies indirectly conclude that plain packaging is likely to reduce youth smoking uptake (Goldberg et al., 1995; McCool, Webb, Cameron,

& Hoek, 2012). However, there has been no attempt to demonstrate whether an association exists between packaging and youth smoking behaviour.

A systematic review of plain packaging studies has outlined three main benefits of plain packaging (Moodie et al., 2012a). Observational and experimental studies have shown that plain packaging can: reduce the attractiveness of tobacco products (Centre for Health Promotion, 1993; Germain, Wakefield, & Durkin, 2010; Hammond, Dockrell, Arnott, Lee, & McNeill, 2009; Rootman & Flay, 1995), increase the salience of health warnings (Germain et al., 2010; Goldberg et al., 1995; Beede & Lawson, 1992) and reduce false beliefs about the harmfulness of tobacco products (Environics Research Group 2008a; Hammond et al., 2009). Within each of these areas, there is evidence of the benefit for children.

Within existing research there has been an overwhelming focus on cognitive responses to packaging, despite the suggestion that responses occur on three levels: cognitive, affective and behavioural (Bloch, 1995). Little attention has been paid within the public health literature to the impact of packaging on feelings and emotions, which alongside cognitive responses, are thought to influence consumer behaviour. This suggests that the full extent of packaging's potency as a marketing tool has not been recognised by public health.

Concurrent with the debate on plain packaging, provisions have been discussed for placing controls on cigarette appearance. The guidelines on Article 13 of the Framework Convention on Tobacco Control recommend that:

> Individual cigarettes or other tobacco products should carry no advertising or promotion, including design features that make products attractive. (World Health Organisation, 2008a, p. 5)

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To reduce the appeal of cigarettes, the Australian Government introduced partial product standardisation as part of the Tobacco Plain Packaging Act 2011. This prohibits branding on cigarettes (use of brand name and decorative elements), stipulates a maximum cigarette length, and requires cigarettes to be white or white with an imitation cork filter. No restrictions were placed on diameter however. The European Commission proposed a different approach from Australia with the draft Tobacco Products Directive (TPD), announced in December 2012. The draft TPD did not propose a ban on branding on cigarettes but instead a ban on cigarettes less than 7.5mm in diameter, on the basis that:

> Cigarettes with a diameter of less than 7.5mm shall be deemed misleading. (European Commission, 2012, p. 34)

This recommendation would have prohibited the sale of very slim cigarettes, called 'superslims', in the European Union. The European Parliament, however, voted against this recommendation to be included within the final TPD, which became law in May 2014. Despite these moves to restrict the marketing role of cigarettes, the public health focus on cues which influence brand imagery and product beliefs has lain with cigarette packaging design rather than cigarette design. No research to date has examined the impact of different cigarette designs on product attributes such as the perceived attractiveness or level of harm among adolescents.

1.2   Key research objectives

The aim of this thesis is to address the gaps identified in the public health literature which is currently being used to inform policy debates on plain packaging. It attempts to bridge the gap between marketing and public health. The intention is to bring a deeper understanding of whether, and how, tobacco packaging and product design act as a marketing tool, and what effect this has (if any) on adolescents. As the first study to determine whether an association exists between tobacco packaging and future smoking

behaviour, this thesis will help to inform whether there is a need to place controls on branded packaging and cigarette design. The findings will therefore have implications for public health policy and practice.

The research has the following aims. They are articulated via two research objectives and one methodological consideration.

Research objectives

- To explore if, and how, adolescents engage with different styles of packaging and product design.
- To establish whether or not an association between tobacco packaging and adolescent smoking exists.

Methodological consideration

- Is it possible to observe and measure adolescents' cognitive, affective and behavioural responses to tobacco packaging?

1.3 Outline of thesis

The following three chapters of the thesis present the findings from an extended literature review. This was conducted to understand packaging (consumer goods packaging, tobacco packaging and plain packaging) from a marketing, tobacco industry and public health perspective. It places the research in context and allows gaps in current knowledge to be identified.

Chapter 2 examines academic and practitioner marketing literature to explore the role of packaging across consumer products. It explores the development of packaging as a marketing tool (2.2), the importance of packaging as a promotional tool (2.3), the

packaging strategies employed to target segmented consumer groups (2.4), the influence of individual packaging design features (2.5), packaging's relationship with the product (2.6), packaging's role within branding (2.7), and consumers' psychological and behavioural responses to packaging (2.8). The chapter concludes with a summary of findings (2.9). This chapter highlights how packaging is a powerful and sophisticated promotional and communications tool which helps build consumer-brand relationships. It has a close relationship with the product and individual elements of packaging design can influence perceptions such as taste and volume, and also usage and consumption. Packaging strategies such an innovation, special-editions and value target different types of consumers and there is emerging evidence that both cognitive and affective responses to packaging may play an important role in consumer behaviour.

Chapter 3 explores the tobacco industry perspective of packaging. Using internal documents (3.2), it examines the importance of packaging to tobacco companies (3.3), how segmentation analysis and packaging are used to target specific consumer groups (3.4), how pack design impacts on consumer perceptions (3.5), and how cigarette design is used as a marketing tool (3.6). Current developments in tobacco packaging and products are also explored (3.7). The chapter concludes with a summary of findings (3.8). Tobacco packaging is considered an important advertising and promotions tool. Tobacco companies are preoccupied with the segmentation and targeting of young people and the minutiae of packaging is carefully studied to influence consumer perceptions and behaviour. The design of the individual cigarette is also used as a communications and marketing tool. Design operates in a dynamic environment which is constantly evolving bringing novel packs and products through structural innovation and graphic design.

Chapter 4 examines the public health perspective of tobacco packaging. It focuses on the primary research currently being used to inform the policy debate on plain packaging and uses the findings from chapters 2 and 3 to identify gaps in the policy evidence base. It examines how this research was presented in a systematic review prepared for the UK

Department of Health (4.2), whether public health recognises the strategic nature of pack design (4.3), the awareness that packaging influences different types of consumer responses (4.4), and whether there is any recognition that cigarette appearance is also used as a marketing tool by tobacco companies (4.5). The chapter concludes with a summary of findings and the intention to look for qualitative and quantitative evidence to fill these gaps (4.6). There is little research demonstrating the impact of strategic pack design such as value and novelty, there have been few attempts to link the pack with affective or behavioural responses, and the promotional role of cigarette appearance has been largely ignored.

Chapter 5 details the research methodology. Firstly, it outlines how chapters 2 to 4 have informed the overarching aims of the study and highlighted the need for primary research (5.2). It presents the rationale for a mixed methods approach (5.3), the study design (5.4), and some mixed methods considerations (5.5). This is followed by a detailed discussion on how the qualitative (5.6) and quantitative (5.7) methods were selected and their implementation.

Chapter 6 presents the findings from the qualitative stage of research (n=48). It examines how adolescents engage with consumer goods packaging generally (6.2) before moving on to tobacco packaging and then cigarette appearance. It explores tobacco packaging awareness (6.3), the pack's role in youth smoking (6.4), how adolescents respond to novelty and value packaging (6.5, 6.6, 6.7), plain pack perceptions (6.8), whether tobacco packaging impacts on affective responses (6.9), the perceived impact of packaging on behaviour (6.10), and the impact of cigarette appearance on perceptions (6.11). The chapter concludes with a summary of key findings and the development of hypotheses to be tested in the quantitative stage of research (6.12). Pack design had a powerful influence on participants' cognitive perceptions and affective responses. Novelty packaging had the greatest impact, generating positive imagery and softening negative smoking attitudes. Functional, emotional and informational benefits were presented through branded packaging while plain packaging exposed tobacco as harmful

and dirty. Slim and superslim cigarettes were viewed most favourably, communicating weaker tasting and less harmful looking cigarettes.

Chapter 7 presents the findings of the quantitative stage of research (n=1373) and tests the hypotheses developed from the qualitative findings. Firstly it describes the sample profile (7.2), before examining adolescent pack ratings (7.3) and pack feelings (7.4) of three different styles of tobacco packaging: 'regular', 'novelty' and 'plain'. It then presents the results of twelve logistic regression models to examine the impact of packaging awareness, and two composite measures, which measure pack appraisal and receptivity, on adolescents' susceptibility to smoke (7.5). It then concludes with a summary of key findings (7.6). Impacts are evident on cognitive, affective and behavioural responses. The research demonstrates a link for the first time between future smoking intent and tobacco pack awareness, positive pack appraisal and pack receptivity.

Finally, Chapter 8 presents conclusions and a discussion. In summary, plain packaging would limit the opportunity for tobacco companies to communicate with, mislead and influence young people. It would effectively reduce the promotional role of packaging which uses strategies such as novelty to target young people. The chapter brings together the findings from the qualitative and quantitative stages of research and discusses these findings in relation to previous studies (8.2). It outlines the study limitations (8.3) and considers the implications for theory (8.4), future research (8.5) and public health policy and practice (8.6).

Chapter 2: Understanding packaging as a marketing tool for consumer products

2.1 Introduction

This chapter presents the findings of a literature review exploring the role packaging has for consumer products. Looking across consumer goods packaging allows for a deeper understanding of how packaging works as a marketing tool, rather than being constrained by the availability and type of research conducted by or on behalf of tobacco companies (an industry focused perspective of tobacco packaging is presented in Chapter 3). It also provides a frame of reference within which a critique of the public health literature being used to inform policy debates on plain tobacco packaging can be undertaken (Chapter 4). The findings of this chapter, along with chapters 3 and 4, have enabled gaps in the policy evidence base to be established and have informed the design of this study (Chapter 5).

This chapter will explore the development of packaging as a marketing tool (2.2), the importance of packaging as a promotional tool (2.3), the packaging strategies employed to target segmented consumer groups (2.4), the influence of individual packaging design features (2.5), packaging's relationship with the product (2.6), packaging's role within branding (2.7), and consumer's psychological and behavioural responses to packaging (2.8). The chapter will then conclude with a summary of findings (2.9).

Packaging is a powerful and sophisticated promotional and communications tool which helps build consumer-brand relationships as the consumer is surrounded by, lives with and interacts with packaging. It has a close relationship with the product and individual elements of packaging design, such as colour, shape and size, can influence consumer product perceptions such as taste and volume, and also usage and consumption. Packaging strategies such an innovation, special-editions and value target different types

of consumers and there is emerging evidence that both cognitive and affective responses to packaging may play an important role in consumer behaviour.

2.1.1 Methods

The aim of this literature review was to assess whether packaging is regarded as an important marketing tool by marketing practitioners and academics alike, and to explore the role packaging plays for consumer products generally. Literature was identified through searching electronic databases and research gateways. Boolean search terms were developed which related to the focus of the review: 'marketing and pack*' and 'brand* and pack*'. This search strategy was run in Business Source Premier - a business, management and economics journals database; Emerald - a marketing and management journals database; The World Advertising Research Centre (WARC) - a practitioner database providing articles on advertising, marketing, brands and campaigns; and Google Scholar. Reference lists of full text papers were also checked to identify further relevant papers not identified through electronic searching. Key authors were also searched for separately.

The databases were initially searched in January and February 2010. No limit on the time period covered was put on this first search in order to understand how packaging had developed as a marketing tool over time. The searches were then rerun in March 2014 to search for publications arising in the intervening period.

The search strategy gave access to a range of published and unpublished literature which related to packaging theory, research and practice. All these categories were deemed important to the aims of the review and were eligible for inclusion. Other inclusion criteria were that papers had to be English language and related to consumer products rather than services. International literature was included as companies utilising packaging, branding and marketing strategies often operate on a global level.

Search results were then screened by title and abstract to assess their relevance and full text versions of relevant papers were located. For the purposes of this literature review, to understand packaging as a marketing tool, the traditional hierarchy of evidence was considered not relevant (Aveyard, 2010). Greatest weight was given to primary consumer packaging research. Studies with experimental and qualitative designs therefore comprise the main body of the literature review. However, this is supplemented with theory and practice literature to gain a fuller understanding. No papers were excluded as a result of quality appraisal. Papers were summarised to establish emerging themes, which evolved and developed as more papers were examined. Grouping papers together by theme then allowed studies within themes to be compared and contrasted. The final themes formed the basis of the literature review and are presented below.

Figure 2.1: Dissemination of Chapter 2 findings

The findings of this chapter are published in *Addiction Research and Theory* (Ford, Moodie, & Hastings, 2012).

At a time when plain tobacco packaging was regaining momentum as a potential tobacco control measure, this article aimed to bring a deeper understanding of how packaging works as a marketing tool for consumer products to public health.

2.2 Packaging: A brief history

In the 1920s, concomitant with the development of post-World War I consumerism, packaging first emerged as a strategic marketing tool. At this time, packaging design was beginning to be included in a strategic approach to develop new products to meet new levels of consumer demand (Klimchuk & Krasovec, 2006). By the 1930s advertising agencies were providing packaging services, which although initially concerned with the technical practicalities of packaging such as manufacturing, printing, labelling and shipping, soon encompassed the aesthetic appeal of packaging and associated psychological values. The etymology of packaging as the 'silent salesman', a term used frequently in the debate on plain tobacco packaging, can be traced back to the

late 1940s, coinciding with the growth of self-service stores and the marked change in how consumer products were sold. It was during this time that products began to come pre-packaged, in self-service shops, rather than being weighed and packaged by a shopkeeper (Hise & McNeal, 1988). With increasing competition it became clear that the key to product marketing was having quickly identifiable brands. Typographical advancements and the continued development of industrial processes in the 1960s meant that more sophisticated graphics, materials and structures could be incorporated into packaging design. These developments made it easier for the pack to communicate brand and product qualities and also develop brand image, which was increasingly being recognised as helping to sell the product. It was also during this period that market segmentation became a greater consideration for packaging, and by the 1970s packaging was a well-defined marketing tool.

2.3   Packaging as promotion

At each of three levels - primary, secondary and tertiary - packaging is designed to contain, protect, dispense, transport and store the product; to have functional appeal for consumers and businesses. Primary packaging is the product's primary container and is in direct contact with the product. Secondary packaging contains the primary packaging and tends to be discarded once the product is used. The tertiary packaging contains the previous two packaging types and helps to distribute the product (Ampuero & Vila, 2006; Kotler, Wong, Saunders, & Armstrong, 2005). This is demonstrated using the examples of a toothpaste tube as primary packaging, the cardboard box containing the tube as secondary packaging, and the shipping package as tertiary packaging (Kotler et al., 2005).

However, the true scope of packaging is much broader than this functional role. Through its promotional role, it also attracts attention to the product, identifies the product, communicates messages about product attributes, projects brand values and differentiates the product from its competitors (Klimchuk & Krasovec, 2006; Silayoi &

Speece, 2004). Packaging does this aesthetically, to appeal to consumers of varying demographics and social characteristics (Klimchuk & Krasovec, 2006). A change in emphasis, from function and protection to the promotional potential of packaging, is illustrated by rising expenditure on packaging. In the United States 14 billion US dollars was spent on packaging in 1981, rising to 31 billion US dollars in 1997 (Chaneta, 2010). This increase in investment in packaging mirrors the increasing importance of packaging design to consumers, who are frequently described as 'design literate' (Metcalf, Hess, Danes, & Singh, 2012), demanding aesthetic packaging even for commodity products such as milk (Hollywood, Wells, Armstrong, & Farley, 2013). Packaging is in a cycle of continual evolution, with redesigns considered a frequent necessity in the modern marketplace (Hall & Doyle, 2012).

Yet traditionally, in both the management and academic literature, advertising was considered key to marketing and promotion, in particular, the return on investment and impact on brand values (Prone, 1993). It was in the later decades of the twentieth century, as packaging design was being established as a discipline, that writers started to acknowledge the growing importance of packaging. Firstly, this shift came from marketing practitioners (Howe, 1978; Nickels & Jolson, 1976; Selame, 1985; Short, 1974) and latterly by academics (Reimann, Zaichkowsky, Neuhaus, Bender, & Weber, 2010; Underwood & Ozanne, 1998; Underwood, 2003). For instance, in the late 1970s Howe pointed out:

> Recently I've read and heard of a trend away from paid media advertising... if advertising budgets are decreased, well-planned and well-designed packaging will be able to sell the product from the shelf. (Howe, 1978, p. 32)

This move away from advertising and towards packaging can be understood for two main reasons. Firstly, increasingly fragmented media channels make it more difficult to reach large audiences with advertising, although this is not so for packaging. Secondly, in comparison to advertising, packaging is better positioned to strengthen brand values

(Cramphorn, 2001) and influence brand perceptions (Hofmeyr & Rice, 2000). Prone (1993) describes how packaging redesign alone for US brand Rice-A-Roni increased sales by 20% within one year, and argues that packaging design can yield a higher return on investment than not only advertising, but all forms of marketing. In recognition of this, it has been suggested that packaging should be the fifth 'p' of the marketing mix model as it is the only element of the marketing mix intertwined with all of the other 'p's (product development, pricing, placement and distribution, promotion), and it plays a key role in all of these strategic marketing areas (Hawkes, 2010; Nickels & Jolson, 1976; Short, 1974). Indeed, highlighting the importance attached to packaging, it is positioned as a standalone marketing mix element, the fifth 'p', for British American Tobacco (British American Tobacco, 2009).

For those who criticise and reject the traditional 4 'p's marketing management paradigm and instead favour relationship marketing (Constantinides, 2006; Grönroos, 1994), packaging is viewed as equally important, if not more so, as it is regarded as one of the building blocks to successful consumer relationships. Fournier (1998) explains that consumer-brand relationships are valid at the consumer's *lived* experience of consumer goods. Packaging plays a key role in building these relationships due to the feelings and experiences arising from possession and usage (Underwood, 2003). For example, from a very young age children build relationships with branded breakfast cereals, not from advertising exposure, but from their interaction with packaging at breakfast and snack times (McNeal & Ji, 2003). Interaction with packaging generates functional and symbolic meaning for consumers, and is related to brand and self-identity (Underwood, 2003).

Both these schools of thought, therefore, highlight the multifaceted nature of packaging. Packaging also has the advantage of being able to influence consumers both within, and outside, the retail environment. At a transactional level packaging attracts attention on the shelf, aids in product differentiation and positioning, conveys messages about product attributes and is a source of competitive advantage (Möller, 2006). This makes

packaging one of the most important factors influencing consumer purchase decisions made at the point-of-purchase (Silayoi & Speece, 2004), described as the 'first moment of truth' for packaging (Löfgren, 2005, p. 102). The increasingly sophisticated displays of tobacco found at point-of-purchase, which showcase evocatively coloured and carefully designed tobacco packages, suggests that tobacco companies are cognisant of the significance of this first moment of truth. The additional key advantage of packaging, however, is its ability to influence usage and consumption after purchase, or at the 'second moment of truth' (Löfgren, 2005, p. 102). 'Winning' at the second moment of truth is crucial for consumer repurchase and longer term engagement with the brand. This is the stage when the functional benefits and usability of packaging are realised, and also the psycho-social benefits in terms of identity and image which arise from symbolic consumption (see section 2.7). Increasingly, packaging design efforts are becoming tactical to optimise opportunities at both point-of-purchase and post-purchase (Roper & Parker, 2006). Common strategies to promote the product, distinguish products from competitors, and communicate brand imagery and values include innovative design, special editions, value options and green packaging.

2.4 Packaging strategies

2.4.1 Innovation packaging

Jugger (2002) argues that the best way to obtain competitive advantage in an overloaded consumer goods market is through innovation in packaging. Innovative packaging is thought to change product perceptions and create new market positions (Rundh, 2005), and represents a shift in focus from graphic design towards the structural design of packaging (van den Berg-Weitzel & van de Laar, 2006). Innovation can arise due to a real concern for safety, for example, childproof packaging for pharmaceuticals or tamper resistant food packaging (Armstrong & Kotler, 2005), or from the development of new materials and processes. Plastics, in particular, provide continuing opportunities for new packaging forms (Klimchuk & Krasovec, 2006). However, the primary driver for

innovative packaging is usually to increase sales via brand promotion. For instance, the energy drink No Fear Extreme Energy, which is packaged in a re-sealable can, was an immediate success and achieved a 524% growth between November 2010 and January 2011 (Convenience Store, 2011a).

As an example of successful pack innovation for a tobacco product, tobacco company Gallaher attributed a substantial rise in sales (46.5%) for Benson and Hedges Silver in 2006 to an innovative side opening sliding pack (The Grocer, 2007). Other recent examples of innovation in tobacco packaging include new pack shapes, such as slim 'perfume' packs, new seal technology for roll your own (RYO) tobacco (Walker, 2009), and also textured packaging, such as the Silk Cut 'touch' pack (Off Licence News, 2010a) (see section 3.7 for an overview of recent developments in tobacco packaging). Going beyond the visual appearance of packaging, tactility is a creative way of adding to the sensory experience of products (Bloch, 1995). Touch can be an important source of information for consumers and there has been a recent growth in tactile branding and marketing (Spence & Gallace, 2011; Yazdanparest & Spears, 2013). Tactile designs which enhance the feel of products and packaging have an important role to play in product evaluation. It is suggested that tactile stimulation contributes to a perception of a product's hedonic attributes, which can then bias perceptions of product quality or pleasantness (Spence & Gallace, 2011). Within the alcohol category, Heineken cans now feature sensory elements such as embossments, strategically placed indents and tactile ink (Collenette, 2010). Another sensory ingredient being developed, this time within can manufacturing, is smell. One European packaging company has developed an 'aroma-can', which includes aroma molecules on the can surface. When activated, the molecules release an aroma for the drinker. The aroma-can could be used, for example, to include a chocolate aroma in a coffee or milk drink (Goldstein, 2010).

2.4.2 Special edition packaging

Increasingly, special edition packaging, usually available only for a limited time, is being used to engage consumers with brands (Roper & Parker, 2006). Events such as brand anniversaries, special public occasions and seasonality provide marketers with opportunities to develop new edition packaging which can help reinforce a brand's heritage, or spark or maintain interest in the brand. Linking special or limited edition packaging with such events is not compulsory however. For example, Procter and Gamble collaborated with a fashion designer to create limited edition packaging for its Olay Complete Care Touch of Foundation range, simply to generate attention (Forrester, 2010). Within the UK alone, no less than 18 limited edition packs were released in a two year period, between December 2008 and 2010, for cigarettes, RYO tobacco and cigars. Often available with multiple designs in a set, these editions are a yearly occurrence for certain brands, with recurring themes such as Sovereign's 2009 'Cityscapes' (Collenette, 2009) and 2010 'City Lights' (Off Licence News, 2010b). Special editions can hold particular appeal for those who value exclusivity and rarity, and have the ability to turn items into collectables (Hampshire & Stephenson, 2007). A number of design agency directors have highlighted the potency of special or limited edition packaging, which can increase the number and speed of sales, and also have a lasting impact on brand perceptions once they have sold out (Elliot 2010; Neuber, 2009).

2.4.3 Value packaging

Packaging can also be used to communicate value to consumers. Price marked packs (PMPs), increasingly being offered in convenience stores, are a promotional strategy which sends out a clear value for money signal. In a survey conducted at the point-of-purchase, 48% of shoppers said that PMPs encouraged them to purchase their chosen product (Chittock, 2011). The food company Baxters announced their introduction of year round PMPs for their products due to research showing that sales of products within PMPs are 66% higher than sales of products within standard packaging (Talking Retail,

2011). As an example of the successful use of PMPs for tobacco products, market share for cigarette brand Sterling increased from 5.0% to 6.1% within four months following a PMP promotion (The Grocer, 2009). The reason for this appears to be that many consumers believe that PMPs indicate a special promotional price, even when the price shown is the recommended retail price, because of the style and prominence of the message (Mustoe Merriman Herring & Levy, 1996). PMP's are also used to encourage consumers to buy different sized packs. Almost one quarter of the increase in sales for a PMP comes from other pack sizes of the same brand (Dawes, 2012).

2.4.4 Green packaging

In line with growing societal concerns about environmental issues, consumer goods companies are increasingly adopting green marketing strategies (Armstrong & Kotler, 2005). While true green marketing should be a holistic strategy involving all facets of a company, it is more common to find compartmentalised green activities (Peattie & Crane, 2005), with packaging often the starting point for companies (Baht, 1993). Options available to increase the sustainability of packaging include paying attention to the environmental impact made by the production of packaging materials and material sources, reducing or eliminating the use of harmful chemicals within packaging, reducing the number of packaging levels, supporting the recycling industry by using reclaimed or secondary materials, reusing packaging by refilling the product, and ensuring that the combination of materials used in packaging are recyclable (Peattie & Charter, 1999). Indeed 'reduce, reuse, recycle' is often a mantra for governmental bodies, environmental interest groups and consumer goods companies. Efforts within the drinks industry towards greener packaging include lighter, material saving containers. Coca-cola (2010), for instance, report reductions in the thickness of their aluminium cans, an innovation they claim is to be adopted by the drinks industry. A trend within tobacco is to use materials from sustainable forests. Lucky Strike cigarette packs and Rizla rolling papers are now certified by responsible forest management assurance schemes, and have the scheme logo clearly marked on their packaging (Walker, 2009,

2010). Thus packaging becomes an opportunity for both demonstrating and communicating responsible activities. Above all else, it can provide access to new market opportunities (Peattie & Charter, 1999) and have positive results for brand credibility and reputation (Waste and Resources Action Programme, 2010).

2.4.5 Packaging strategies target specific consumer groups: Segmentation

These packaging strategies enable marketers to align brands with target groups of consumers. Brand values are inferred from packaging design and this has an impact on purchase intent, particularly when brand values are congruent with personal values (Limon, Kahle & Orth, 2009). As personal values stem from membership of cultural and peer groups, careful attention is paid to which values are important to the target group (de Chernatony, 2006). For example, tobacco industry documents show clear segmentation with regards to age, gender and social class (Lowe Howard Spink, 1997; Wakefield et al., 2002) (see section 3.4 for further details). The values of such groups are monitored to allow packaging strategies to fit in with any changes. For instance, value packaging becomes more prominent in times of economic pressure, when PMPs are perceived favourably as they represent a 'positive modern virtue – value'. (Lowe Howard Spink, 1996, p. 3)

In respect to innovative and special edition packaging, they are more likely to appeal to individuals who place greater significance on the visual aesthetics of design, something Bloch, Brunel and Arnold (2003) term the 'centrality of visual product aesthetics' (CVPA). Those individuals with a high CVPA are more aware of design aesthetics, and this innate sense of design has been shown to have a strong effect on the perceived attractiveness of packaging, brand choice and purchase intent (Orth, Campana, & Malkewitz, 2010). And in respect to green packaging, while traditionally this would have only held appeal for the 'ethically sensitive', increasing environmental concern suggests that it is becoming the most important product attribute for 'ordinary' consumers (Rokka & Uusitalo, 2008).

While traditionally, pack designs were tested among different types of consumers at the final stage of design, ever-more sophisticated techniques in packaging design research aim to optimise the appeal for consumers. Involving consumers early on in the design process, and getting them to play a central role in the creation of design prototypes, has been found to improve the targeting of specific consumer groups (Gofman, Moskowitz, & Mets, 2010). These prototypes are tested to find the optimal solution both from a segmented and individual basis. Attention is also paid to consumers' experiences during or post-product use. As the perceived quality of packaging which arises during usage is an important aspect of brand evaluation and future purchase intent (Löfgren, 2005), engaging consumers at this stage of the pack's life cycle means consumer goods companies can use the feedback to improve the usage experience, build brand loyalty and increase repurchase (Metcalf et al., 2012).

Effective packaging thus aligns itself with consumer values and needs. Concern over unhealthy eating and childhood obesity has led to growing academic interest in how food packaging targets children. Research shows that packaging affects the food preferences of children, who then try to influence parental purchase of unhealthy foods (Ogba & Johnson, 2010). Increasing use of fruit cues, both on packaging and brand names, often mislead parents and children about the fruit content of products by signalling a healthy message and tapping into parental concern for a healthy diet (Maher, 2012). Marketing industry awards also highlight how packaging is used to exploit knowledge about teenage behaviours. Hungry Jack's, a fast food outlet in Australia, based a new offering on the insight that teenagers are both cash-savvy and used to sharing with friends. A new product with a larger pack size was developed which offered teenagers increased value when shared among a bigger group (Alvarez, 2012). In Asia, the brand Vitasoy, which produces soya-based beverages, engaged with teenagers through special edition packs carrying messages similar to status updates found on Facebook, a medium popular with young people (Wong, 2011).

These examples illustrate that the Hungry Jack's and Vitasoy brands utilised packaging to target teenagers, providing a vehicle through which teenagers could express themselves and establish self and group identities through consumption. Packaging, therefore, has the potential to increase product sales by tailoring its design to consumer aspirations, uncertainties and preferences. On a psychological level, growing academic attention has been paid to how the use of visual design factors, or 'peripheral cues' (Wansink & van Ittersum, 2003), such as colour, shape and size of packaging, can have inherent meaning for consumers (Bottomly & Doyle, 2006) and also affect their perceptions, brand impressions, and purchase and consumption behaviour.

2.5   The influence of packaging design features

2.5.1   Colour

Colour psychology has shown that people attach meanings and emotionally respond to colour, with colour associations shared among people from similar geographical and cultural backgrounds (Madden, Hewett, & Roth, 2000; Meyers & Lubliner, 2006). Additionally, some colour meanings are cross cultural, for example, blue, green and white are associated with 'good', 'gentleness' and 'calm', while black and red are strong, active and potent colours (Adams & Osgood, 1973; Meyers & Lubliner, 2006). Brown, a colour often associated with plain tobacco packaging, has been associated with 'sad' and 'stale' across countries (Madden et al., 2000).

Because of its universal effect, packaging designers consider colour to be the most influential aspect of packaging design (Klimchuk & Krasovec, 2006; Meyers & Lubliner, 2006). A key element of brand identity (Keller, 2008), colour can break through the overload of competing products and information at the point-of-purchase (Garber, Burke, & Jones, 2000). There is an element of colour congruity among consumer products packaging and colour is routinely used to differentiate product categories, flavours and brand families, and to connote a mood such as fun, elegance and

playfulness (Figure 2.2). Over time consumers have learnt which colours are appropriate for product categories, invoking expectations about the product (Grossman & Wisenbilt, 1999; Kauppinen-Räisänen & Luomala, 2010), and have become so accustomed to the use of packaging colour that their responses to colour cues are automatic (Meyers & Lubliner, 2006). For example, smokers erroneously associate lightly coloured packages with reduced harm (Hammond et al., 2009). While this can make it difficult to market new products that do not conform to the norm, novel use of packaging colour can be advantageous in enhancing interest among consumers who are not loyal to particular brands (Garber et al., 2000). It is also possible that acceptable use of packaging colour can change over time. For example, green used to be an unacceptable colour for food packaging, but is now a commonly used colour to represent health-oriented products (Meyers & Lubliner, 2006).

Figure 2.2: Colour associations of consumer goods packaging

Packaging colour	Associations
Bright colours	Lightness, festivity, relaxation, joy Often used on cereal packages - cereals are consumed in the morning, a time of day associated with brightness
White or light colours	Food product attributes such as diet, light, salt-free and low calorie White on pharmaceutical packaging suggests efficacy of prescription drugs
Deep rich colours	Good taste, warmth, appetite appeal Often found on gourmet food packaging
Grey and black	Communicate 'high-tech' nature of electronic products
Dark colours	A more serious frame of mind
Pastel colours/ Black and gold	Fashion and elegance
Metallic colours	Upscale and high quality, especially in cosmetics, gourmet food and luxury products.

Source: Adapted from Meyers, H. M., & Lubliner, M. J. (1998). *The marketer's guide to successful packaging design*. Lincolnwood: NTC, pp. 16-17.

Packaging colour is also used to portray brand imagery (Madden et al., 2000), gender suitability (Sara, 1990) and, in the case of tobacco, product strength (Hammond et al., 2009; Moodie, Ford, MacKintosh, & Hastings, 2012b).

2.5.2 Graphics

Graphic design of packaging, which includes image layout, colour combinations and typography (Silayoi & Speece, 2007), has been shown to affect consumer preferences, recall of messages and brand and product evaluations. Fonts have been described as a 'medium with their own message' (Henderson, Giese, & Cote, 2004, p. 7) and can influence consumers' perceptions of the brand's personality. Personality dimensions such as excitement, sincerity, sophistication, competence and ruggedness have been found to be enhanced by selecting appropriate font characteristics (Grohmann, Giese, & Parkman, 2013). The positioning of messages placed on the package can influence consumer attention and recall of those messages. This is enhanced by placing verbal stimuli on the right side of the package, and visual stimuli on the left, something attributed to the laterality of the brain and how different types of stimuli are processed (Rettie & Brewer, 2000). Furthermore to ensure messages are observed, eye-tracking studies have found that they should be placed in the same area of the package. On-pack messages in different locations pull the consumer in different directions when viewing the package so not all messages are observed. This has potential implications for tobacco packaging where health warnings may have to compete with stimuli placed elsewhere on the package. Placing a picture of the product on the pack has also been shown to positively affect beliefs about product attributes such as taste and healthiness (Underwood & Klein, 2002).

2.5.3 Shape

Packaging shape has been found to result in strong volume perception biases among consumers. For instance, elongated bottles are believed to contain more product than shorter bottles with the same capacity. This leads to misjudgements on how much consumers believe they have consumed and also affects the level of consumer satisfaction (Raghubir & Krishna, 1999). Lower quantities are also purchased when the product is available in an elongated container even when price, actual volume,

promotion and desired consumption level are held constant (Yang & Raghubir, 2005). Consumers have been found to have rectangular preferences in the context of consumer products with different side ratios, which have an impact on consumer purchase intentions and product perceptions (Raghubir & Greenleaf, 2006).

Product and symbolic values are also thought to be inferred from package shape and form (Creusen & Schoormans, 2005; van den Berg-Weitzel & van de Laar, 2006). Van den berg-Weitzel and van de Laar highlight that packaging design of whisky bottles, which tend to be angular in shape, with heavy, course, thick and broad forms, represent masculinity and robustness. On a similar note the Silk Cut Superslims cigarette pack communicates femininity, elegance and slimness through its tall and thin pack shape (Moodie & Ford, 2011). Furthermore, growing evidence demonstrates a correspondence between package shape and sensory attributes - taste, aroma, flavour - of the product, something termed 'shape symbolism' (Spence, 2012). Similar to sound symbolism, where consumers subconsciously infer product attributes from phonetic sounds within brand names, specifically the position and use of vowels (Klink, 2000; Yorkston & Menon, 2004), the shape of the package can likewise set up sensory expectations for consumers.

2.5.4 Size

Package size has been shown to have an impact on consumption behaviour (Wansink, 1996; Wansink & Park, 2001). In a study with different packaging sizes for spaghetti and oil, Wansink (1996) found consumers to use more of the product when it was presented to them in a larger package. This is explained in part by the consumer being less concerned of running out of the product. In another study, it was found that even when the product, in this case popcorn, was deemed unfavourable in taste, 53% more product was consumed from the larger container, suggesting the dominance of size over product quality on consumption (Wansink & Park, 2001). This has important implications for the larger tobacco pack sizes on offer, such as the increasing availability

of 50g, rather than 25g, RYO tobacco packs (Off Licence News, 2010c), and may have repercussions for tobacco consumption as an investigation into the typical daily consumption of smokers suggests that smokers regulate their consumption in accordance with the packs sizes available to them (Farrell, Fry, & Harris, 2011). Additionally, package size suggests consumption norms by implying what is a normal or appropriate amount, with larger sizes suggesting larger consumption norms (Wansink, 2004). Offering products in different pack sizes, an additional value strategy, can also impact upon purchase behaviour. Consumers typically believe unit costs vary depending on package size, with a lower price per unit in larger packages (Wansink, 1996), and even small changes in packaging size can result in increased sales and profits (Raghubir & Greenleaf, 2006). In terms of product attributes, size has been shown to affect perceptions of product healthiness, with products consumed from a small package perceived as healthier than the same product from a large one (Wansink & Park, 2001). This applies to tobacco products as well, with young adult female smokers perceiving a small, narrow perfume type pack as being healthier than other larger packs containing the same quantity of cigarettes (Moodie & Ford, 2011).

2.5.5 Holistic package design

While the research previously mentioned offers useful insights into understanding the effects of individual packaging design elements, in the context of real life consumer products, pack colour, graphics, shape or size do not appear in isolation. It has been argued that packaging design should always be viewed holistically, with greater value in examining the combination of design elements and how they generate product and brand impressions (Orth & Malkewitz, 2008). Examining individual elements of packaging is thought to take a fragmented approach, ignoring the 'visual equity', the value derived from the overall visual form which encompasses the look and feel of the brand (Lightfoot & Gerstman, 1998). This viewpoint is in line with Gestalt psychology where the whole is greater than the sum of its parts. It is the mix of the various packaging

elements, the congruence between them, and how they are evaluated as a whole, which achieves richer sensory effect for the brand:

> The overall effect of the package comes not from any individual element but from the gestalt of all elements working together as a holistic design. (Orth & Malkewitz, 2008, p. 64)

For example, Coca-Cola achieves strong brand identification and communicates the brand's image through a combination of its bottle design elements:

> ...the fluted surface with parallel vertical grooves, the hourglass shape, the greenish-hued glass, and the iconic Spencerian script spelling 'Coca-Cola' on the face of the bottle. (Orth & Malkewitz, 2008, p. 64)

And in terms of product attributes, this viewpoint suggests that these too are inferred by the combination of design features. For example, it is the combination of parchment-type labels, ornate château images, and flourish-rich typography which communicates high quality wine, whereas bottles with bold fonts and eye-catching colours infer a low price (Orth et al., 2010). However, packaging is not only a product related cue from which product attributes can be inferred, but also an inherent part of the product (Hawkes, 2010).

2.6 Packaging as product

While packaging is widely considered product related (Underwood, 2003) there is some debate within the academic literature on its exact relationship with the product. Product attributes, such as quality, can be inferred by two types of product related cues: intrinsic or extrinsic cues (Olson & Jacoby, 1972; Zeithaml, 1988). The previously determined notion was that packaging is an extrinsic product cue and not part of the physical product itself. It is *outside* the product, as is price and brand name. By comparison,

intrinsic cues are part of the product. They are consumed as the product is consumed - for example the colour or flavour of a drink - and these intrinsic cues can't be changed without changing the nature of the product itself (Zeithaml, 1998). However, Hawkes (2010) argues that as the package contains the message of the product, changes to packaging, through regulation for example, could equate to changing the essence of a product. This gives some credence to the idea that packaging may be an intrinsic product cue which, when changed, can alter the nature of the product. In support of this, children between three and five years old were found to prefer the taste of McDonald's food and drink when packaged in the brand's regular packaging rather than plain white packaging (Robinson, Borzekowski, Matheson, & Kraemer, 2007). Similarly, Allison and Uhl (1964) found that beer drinkers could discern no taste differences between different brands of beer presented in plain brown bottles, yet when the same bottles displayed branded labels, overall taste ratings improved significantly. Just as changing the packaging for food and alcohol products by removing all branding has been found to alter taste perceptions, the removal of branding from tobacco packaging has been found to do likewise (Moodie, MacKintosh, Hastings, & Ford, 2011). That all these studies show an impact on product attributes from a change in packaging demonstrates a closer link between pack and product than previously thought.

2.7   Packaging as branding

While packaging has a close relationship with the product, for Keller its most important role is in developing brand meaning. Keller argues that packaging does not facilitate product performance, but instead contributes to brand associations and is an important element of the brand which constitutes it identity (Keller, 2008). When consumers think of brands they often automatically associate packaging with the brand (Cramphorn, 2001; Keller, 2008). Packaging is what consumers tend to know best about the brand and this familiarity can be reassuring for them (Cramphorn, 2001). For example, the red and white can is a common association with Campbells soup (Meyers & Lubliner, 1998) and the green bottle with Heineken beer (Keller, 2008). Indeed Schlackman and Chittenden

(1986) argue that packaging design features such as colour or shape can be more important than brand name for identification. Children as young as two years old can identify and hold preferences about brands from names, logos and packaging, particularly when these include bright colours, pictures or characters (Robinson et al., 2007).

De Chernatony (2006) explains that brands are complex offerings that are conceived in managerial brand plans, but ultimately reside in consumers' minds. Brand owners attempt to control the essence of a brand through placing it in a certain context, for example, the type of retail outlet (Roper & Parker, 2006), designing the visual elements of the brand to deliver a certain message and convey meaning (Orth & Malkewitz, 2008), and having well defined brand values and personality (Aaker, 1997). However, once in the marketplace, brands are based on consumers' own interpretations of all these things. The concept of brand imagery in particular is a consumer-centred approach which concerns all the associations that consumers connect with the brand (Batra & Homer, 2004). It is defined as:

> ...the set of associations perceived by an individual over time, as a result of direct or indirect experience of a brand. These may be associations with functional qualities, or with individual people or events. (de Chernatony, 2006, p. 46)

Brand image beliefs are formed from exposure to many facets of the brand, for example, the users associated with the product, employees, chief executive, product related attributes, product category associations, brand name, logo, price and distribution channels. While the focus tends to be on how advertisement message and style helps to form brand image beliefs (Batra & Homer, 2004), there is strong evidence to show that packaging, and specifically tobacco packaging, can and does generate brand image beliefs (Beede, Lawson, & Shepherd, 1990), discussed further in section 3.4.1.

Marketing theory has suggested for several decades that a brand includes symbolic meanings (Levy, 1959) which link people's self-concepts, such as their aspirations, attributes and values, to products (Grubb & Grathwohl, 1967). Through purchase and consumption, consumers use the meanings inherent within brands to create an identity that they wish to project to others (Belk, 1988; Bunton & Burrows, 1994). This is often an 'ideal self' consumers aspire to and may be different from their 'real self' (Mälar, Krohmer, Hoyer, & Nyffenegger, 2011). This is the cornerstone of relationship branding. As consumers start to incorporate the symbolic meaning of brands in their 'selves', and these brands become associated with pleasurable feelings and experiences, this generates a bond between the consumer and brand (Fournier, 1998; Reimann, Castano, Zaichkowsky, & Bechara, 2012). Young people in particular are thought especially vulnerable to this 'symbolic consumption'.

Consumers have been found to attach conceptual and symbolic meanings to brands, particularly those meanings associated with ownership of certain products and brands, such as status, prestige and trendiness, from 11 or 12 years of age (Achenreiner & John, 2003). Smoking is a prominent example of how the conspicuous consumption of tobacco products can help build social relations and communicate an acceptable identity during adolescence (Amos & Bostock, 2007; Amos, Gray, Currie, & Elton, 1997; Wiltshire, Amos, Haw, & McNeill, 2005). Packaging plays a key role within this as young people have been shown to place great importance on the symbolic properties of cigarette brands communicated through pack design (Scheffels, 2008). In this instance the brand packaging is used as a cue for young people to define themselves. That tobacco marketing documents from the UK have gone as far as to say that the packaging is the brand, provides insight into how valuable packaging is viewed for tobacco products (Colquhoun Associates, 1996).

2.8   The influence of packaging on cognition, affect and behaviour

This chapter has established that packaging can influence behaviour, for example, consumption can be influenced through package size. Yet while it is known that packaging can and does influence purchase decisions – purchase being arguably the most important behavioural response to marketing investment for many marketers (McCreanor, Barnes, Gregory, Kaiwai, & Borell, 2005) – only a handful of academics have considered *how* packaging influences behavioural responses. An influential paper by Bloch (1995) proposed a conceptual model of how product form relates to consumers' psychological and behavioural responses. Bloch (1995) describes behavioural responses to design as either approach or avoidance. Approach behaviours include being drawn to a product, spending time looking at or touching a product and purchase. Post-purchase approach behaviours can include careful product maintenance, frequently displaying the product and showing the product to others. Conversely, avoidance behaviours would include little attention being paid to the product, putting the product out of sight, and no willingness to purchase (Bloch, 1995). Here, a wide definition of the term 'product' is used, applying it to any good or service that has been purposely designed with a combination of elements to achieve a particular sensory effect. It is generally accepted within the academic packaging literature that the design of a package can fit this model (Ghoshal, Boatwright, & Cagan, 2011; Reimann et al., 2010; Underwood &, Orzanne, 1998).

Bloch's model of consumer responses suggests a linear process (Figure 2.3). Behavioural responses to design are influenced by the psychological responses elicited by the product form. Negative psychological responses tend to result in avoidance behaviours and positive responses in approach behaviours. An example of the impact on purchase behaviour from a negative psychological response to a new package design can be demonstrated with the case of Tropicana orange juice. When a new pack design was introduced in January 2009 in the United States, sales for Tropicana decreased by 20% in a three month period (Lee, Gao, & Brown, 2010). The design was changed so much

that consumers could not recognise the package on the shelf and a redesign back to the earlier packaging swiftly occurred. This lack of recognition was an unfavourable cognitive response to the new package design.

Bloch (1995) proposes that psychological responses to product form include both cognitive and affective elements. Cognitive responses include product-related beliefs, such as price, functionality and gender appropriateness, and also categorisation, where consumers try to understand a product by placing it in an existing product category. It is likely that the new Tropicana packaging was incongruent with consumer expectation for orange juice packaging, and the appropriate categorisation did not occur, resulting in lack of purchase. Affective responses to product form can include positive responses such as liking, or stronger and deeper aesthetic responses similar to how people respond to art. Furthermore, it is suggested that products can elicit feeling and emotion in consumers, and that this occurs from design and sensory product properties rather than functional attributes (Bloch, 1995; Holbrook & Zirlin, 1985).

Within advertising it is recognised that consumer responses have both cognitive and affective elements. Cognitive elements of advertising include consumer judgements of the advert, for example, whether it is found 'humorous', 'for me', 'worth remembering' or 'informative' (Edell & Burke, 1987, p. 425). This is similar to the cognitive role of forming product-related beliefs from a product form (Bloch, 1995). Affective elements of advertising are the feelings experienced during exposure to the advert, such as 'disgusted', 'amused', and 'proud' (Edell & Burke, 1987, p. 424). Advertising research, therefore, has made a clear distinction between evaluations and judgements of advertising and the feelings elicited from advertising (Batra & Ray, 1986) – although it is likely that these processes interact and occur simultaneously (Cohen, 1990). It has been suggested that the feelings resulting from ads are so important they should be included in models of advertising effects (Burke & Edell, 1989), and within the literature, feelings are thought to have a more important role in consumer behaviour than previously thought (Zajonc, 1980).

Figure 2.3: A model of consumer responses to product form

DESIGN GOALS and CONSTRAINTS	
Performance	Ergonomic	Production/cost
Regulatory/legal	Marketing program	Designer

PRODUCT FORM

Moderating Influences

PSYCHOLOGICAL RESPONSES TO PRODUCT FORM

COGNITIVE RESPONSES
- Product beliefs
- Categorisation

AFFECTIVE RESPONSES
- Positive responses
- Negative responses

BEHAVIOURAL RESPONSES
approach   avoidance

INDIVIDUAL TASTES and PREFERENCES

SITUATIONAL FACTORS
- Sequence effects
- Social setting
- Marketing program

Moderating Influences

INNATE DESIGN PREFERENCES

CULTURAL and SOCIAL CONTEXT

CONSUMER CHARACTERTISTICS
Design acumen Experience Personality

Source: Bloch, P. H. (1995). Seeking the ideal form: Product design and consumer responses. *Journal of Marketing, 59*, 16-29.

More recently, the distinction between affective and cognitive responses to packaging design has been examined (Ghoshal et al., 2011; Reimann et al., 2010). While the importance of affect in advertising has now been well-researched, affect, specifically in packaging, has been largely ignored. This is despite the recognition that packaging is a form of advertising and a powerful communications tool and that 'a person may have cognitive and affective involvement with any type of communication' (Celuch & Slama, 1998, p. 116). Reimann et al. (2010) demonstrate that consumers can have a substantial emotional response to aesthetic packaging design, and that this affective involvement explains the emotions, moods and feelings strongly associated with aesthetic design. Similarly, Ghoshal et al. (2011) found that both positive cognition and affect are evoked by aesthetically appealing packaging and that this influences product satisfaction. While this type of research is still in its infancy, it does suggest that affect may be an important psychological response to packaging design, and along with cognitive responses (judgements and evaluations of packaging), it could provide further understanding of how packaging influences consumer behaviour.

2.9   Conclusion

This chapter has illustrated that packaging is a powerful marketing and communications tool across product categories. Packaging strategies such as innovation, special edition, value and green packaging align packaging with target groups of consumers. Design elements such as colour, shape and size, whether viewed individually or holistically, influence consumers' product perceptions, to such an extent that the pack can be viewed as an intrinsic product cue. Through usage and consumption packaging plays a key role in building consumer-brand relationships, with young people considered especially susceptible to the symbolic meanings inherent within brand packaging. There is also emerging evidence that affective responses to packaging, such as emotion and feeling, may play a role in consumer behaviour alongside cognitive responses, such as evaluation and judgement. That there is good evidence of these effects across product categories

suggests that packaging may work equally well for tobacco, perhaps even more so as tobacco transcends culture and is a global epidemic.

Chapter 3 will examine, in depth, how packaging works specifically for tobacco products, how important it is for tobacco companies, and whether it is used as a means to influence consumers and potential consumers.

Chapter 3: Tobacco packaging. An industry perspective

3.1 Introduction

The previous chapter examined academic and practitioner marketing literature and established that packaging, across product categories, is a powerful and sophisticated marketing tool. Packaging has a close relationship with the product, communicates the brand to the consumer and helps build consumer-brand relationships. Individual elements of packaging design, such as colour, shape and size, can influence consumer perceptions such as taste and volume, and also usage and consumption behaviour. There is also emerging evidence that packaging can influence consumers' affective responses - emotions and feelings - as well as cognitive responses.

This chapter will examine how packaging works for tobacco products. Using analysis of internal tobacco industry documents (3.2), it will explore how important packaging is to tobacco companies (3.3), how segmentation analysis and packaging are used to target specific consumer groups (3.4) and how the design of the pack impacts on consumer perceptions (3.5). Given the similarities in how pack and product design work to influence consumers, this chapter also examines whether or not cigarette appearance is used as a marketing tool (3.6). While tobacco documents provide a snapshot of a particular timeframe, current developments in tobacco packaging and products are then explored (3.7). Finally, the chapter will conclude with a summary of findings (3.8).

Tobacco packaging is an advertising and promotions tool, one that is equally, if not more so, important to tobacco companies because of restrictions on traditional advertising such as billboards and television, and sponsorship. Tobacco companies are particularly concerned with the segmentation and targeting of young people and the minutiae of packaging is carefully studied to achieve the best possible outcomes in terms of consumer perceptions and behaviour. Similar to the pack, the design of the individual cigarette is also used as a communications and marketing tool. Packaging operates in a

dynamic environment which is constantly evolving, bringing new novel packs and products through structural innovation and graphic design.

3.2 Tobacco industry documents

Tobacco industry documents originally intended only for internal use have been made publicly available through litigation and settlement agreements in the United States and Canada. As a result, millions of documents from the global tobacco companies have been released since the 1990s, including research reports, strategy documents and memoranda, both from tobacco companies and commissioned outside agencies. Documents are housed in searchable electronic archival databases on websites maintained by individual tobacco companies or the tobacco control community (MacKenzie, Collin, & Lee, 2003). Since their release, systematic search methods have been employed to identify documents relating to tobacco marketing. Searching by key terms (Kotnowski & Hammond, 2013; Wakefield et al., 2002), snowball sampling (Carpenter et al., 2005), or 'request for production' codes, which relate to specific litigation goals (Cummings et al., 2002), all provide a means of relevant subject access. While there is evidence of documents being destroyed, concealed or withheld (Liberman, 2002; Muggli, LeGresley, & Hurt, 2004), in particular those relating to youth marketing (Cummings et al., 2002), they nevertheless shed light on how the industry operates, and their significance to current public health policy is widely noted (Bero, 2003; Carpenter et al., 2005; Hirschhorn, 2002; MacKenzie et al., 2003).

There are a number of comprehensive reviews of documents relating to packaging design (DiFranza, Clark, & Pollay, 2002; Kotnowski & Hammond, 2013; Wakefield et al., 2002). Wider searches on tobacco marketing activity have also provided greater understanding of the importance attached to packaging (Bero, 2003; Carpenter et al., 2005; Cummings et al., 2002; Hastings & MacFadyen, 2000; Pollay & Dewhirst, 2002; Wen et al., 2005). Identifying these reviews was an essential first step in understanding tobacco companies' perspectives of packaging. They are particularly helpful as

thousands of documents relating to tobacco marketing - dating from 1951 to 2002 - have been systematically retrieved and analysed to provide evidence for public health policy. For the purposes of this chapter, the reviews were identified using search terms in the databases, PubMed, PsychINFO, Emerald and Business Source Premier, in addition to Google Scholar. The search terms were: tobacco, internal, company, documents, marketing and pack. Databases were initially searched in July and August 2010 and then again in March 2014. The searches covered the time period from January 1998 (to coincide with the release of internal tobacco company documents through the Master Settlement Agreement) to March 2014. Results were screened by title and abstract to assess their relevance. At this stage relevant papers were retrieved in full text. Further papers were then identified by checking reference lists and separate searches were performed by key author and publication title.

These document reviews primarily contain information from the US and Canada. They have also largely been undertaken and published for a tobacco control audience. It was deemed important, therefore, to supplement this information with data from a UK set of internal marketing documents, housed at www.tobaccopapers.com. This not only provided a new UK perspective, it enabled the findings of the published tobacco company document reviews, alongside the UK documents, to be analysed in line with the marketing perspective of packaging, established in Chapter 2.

Tobaccopapers.com

As part of an investigation into UK tobacco industry practices in 2000, the House of Commons Health Select Committee obtained private documents from the leading five advertising agencies which conducted business with UK tobacco companies from 1994 to 1999. Documents from CDP, M&C Saatchi, Mustoe Merriman Herring and Levy, TBWA GCT Simon Palmer Limited and Lowe Howard-Spink were obtained. The documents represent the tobacco work of the advertising agencies and also contracted marketing consultants and market research companies. In total, tobaccopapers.com houses 665 scanned original documents. The archive was searched using the Boolean

search term 'pack*', which enabled 445 documents to be retrieved. A preliminary look at the first 100 documents identified that the documents could initially be broadly coded using themes established in Chapter 2: packaging as a marketing tool; packaging's role within branding; consumer segmentation; and the impact of packaging design features. Analysis proceeded through the development of a coding framework, based on these themes. The nature of the scanned documents in www.tobaccopapers.com meant that they could not be imported into NVivo - a qualitative analysis software package – for coding. Instead, a Microsoft Word document was created for each theme. Relevant sections of scanned documents were copied and pasted into the word documents, along with relevant summaries of the previously published US reviews. The tobacco documents were systematically examined in order of retrieval until it was felt that all relevant information related to packaging had been exhausted. This led to the first 50% of the documents being fully analysed plus a random sample of 10% of the remaining documents. In total 245 documents were fully examined. All information relating to packaging was extracted and coded into the themes outlined above. While the principle idea of the four themes did not change they were in no way viewed as static and each theme gave way to numerous subthemes, which were continuously evaluated and modified through an iterative process. The coded themes were then used as the categories for analysis and were compared and contrasted with the findings from the US document reviews already published.

Figure 3.1: Dissemination of Chapter 3 findings

Extracts from this chapter were published in a Cancer Research UK funded report on tobacco packaging (Ford, 2012). This report was published to coincide with the timing of the 2012 consultation on plain packaging (Department of Health, 2012). It was launched in Parliament at an expert briefing and an executive summary of the report was sent to all MPs, with the full report given to key decision makers in government and parliament.

The findings of the report have been an important part of our [CRUK] briefing on the packaging issue that has gone to all MPs, the media and supporters. (R Hewings, Tobacco control policy manager, personal communication, August 29, 2012)

3.3 The importance of packaging to tobacco companies

3.3.1 Packaging research and investment

The pack is king. (CDP, 1996a, p. 17)

The pack is the hero, and is shown to have tremendous value. (CDP, 1998a, p. 18)

Pack is reason enough to want to try. (Leading Edge Consultancy, 1997, p. 22)

The quotes above, extracted from www.tobaccopapers.com, support the US document analyses which consistently conclude that tobacco companies view packaging as an important marketing tool. Substantial investment in packaging design research has been evident from as early as the 1950s (Wakefield et al., 2002). Research links the pack to consumer behaviour through brand choice. Sophisticated and thorough market research techniques are employed including focus groups, market surveys and use of tachistochopes to measure eye-movements (Pollay 2007; Wakefield et al. 2002). The packaging design process from initial concept through to consumer pack testing is both complex and time-consuming with apparently small pack design elements critically examined along with the psychological dynamics of consumers (Cummings et al., 2002; DiFranza et al., 2002). As a result tobacco companies carefully align brands and packaging designs with segmented groups of consumers, particularly young consumers (see section 3.4.1), who have been identified as particularly vulnerable to 'symbolic consumption' through the purchase and use of brands (see section 2.7). The UK documents support these findings. Documents pertaining to packaging research, including creative briefs, internal memos and research reports, all show considerable effort and high attention to detail when any packaging decisions are made. Packaging has an integral role in promoting existing products, new product development and branding.

3.3.2 Packaging as a promotional tool

While tobacco packaging still performs the more practical functions of storing, dispensing, transporting and protecting the product - maintaining freshness through seals and materials is a particular concern for roll-your-own packaging (Colquhoun Associates, 1998a, 1998b) - its key value lies in facilitating promotion, especially through creating and communicating brand imagery (Bero 2003; DiFranza et al., 2002; Wakefied et al. 2002).

> The easiest way to communicate with current smokers is through the packet. (CDP, 1995a, p. 1)

Messages about the product and the brand are communicated through the combination of pack design elements, such as colour, symbols, graphics, fonts and pack structure, discussed in more detail in section 3.5. However, the pack goes deeper than simply communicating product and brand attributes. The UK documents provide evidence that tobacco packaging has the ability to impact on affective consumer responses, particularly feelings of embarrassment and pride (Sadek Wynberg, 1995; M&C Saatchi, 1997a). This supports the emerging academic evidence which suggests that packaging plays a role in this type of consumer response (see section 2.8). There is also evidence of packs impacting on behaviour such as smokers reporting hiding packs in certain situations, and buying a premium brand (in contrast to their usual lower priced brand) for a social event, when the pack is likely to be on display (The Research Practice, 1999).

> Moreover, to the majority of its smokers, the packaging was not a source of enjoyment but rather an embarrassing symbol of the fact that they cannot afford a better quality cigarette. Younger women, in particular, were at pains to hide their use of the brand when on public view (e.g. at the pub) and also amongst non-smokers of the brand. (Sadek Wynberg, 1995, p. 6)

It is suggested that much of packaging design communicates through subconscious and subliminal processes, and it is not always readily apparent to the consumer that pack designs reinforce brand imagery and messages (DiFranza et al., 2002). It is also well documented that smokers find it difficult to distinguish products through taste alone, and the pack is known to have a strong influence on product quality and strength perceptions, something known as 'sensation transfer' (Bero, 2003; DiFranza et al., 2002; Pollay & Dewhirst 2002). Additionally, all aspects of the pack, including the pack outer, cellophane, tear tape and inner cards, maximise the ways in which the pack communicates these things to consumers (Wakefield et al., 2002).

> Red packs connote strong flavor, green packs connote coolness or menthol and white packs suggest that a cigaret [sic] is low-tar. White means sanitary and safe. And if you put a low-tar cigaret [sic] in a red package, people say it tastes stronger than the same cigaret [sic] packaged in white. (Koten, 1980, cited in Pollay & Dewhirst, 2002, p. i24)

To promote the brand, packs are designed to create a strong visual impact at point-of-sale (POS). This impact increases when brand families are displayed together (Wakefield et al., 2002). Consideration also goes into how pack designs interact with each other when placed side-by-side on the gantry and the optimum pack positioning for premium offerings (Mustoe Merriman Herring & Levy, 1999; RMC Associates, 1998). Price-marked packs (PMPs), which typically carry distinctive bright yellow flashes displaying the price in a bold font, also provide an effective way to generate impact through the pack at POS. Many smokers believe PMPs indicate special offer prices (Mustoe Merriman Herring & Levy, 1996). These packs are considered very appealing to those consumers who place specific importance on value (Lowe Howard-Spink, 1996).

> The money-off flash is very effective in drawing smokers' attention to the pack on the gantry as it has a major appeal. (M&C Saatchi, 1996a, p. 2)

Before legislation restricting tobacco promotion, the pack was also routinely used to facilitate brand promotions such as loyalty schemes (CDP, 1997a), money-off coupons (Gallaher Group Plc, 1995a), competitions (M&C Saatchi, 1999) and free gifts (M&C Saatchi, 1998a). Such promotions were communicated either on or within packs, via inserts.

3.3.3 The pack's role in new product development

The UK documents highlight that packaging is not a secondary consideration in a new product offering, but informs and plays a central role in new product development. This suggests that the right packaging is as important as the right product, if not more so. Testing consumer responses to pack designs is critical in assessing the viability of introducing a new brand. This indicates whether the pack adequately communicates the brand's positioning in the market. The pack is involved from the very start, even influencing decisions about the product. For example, the development stage of a new product from Gallaher, B&H Yellow, started with testing pack designs. This explored the possibility of launching a new brand concept:

> Gallaher are exploring the opportunity for the launch of a new brand, targeted at younger smokers, communicating an outgoing personality and offering a mellow flavoured product. Four pack designs have been developed to explore the potentialities of this concept and research is required to gauge consumer response. Objective - GAUGE RESPONSE TO THE FOUR PACK DESIGN UNDER EXPLORATION AND ASSESS THE OPPORTUNITY FOR THE NEW BRAND WITHIN THIS CONTEXT. (Colquhoun Associates, 1998c, p. 1)

The pack was considered 'pivotal' to the success or failure of this new brand, through its ability to communicate the desired brand image (M&C Saatchi, 1998b). Furthermore, the pack design had the ability to influence the final product design.

Final product/blend decision needed by end of Jan... This would possibly be influenced by final pack design. (M&C Saatchi [n.d.a], p. 22)

Even for other brands, where the relative importance of pack and product was more balanced, the pack design had to equal the new product in terms of level of appeal.

New brands in this market need to have 'credigree' i.e. provenance and heritage. Any innovation will not be: purely product led due to lack of vocabulary or intrinsic product understanding; purely packaging led - pack innovation alone is not enough to give the requisite credibility. (Interbrand UK Ltd, 1997, p. 34)

3.3.4 The pack's role in branding

Tobacco packaging is inextricably linked with the brand and is considered crucial to a brand's progress; hence pack redesign is often the first point of call for rejuvenating a brand's image. Examples for the Lambert & Butler and Winston brands show how an outdated pack design had a negative impact on the brand.

Indications from recent market research are that the pack graphics are in need of a re-design and that the pack may be holding back the progress of the brand (Lambert and Butler). (Mustoe Merriman Herring & Levy, 1996, p. 4)

Low image with negative associations:
No clear identity - pack of cards / tab as if Duty Free
Plain, boring pack
Cheap-looking (Winston). (Leading Edge Consultancy, 1997, p. 19)

Congruence between the desired brand imagery and pack design is crucial as the pack helps to communicate brand identity and values (M&C Saatchi, 2000; RMC Associates, 1998), and can influence a brand's perceived status (The Research Practice, 1999),

alongside price, brand name, and if available, other marketing tools such as advertising, promotion and sponsorship (CDP, 1997b; Colquhoun Associates, 1996; RMC Associates, 1998).

> Embassy is notoriously difficult to define as a brand, but it does seem that its values are well expressed by the pack - straight, slightly old-fashioned, created before designers were invented, a smoker's fag, not flash, and one that it's OK to be seen with by your mates. (Lowe Howard-Spink, 1997, p. 3)

> The designs that deserve further consideration are potentially a good strategic fit with the brand. (Haslam Drury Partnership, 1998, p. 43)

For some brands, the pack is the one defining feature of the brand. For example, for Benson & Hedges Special Filter, the gold pack was considered 'the purest representation of the brand' (CDP, 1998b, p. 14).

> The Gold pack is fundamental to brand imagery. It is seen as an encapsulation of all that Benson & Hedges Special Filter is and represents. (Colquhoun Associates, 1996, p. 12)

However, for other brands, packaging works alongside other attributes or activities, to contribute to brand perceptions.

> Brand values for Marlboro are defined most strongly by WHO SMOKES THEM, their distinctive TASTE, their established and impactful COWBOY ADVERTISING VEHICLE and RED AND WHITE LIVERY, their memorable and impactful PACK, their ACCESSIBILITY and their overt SPONSORSHIP activities. (Colquhoun Associates, 1996, p. 12)

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The documents show that personification of the pack is also an important consideration in branding. This helps to communicate a brand personality, contributing to the overall brand imagery. Advertising was a useful vehicle to facilitate this, but there were on-going concerns from the Advertising Standards Authority (ASA) that the pack was communicating aspirational imagery or would be appealing to children.

> We think that the vital thing to be clear about is the character and personality that we are giving to the pack via this campaign. We think that in the execution we currently have, the pack comes over as a smart, streetwise, `diamond geezer' - which is right (CDP, 1998a, pp. 9)

> You (ASA) rejected 'Hairdryer' and 'Electric Shaver' on the principle that an 'animated' pack with a personality could be viewed as appealing to children (CDP, 1995b, p. 1)

> Sentry Box: Unacceptable. Pack is replacing a guard which constitutes an admired profession. Also guards are usually associated with a palace setting/ an aspirational location. (CDP, 1996b, p.8)

3.3.5 Strategic use of the pack

In addition to packaging's key role in promotion and branding, the UK documents also highlight that packaging is a versatile tool which is used strategically to respond to external pressures and influences that the tobacco industry faces. There is evidence of packaging being used to offset threats coming to the industry from the political and legal environment, the competitive environment, and the consumer environment (Figure 3.2).

Figure 3.2: External threats facing the tobacco industry
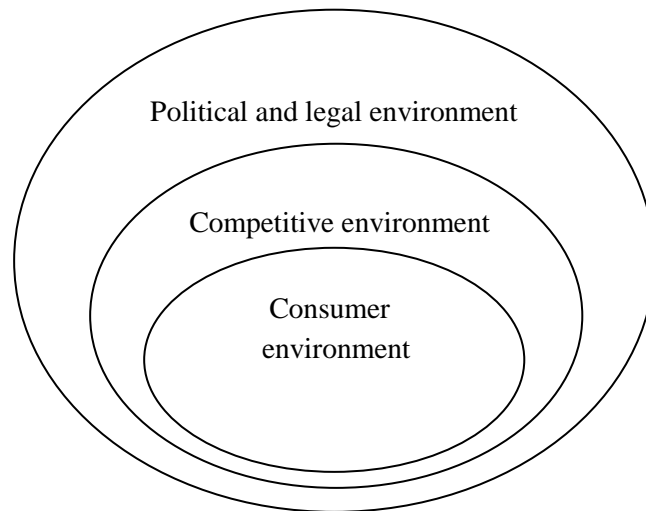
Political and legal environment

Legislation to ban tobacco advertising and promotions was expected and planned for, when the pack would become the remaining primary marketing tool. In the lead up to these restrictions, there were considerable efforts to build upon the strength of the pack's advertising role.

> We need to create a new campaign making the pack the hero. In the last year before a probable ad ban, it also makes sense to play up the pack - as that's all they may have left next year. (Lowe Howard-Spink, 1997, p. 3)

> In January '98 we are expecting a total advertising ban. We need a number of ads to run from December '96 throughout December '97 that will remain in the consumer's mind for years to follow ... It's the gold pack or some representation thereof that is needed. Gallaher want big scale, splendid images which revolve around the pack. (M&C Saatchi, 1996b, p. 5)

Furthermore, tobacco companies started investigating other ways in which to maximise the opportunity for the pack to communicate marketing messages, such as cellophane wrapping.

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Imperial have the machine technology to print high quality images on their cellophane wraps. But, to date, this technology has been under-utilised. We want to look at making the current L&B campaign work using the pack outer as our advertising medium...They want to concentrate on this area alone as it will become very important after the ad ban. (Mustoe Merriman Herring & Levy, 1997, p. 8)

In response to health warning legislation, when retailers were losing out on cigar sales by being unable to sell individual cigars without a health warning, Hamlet started to print warnings on individual wrappers so retailers could split packs again (CDP, 1995c). To offset the effect of Budget increases, when there is a fear of consumer down-trading, in-pack loyalty schemes and money-off coupons were routinely used to maintain brand loyalty (CDP, 1996c; Syndicate 3, 1989). Price marked packs have also been used as a tactical measure to offset Budget price increases. PMPs bought before tax increases must be sold at the price displayed on the pack, thereby becoming a special offer price (Mustoe Merriman Herring & Levy, 1996). Packaging was also seen as one way for companies to comply with increasing requirements to show a greater environmental conscious (Syndicate 3, 1989).

Consumer environment

During the time period covered by the UK documents, the tobacco industry expected and was prepared to face a shift in consumer awareness and attitudes surrounding the health implications of smoking. The requirement to label packaging with tar and nicotine yields in 2003, directives concerning children and smoking in public places, and the Europe Against Cancer programme, were expected to heighten smokers' health concerns and reinforce non-smoker attitudes (Syndicate 3, 1989).

As noted above it is likely that consumer interest and awareness of tar and nicotine levels and social and health pressures will increase over the planned period. (Syndicate 3, 1989, p. 20)

Current social, family and health pressures meant that it was more likely that people would switch 'downwards' to a more mellow tobacco, rather than upwards to a richer and stronger tobacco. (Colquhoun Associates, 1998a, p. 6)

As consumers were expected to become increasingly tuned into the harms of smoking, several brands became focused on their low tar offerings to capitalise on this potential consumer shift. Packaging was at the core of B&H's new low tar product offering B&H yellow (see section 3.3.3), and Silk Cut identified that clearer packaging and product descriptors could help communicate its low tar brand family (The Research Practice, 1998).

Competitive environment

Packaging was also used to try and claw back market share lost from the success of competing brands. Brands can lose sales due to cheaper brand offerings in times of consumer down-trading, technological advancement by competitors, for example with roll-your-own packaging seals and materials, or from the success of competing brands in appealing to a particular consumer segment. Making changes to the pack is a common response to these types of threats, and can communicate value for money with price-marking (Lowe Howard-Spink, 1996), or can update the brand image with a new pack design (Mustoe Merriman Herring & Levy, 1996). For example, in the late 1990s Gallaher was especially concerned with the success of Marlboro Lights among 18-24 year old low-tar smokers, a segment previously considered the domain of its Silk Cut brand (Gallaher Group Plc, 1995b; Market Trends Ltd, 1995).

Indeed, Marlboro Lights, as a brand, clearly held a certain social cache for some younger smokers that was greater than other 'premium' brands. This brand had clearly moved into 'trendy' territory, over and above just being premium. These Marlboro Lights smokers were also more likely to mention the good design of the pack as being a reason for liking the brand. (M&C Saatchi, 1998a, p. 7)

Research into Marlboro Lights attributed the success of the brand to its association with an aspirational lifestyle, one associated with successful people, and the offering of a more appealing gold and white, classy-looking, and stylish pack design (Gallaher Group Plc, 1997; Leading Edge Consultancy, 1997). This competitive threat sparked Gallaher into redesigning the Silk Cut brand family and developing a new low tar brand to appeal to younger smokers. Gallaher evoked a similar response for its Club brand, which was losing sales to Imperial Tobacco's Lambert and Butler brand.

Club is losing share, primarily to Lambert & Butler. These losses are most apparent amongst 18-44 year olds. Research identified that this group found the packaging old and boring - so the pack has been redesigned. (CDP, 1998c, p. 1)

3.4   The value of consumer segmentation

Chapter 2 highlighted that segmentation is an integral component of consumer goods marketing, and is used to maximise the appeal of products, and product packaging, for target groups (see section 2.4.5). Segmentation analysis is also a tool used by tobacco companies to ensure pack designs elicit the most favourable response (Wakefield et al., 2002). This section shows how US document analyses consistently reveal two groups to be particular targets for tobacco companies through pack design, young people and females. It is supported by evidence from the UK documents which show that during the mid to late 1990s, UK tobacco companies were particularly concerned with targeting young people.

3.4.1 Packaging for young people

Packaging is developed to appeal to new and young smokers through its structure, size, colour and design (Cummings et al., 2002; Kotnowski & Hammond, 2013), and then constantly monitored to ensure it remains appealing to youth (Wakefield et al., 2002). Given that industry documents have provided strong evidence of the importance of the recruitment of starters due to high brand loyalty to the first brand smoked and low rates of brand switching, it is perhaps unsurprising that often the key objective of a new product offering or pack design is to target the young (Pollay, 2000). These industry quotes highlight why young people are so important to tobacco companies.

> The smoking patterns of teenagers are particularly important to Philip Morris... it is during the teenage years that the initial brand choice is made. (Johnston, 1981, cited in Perry, 1999, p. 936)

> Younger adult smokers have been the critical factor in the growth and decline of every major brand and company over the last 50 years. They will continue to be just as important to brands/companies in the future... (Burrows, 1984, cited in Perry, 1999, p. 936)

US industry documents provide numerous instances where the young, specifically underage smokers, were the key target for the industry. For example, the target market for Project Huron during the 1980s, when Imperial Tobacco was investigating the feasibility of a new product, was:

> ...principally young males 15-25. (ITL [n.d.], cited in Pollay, 2000, p. 137)

However more sanitised language is found in industry documents from the 1980s onwards to refer to the youth market (Cummings et al., 2002; Perry, 1999). Around this

time explicit references to the youth market were replaced by the term 'young adult smoker', intended to imply the 18-24 age group.

> From time to time when describing market categories and target audiences we use references such as 'young smokers', 'young market', 'youth market', etc... when describing the low-age end of the cigarette business please use the term 'young adult smoker' or 'young adult smoking market'... these terms should be used in all written materials in the future. (Pittman, 1975, cited in Cummings et al., 2002, p. 17)

Consistent with this, within the UK documents, the term 'young adult smoker' is most frequently used. However, one document clearly states that the main concern for Silk Cut in the late 1990s was that it was 'not performing as strongly as a recruitment brand' (Gallaher Group Plc, 1995b, p. 2). The solution was to modernise the brand through pack redesign.

The UK documents show considerable attention was paid to attracting younger smokers. Packaging was a key tool for new products entering the market to capture the attention of a younger audience (Colquhoun Associates, 1998c; M&C Saatchi, 1998c). Existing brands also sought to attract new, younger, users through pack redesign, while simultaneously remaining familiar so not to alienate existing brand users, termed 'loyalists' (Colquhoun Associates, 1998a). Young people were targeted according to their gender, location, class, and psychosocial needs, and the UK documents reveal a level of sophistication in targeting young people which previous US document analyses overlook. Previous analyses tend to imply that young people are a homogenous group with similar attitudes, needs and wants. The level of space and detail in the UK documents given to segmenting and understanding young people highlights greater complexity in targeting this group. Young people's lifestyles, smoking attitudes, self-perceptions, motivations, life-stages, personalities, and brand usage, ratings and requirements were carefully researched so brands and packaging designs could be

aligned to greatest effect (Colquhoun Associates, 1998b; Gallaher Group Plc, 1995b). This type of research conducted by, or on behalf of tobacco companies, is the backbone in understanding how best to target subgroups or 'niches' of young smokers. Both the US and UK documents have highlighted that young people are particularly concerned by imagery, novelty, and value, and packaging has clearly been intended for young people by communicating these three things.

Image

One of packaging's primary strengths lies in its ability to communicate with consumers and reinforce brand imagery (Wakefield et al., 2002). Youths in particular are viewed as most susceptible to the images portrayed through marketing and much attention has been paid by tobacco companies to understanding youth culture. For example a recommended starting point for a new youth brand in the US was:

> A careful study of the current youth jargon, together with a review of currently used high school American history books and like sources for valued things might be a good start at finding a good brand name and image theme. (Teague, 1973, cited in Perry, 1999, p. 938)

Image is seen as crucial to the success of a brand with young smokers (Cummings et al., 2002) and much attention is paid to ensure that the pack design communicates the right image. Tobacco companies are acutely aware that on-pack branding can add aspiration and coolness (Hastings & MacFadyen, 2000). Youth desire for maturity, independence and success can also be reflected through packaging which communicates a better class of product (Wen et al., 2005). Pack fonts and typeface can support the desired imagery:

> Package design should evoke graphic and visual cues representative of target lifestyle; i.e., strong vivid colors, (as on HBO/MTV, 'Houston Knights') distinctive, unique typeface (as on neon bar signs, rock album covers, Mack truck grills). (O'Leary, 1987, cited in DiFranza et al., 2002, p. 938)

Brand images developed through packaging are then transferred to the user via public displays of the pack. Through keeping their packs close by and revealing them countless times daily, smokers take on some of the brand personality and identity (Wakefield et al., 2002). This is why the pack is often termed a 'badge' and why its advertising role extends far beyond that of the point-of-purchase.

> Cigarette packs are still considered to be badges, albeit that the cigarettes themselves seem to be losing a large amount of the glamour and aspiration that used to be associated with them. (M&C Saatchi, 1996a, p. 1)

Document analyses frequently refer to the importance of brand imagery to younger smokers. The UK documents provide insight into the involvement of packaging in brand image construction. Gallaher, exploring the potential to introduce a new 'lights' brand conducted research with existing 'lights' smokers. They found the younger respondents had great enthusiasm for, and enjoyment of, smoking, which was linked with an active and enjoyable social life and pre-family lifestyle (The Research Practice, 1999).

> The enjoyable social focus which smoking held for many of these respondents was also reflected in their tendency to: notice other people's packs and brands (those of friends, and even strangers in venues such as pubs); be more brand aware in terms of current smoking tastes, and fashionable brands; be more sensitive to, and welcoming of, modern pack designs, and more dismissive of packs that were perceived to have an 'out-of-date' look. (The Research Practice, 1999, p. 10)

This section of the market was also characterised by peer group conformity, general attraction to image and brands, and self-indulgence.

Although not spontaneously admitted, BRAND IMAGE is especially important to the 18 - 35 age range: As a statement about personal style (especially for 18 - 24s); Almost as important as your choice in music, clothes, fragrances. (Leading Edge Consultancy, 1997, p. 8)

In contrast, older age groups appeared to derive little enjoyment from smoking, which was seen as dull, routine and habitual. Smoking and brand choice was 'needs driven' and there was little interest in new pack developments or aspirational imagery.

Amongst such people the potentially pleasurable flavours and imagery associated with cigarettes appeared to have ceased to be relevant. As a result, some appeared to take no positive interest in the market, other than what was necessary in order to find a brand that they found acceptable without being unnecessarily expensive. Some had thus become almost exclusively focused on their habitual brand, to the detriment of any wider interest in the market..... Some of the older respondents, with more a 'tunnel vision' of the market and less knowledge of recent developments, remained more conditioned by the traditional norms of (70s) pack designs. (The Research Practice, 1999, p. 11)

These quotes shed light on why younger, rather than older, smokers may be especially concerned by the imagery communicated by pack design. Further investigation of the 18-24 market highlights a subgroup identified as 'aspiring sophisticates' (Gallaher Group Plc, 1995b). These young people were described as 'a marketers dream' who place much importance on having an attractive, classy looking pack, which communicates a fashionable, interesting and premium price brand (Gallaher Group Plc, 1995b). Similarly, a group called 'conservatives', while they attach low importance to packaging, still desired an expensive looking pack which communicates successful and youthful brand imagery (Market Trends Ltd, 1995). In contrast, however, there were subgroups termed 'slobs' and 'worriers'. 'Worriers' do not seek classy, expensive looking packs, or successful brand imagery, while 'slobs' have a 'don't care' attitude

(Market Trends Ltd, 1995). Therefore, while imagery is clearly important for some young people, it must also be appreciated that there is a subset of young people, for whom, packaging and imagery is less of a consideration.

Novelty

Novelty is also highlighted in industry documents as being particularly important to younger consumers, and tobacco companies routinely monitor youth perceptions of packaging to check it is perceived neither too old nor out of date (Wakefield et al., 2002). Innovation in particular, which offers new concepts in packaging shapes, structures and methods of opening, is thought to be particularly appealing for young smokers. New pack ideas are often tested with this target group in mind. A spokesperson from a product innovation group at a Philip Morris marketing meeting described research investigating an oval pack which 'projects a distinctive young masculine appearance'. This was found to be:

> …new, original, sensual and striking. Test concluded: pack has tremendous appeal among young smokers. (Philip Morris, 1990, cited in Wakefield et al., 2002, p. i75)

This Philip Morris document further explains the appeal of 'novelty' for young people.

> Once exposed to 'innovative', especially young adults see their current packaging as dated and boring.... draws attention (jealousy) from others.... especially young adult consumers are ready for change in packaging. (Philip Morris, 1992, cited in Wakefield et al., 2002, p. i77)

A comprehensive review of internal US documents relating to pack size, shape and opening, highlighted the relevance of novel pack structures for young people (Kotnowski & Hammond, 2013). Small, slim, rounded, oval and booklet pack shapes were found appealing to young adults, and there was evidence of increased purchase

intent for these packs. Indeed, such packs were often intended for a young market. For example, an octagonal pack developed for Philip Morris' Parliament brand, launched in 2000, was intended to:

> ...build sale of Parliament among young adult smokers [and] generate excitement... with the test market of an octagonal packaging structure. (Philip Morris, 2000, cited in Kotnowski & Hammond, 2013, p. 1662)

The UK documents from the late to mid-1990s show less evidence of structural pack novelty being used at that time. Although one document suggests packs could have a variety of openings, including a 'button dispenser' and 'zippo type sideways opening' (M&C Saatchi, 1997b), two innovative methods of opening, among many, which have recently entered the market. Instead, the evidence within these documents suggests young people were mainly offered novelty through on-pack graphic design, bright colours and packaging materials. Research for Gallaher had identified a desire among 18-25 year olds for 'more courageous/adventurous use of colour', 'more striking/different pack design', and 'a departure from cigarette pack design norms' (Colquhoun Associates, 1998c, p. 6).

Two new products offering novelty were developed during the late 1990s: Raw and B&H Yellow. These are good examples of how novelty was seen as key in attracting younger smokers. RAW was developed by Gallaher to be the first RYO brand specifically targeting younger smokers. It was the only tobacco product on the market with novel transparent packaging, intended to communicate the product as 'trendy' and 'daring', having 'attitude', and that RYO smokers could for the first time:

> ...smoke RYO tobacco without feeling like my granddad. (M&C Saatchi, 1998c, p. 5)

RAW is a very interesting concept. It has an edgy, streetwise feel which is highly appropriate to younger smokers, especially students. What differentiates the brand is the clear packaging and minimalist design/livery. It should be noted that younger smokers in particular are packaging and design literate. (Haslam Drury Partnership, 1997, p. 50)

Offering something different or unusual was seen as an opportunity to tap into youth sub-cultures.

What I would add is that there is a definite sub-culture among younger RYO smokers, and I believe their desire to display their exclusivity could be supported by provision of unusually designed 'badges'. (CDP, 1999, p. 1)

Particularly concerned by the success of Marlboro Lights among the 18-24 age group, Gallaher also developed a new premium low tar cigarette brand - B&H Yellow - to target this group. Detailed research was undertaken to understand these young smokers, and they were defined as:

... rebellious in attitude and want to express this in their choice of fashion, music and brands. They want to be different from their parents. They have no sense of their mortality and hence live life to the edge. They're bored stiff with the cigarette market as the same brands are around, in the same pack sizes, with heavy Royal references or named after posh London squares. They're looking for something new that they can call their own. (M&C Saatchi, 1997a, p. 4)

Gallaher's approach was to target this group through bright yellow packaging. Extensive research into potential pack designs showed unusual pack colours would make an impact due to the departure from current pack norms and that solid blocks of colour were particularly appealing to the 18-24 age group. The bright yellow pack chosen was found to communicate all the desired brand qualities.

> From rave culture to teletubbies, flat colours were viewed as appealing by this generation. (M&C Saatchi [n.d.a], p. 21)

> ...new, fresh, clean, sharp, impactful...youthful by implication, contemporary and lighter...credible in the context of `mellow', smooth flavour. (Colquhoun Associates, 1998c, p. 11)

Other novelties - 'gimmicks' - considered in the documents to be young and fun, were on-pack jokes and puzzles (M&C Saatchi, 1997b) and soft packs, which while not necessarily innovative or new, offered novelty by deviating from the norm of a hard cardboard pack. Soft packs were thought to have 'niche appeal among students' and could make the brand 'trendier' (Leading Edge Consultancy, 1997, p. 20). Innovative printing techniques were also tested with the aim of adding a fun element to the pack such as 'day-glo' ink and scratch-off latex (Mustoe Merriman Herring & Levy, 1998).

Value

While industry documents suggest that the price of a brand is a consideration in youth smoking, there tends to be a conflict between price and imagery, given young smokers desire for higher priced popular premium brands.

> Some evidence suggests that younger adult smokers are interested in price, but unlikely to adopt a brand whose only hook is price.... a price-value brand would need a conspicuous second 'hook' to reduce possible conflict between younger adults' value wants and imagery wants. (Burrows, 1984, cited in Cummings et al., 2002, p. i11)

As such, utilising the pack for value promotion strategies can add value to premium brands and have an impact on young smokers. Price-marking is an obvious method of communicating value for money. Packaging brands in more affordable size offerings is

another value strategy. Not only does a smaller pack size reduce the lay-down price – the actual price paid – it provides a cheap route to aspirational brands (Anderson, Hastings, & MacFadyen, 2002). The UK documents reveal that 10 packs are potentially how 'new entrants' enter the market.

> As the laydown prices of cigarettes have increased, the younger adult smokers may have traded down to a 10s pack of a premium brand or, chosen to buy a premium 10s pack when they entered the market, rather than buying into cheaper 20s pack of an economy brand. (Marketing Services, 1997, p. 5)

A survey of males aged 18-29 for Philip Morris also outlined the possible impact of offering packs containing 14 cigarettes rather than the standard 10 and 20 cigarettes.

> 14s has potential to attract young smokers. (Philip Morris, 1993, p. 4)

3.4.2 Gender specific packaging

Gender specific packaging is a common strategy used to boost the performance of consumer goods brands. US tobacco documents have revealed that much attention has been paid to understanding the female psyche and packaging has been identified as the most overt way in which to target women (Carpenter et al., 2005). Especially young adult females have been found to show great interest in new designs (Wakefield et al., 2002).

> Throughout all our packaging qualitative research, we continue to validate that women are particularly involved with the aesthetics of packaging. (Philip Morris, 1992, cited in Wakefield et al., 2002, pp. i77)

Packs specifically developed to target women are often designed long and slender, with pale or pastel colours. These details are acknowledged to portray femininity, style,

sophistication and attractiveness. Slim shapes decrease harm perceptions among women and females have been attracted to novel oval and booklet pack shapes and rounded corners (Kotnowski & Hammond, 2013). Philip Morris research for the female Virginia Slims brand shows feminine packaging to be highly evaluated by women, and associated with positive attributes such as not looking like a cigarette pack and being easy to carry in a purse (Carpenter et al., 2005). Females also appear more tuned in to how certain pack shapes feel in the hand (Kotnowski & Hammond, 2013). Cleanliness, another desirable feminine attribute, is portrayed through the pack in its paler colours, lines and structure.

> There seems to be some evidence that packaging preference is sex-linked...the cleanliness of the pack is its greatest attraction for the female smoker. (Opinion Research Corporation, 1961, cited in Wakefield et al., 2002, p. i78)

The UK documents also highlight that females are more likely to be attracted to low-tar brands and that they are 'motivated by fags in nice packs, especially shiny silver ones' (M&C Saatchi, 1996c, p. 10). Females recruited to the Berkeley 'lights' brand were said to be attracted by the longer length, thought to communicate elegance and value (CDP, 1996d). The amount of white on a pack is also related to weaker cigarettes and a female-oriented product (Calcraft Buck, 1997). Conversely, the image of a stronger cigarette was allied more with males (Market Trends Ltd, 1995; The Research Practice, 1999).

However, these documents also show young males to be carefully researched and targeted through packaging. For example, Imperial Tobacco targeted '18-30 working class lads in the Midlands' with its Embassy brand (M&C Saatchi [n.d.b], p. 2). Here the pack was required to communicate a 'top-price, top-quality packet of fags' but without the 'flash and poncey pretentions of the gold Bensons' packaging'. The Benson & Hedges advertising campaigns, which focused on giving the pack a personality by placing it in unusual situations, was also designed to appeal primarily to young males.

What do we want this work to achieve? We want more 18-34 year old blokes smoking B&H than ever before. We want to see these dudes ripping-up packets of Marlboro and Camel and treating them with the disdain that second rate, American filth deserves. For Christ's sake what the hell are people doing smoking brands that are made to be smoked by 'cowhands' and not by the youth of the trendiest, coolest, most happening country in the world. In many ways this brief is really a charity brief. Trying to help people recognise the error of their ways, thinking they are being cool smoking what Roy bloody Rogers smoked and opening their eyes to the un-challengeable truth that the coolest smoke in the world is a B&H. We want to see Great, British B&H in the Ben Sherman shirt pockets of Brit-popped, dancecrazed, Tequila drinking, Nike kicking, Fast Show watching, Loaded reading, Babe pulling, young gentlemen. (CDP, 1998d, p. 3)

This suggests that although it is perhaps more obvious to detect feminine-oriented packaging, packaging has still been designed with a specific gender in mind. Tobacco companies equally know how to use packaging to appeal to males.

3.5 The influence of tobacco packaging design

Research into consumer perceptions of pack designs for a potential new Silk Cut brand highlight the breadth of what packaging design can communicate. The study participants said they found the designs 'rich', 'warm', 'welcoming', 'unisex', 'trendy', 'fashionable', 'sophisticated', 'youthful' and 'fun'. The designs were also able to signal 'strength', 'rebellion' and 'irreverence' (Leading Edge Consultancy, 1997). So packaging can communicate these messages, the minutiae of design elements are carefully studied. DiFranza et al. (2002) and Kotnowski and Hammond (2013) demonstrate how pack design can be broken down into individual compartments such as colour, typography, fonts, proportioning, texture, structure, and shape, and how these elements can impact on consumer perceptions and behaviour. The UK documents also provide evidence of the power of these design features, which are discussed in turn

below. However, the combination of elements have to work together to make 'conceptual sense' for the brand, and while individual components alone can communicate strength, taste, quality, and price, the sum of the parts can have a greater effect for the brand image and personality. For example the 'bold, impactful and traditional' overall pack design for Old Holborn rolling tobacco was said to communicate the 'heritage', 'longevity' and 'pedigree of the brand' (Colquhoun Associates, 1998a, p. 5).

> The style of the pack was described by the majority as 'traditional', 'conservative', 'British' and 'uncomplicated'. (Colquhoun Associates, 1998a, p. 18)

Tobacco companies strive to get the balance between the different design elements right. Too much on the pack is considered complicated and distracting, and risks diluting the overall impact (Colquhoun Associates, 1998a). Packs are evaluated according to appearance and also functionality. Figure 3.3 highlights the qualities used by tobacco companies to rate tobacco packs.

Figure 3.3: Qualities which tobacco pack designs are rated on

Appearance	
Rich looking/smart/elegant	Liked the colours
Different	Ordinary/similar to others
Looks refreshing/clean	Cheap looking
Bright/eye-catching/bold	Dull/drab/plain
Happy	Cheap looking
Attractive	Unattractive
Simple/neat	Messy/chopped up/gaudy/cluttered
Modern/up to date	
Functionality	
Ease of opening	Containment of product
Ease of closing	Freshness of product
Pleasing to look at	Protection of cigarettes
Goodness of fit in pocket or bag	Feels comfortable in hand

Source: Adapted from DiFranza, J. R., Clark, D. M., & Pollay, R. W. (2002). Cigarette package design: Opportunities for disease prevention. *Tobacco Induced Diseases, 1,* 97-109, p. 102.

3.5.1 Colour

Getting the pack colour right, from the best tone to the amount of colour on the pack, is crucial in reaching the target market (DiFranza et al., 2002; Haslam Drury Partnership, 1998). The red which forms the basis of the Marlboro pack was chosen after comprehensive research conducted by the Color Research Institute of Chicago (DiFranza et al., 2002). This red pack represents a strong, full flavoured and masculine cigarette.

> Marlboro [Red] is more for men. The colours are more definite and strong, and that is what men like. (Mike Imms Market Planning & Research, 1996, p.30)

Consistent with the marketing colour literature outlined in Chapter 2, the UK documents show that the use of colour for tobacco packaging is met with shared meaning for consumers (Figure 3.4). Colour associations for tobacco do not appear to differ greatly from those of general consumer products (see Figure 2.2). There is also consistency between the US and UK tobacco documents. For example, gold is typically associated with quality, a premium price and class, while richer and darker colours are associated with higher tar levels and full flavour, and lighter and pastel colours are associated with low tar and low flavour (Colquhoun Associates, 1998a; DiFranza et al., 2002; Haslam Drury Partnership, 1998). Consumers are thought to get particular enjoyment from bright and colourful tobacco packs, which are also considered especially impactful (Colquhoun Associates, 1998a, 1998c; Gallaher Group Plc, 1999).

Colour is intended to communicate many things, for example, taste, gender, quality, price and class, which in turn help to establish the brand image. The colour purple for example, is a defining feature of the Silk Cut pack and brand. Consumer research for the on-pack purple colour found it represented a multitude of things, all congruent with the brand's premium status.

Purple is unique; it symbolises and carries the brand within the market. The purple is a rich, dark purple: silk, velvet, luxury, sensual, quality, premium, royal. The purple is dark and contained, angular: Potent, distinctive, with an inner strength/force. (Haslam Drury Partnership, 1998, p. 14)

Figure 3.4: Colour associations of tobacco packaging

Tobacco pack colour	Associations
Blue	Dark/strong tobacco (Colquhoun Associates, 1998a)
Red	Strong flavour, masculine (Mike Imms Market Planning & Research, 1996)
Green	Mellow tobacco (Colquhoun Associates, 1998a)
Purple	Rich, luxury, sensual, quality, premium (Haslam Drury Partnership, 1998)
White	Purity, fresh air, clean smoke, low tar (CDP, 1996e; Haslam Drury Partnership, 1998)
Black	Strong taste, masculine, nightlife, classy, sophistication, death (M&C Saatchi, 1998a)
Gold	Quality, full strength, sophistication, luxury, classy (Colquhoun Associates, 1998a; Haslam Drury Partnership, 1998; The Research Practice, 1999)
Silver	Feminine, mild/weak taste, cheaper than gold, better value (Research International, 1995; M&C Saatchi, 1999)
Metallic	Premium, classy (M&C Saatchi, 1995)

Similar to other consumer products, where colour coding differentiates between product categories or flavours, tobacco pack colour is an overt means to communicate product strength. There has been an 'establishment of [a] colour code' for tobacco products (The Research Business, 1996, p.17). This has led to colours such as white and light blue being used on packaging as coding for tar levels, and to reinforce perceptions of weaker product strength and reduced harm (Haslam Drury Partnership, 1998; Leading Edge Consultancy, 1997; The Research Business, 1996).

Lower delivery products tend to be featured in blue packs. Indeed, as one moves down the delivery sector then the closer to white a pack tends to become. This is because white is generally held to convey a clean healthy association. (Philip Morris, 1990, cited in Wakefield et al., 2002, p. i77)

USE OF WHITE ON THE PACK

White signals the low tar category

Correlation between amount of white, and the tar/nicotine levels of the cigarette

The whiter the pack, the healthier they are

Looks less harmful than other brands

Implies a lighter, smoother smoke; less harsh and aggressive

Also purity and cleanliness. (Haslam Drury Partnership, 1998, p.13)

However there is a tension between communicating low tar without sacrificing flavour or brand perceptions. For example, Silk Cut pack designs with too much purple implied a stronger product than the brand wanted to communicate, while too little resulted in a loss of brand potency and distinctiveness (Haslam Drury Partnership, 1998).

While pack colour is one of the key vehicles to communicate product strength, other elements of the pack also contribute to the impression of strength. Smaller and thinner graphics and fonts have been identified as consistent with low-tar values. These design features make the pack appear 'quiet and somewhat recessive/apologetic...more gentle' (Mike Imms Market Planning & Research, 1996, p.30). Pack shape and texture also play a part in strength perceptions (DiFranza et al., 2002; Kotnowski & Hammond, 2013).

3.5.2 Font and typeface

Although DiFranza et al. (2002) outline pack fonts to be an important contributor to the brand image, no detail is provided on how fonts impact on perceptions. While consumer familiarity with pack fonts, particularly for the brand name, is said to be important for brand loyalists, new styles of lettering will often be tested as part of updating the pack design. Italics for example, are said to provide a classic feel to the pack while large fonts provide impact (Colquhoun Associates, 1998a).

The font used to print the brand name was perceived to be bold and impactful, with a stylish, traditional quality, which added character to name. Because of the perceived importance of the brand name, the majority believed the lettering should remain large and the focus of the pack design. (Colquhoun Associates, 1998a, p. 15)

Font and letter case also contribute to the brand personality. They can indicate the gender orientation of the pack, communicate a message of authority for the brand and provide the pack with a more contemporary and fashionable feel.

Font and case contribute to brand personality. Consider what is helpful in terms of: - brand authority and stature
- contemporary/classic versus fashionable
- more feminine versus more masculine values

Note that existing uppercase tends to be more authoritative and masculine. Although even for some men 'Quite old, square and chunky'
Ensure stand out, especially when gold is superimposed on purple. (Haslam Drury Partnership, 1998, p. 19)

Typeface also works in tandem with colour. Use of the colour gold, for example, can help the chosen lettering communicate quality and class, while white lettering can have the opposite effect, undermining quality and denoting a cheap, downmarket, own brand (Haslam Drury Partnership, 1998).

3.5.3 Further graphical elements

Using other graphical elements, such as lines, shapes or images, on a pack can be useful in generating positive consumer perceptions, with barely noticeable changes making an impact (DiFranza et al., 2002).

> Vertical lines seemed to connote sleekness, length, compactness, versus masculinity, fatness, and thickness which is connected with the horizontal style. (RJR Reynolds Tobacco Company, 1969, cited in DiFranza et al., 2002, p. 101)

The symmetry of design appears to be viewed positively by smokers, particularly for on-pack shapes such as squares (Haslam Drury Partnership, 1998). Spacing, margins, framing of the brand name and borders are all carefully studied to ensure these elements communicate quality and render the design contemporary.

> The white edges of the pack were perceived spontaneously by many to be 'tacky' and 'cheap' in appearance. (Colquhoun Associates, 1998a, p.17)

Images are tested to make sure they have a connection with tobacco and the brand (Colquhoun Associates, 1998c). Successful on-pack images have included crests, coins, leaves and animals. Gold crests have indicated a stamp of approval and authority endorsement of the product (Haslam Drury Partnership, 1998). A coin emblem on the Sovereign pack was said to signify 'old world', 'heritage' and 'quality' (M&C Saatchi, 1998a). Gold leaves on a RYO pack represented the quality of the tobacco, while introducing a 'natural' feel (Colquhoun Associates, 1998a). Placing an image of an elephant on the Old Holborn RYO pack was thought to add 'dynamism' to the brand imagery, and supported the message that Old Holborn was a full flavour product:

> Some believed the elephant added a 'heraldic' feel to the pack design and reflected positively the established and traditional nature of the brand. Many suggested that a larger, bolder elephant would be more impactful and reflected the strength of the tobacco in the design. (Colquhoun Associates, 1998a, p. 16)

3.5.4 Texture

The different materials used within tobacco packaging, whether paper, cardboard, foil or plastic, are important contributors to texture, which also plays a role in consumer perceptions (DiFranza et al., 2002). Research into roll-your-own (RYO) packs, in particular, has been concerned with the feel of RYO pouches and how this impacts on perceptions of tobacco freshness and taste. A robust feeling pouch is indicative of tobacco which keeps fresher for a longer time, while a softer feeling pouch indicates that the tobacco is mellower in taste - a further example of sensation transfer (Colquhoun Associates, 1998a, 1998b). Softness also implies accessibility as it has been described as indicating a 'friendlier' product. In contrast, a less robust feeling pack, made from a thinner material, can indicate a cheaper and lower quality product (Colquhoun Associates, 1998b).

> When probed, the Old Holborn pack was considered by the majority to feel more capacious and robust than the Golden Virginia pack and this suggested to many that the tobacco would stay fresher. Overall perceptions of the Old Holborn pack were seen to be coherent with the brand and most rejected the suggestion of a softer pack for the tobacco. (Colquhoun Associates, 1998a, p. 5)

> (Golden Virginia) Identified by a minority of loyalists as being softer in feel to Old Holborn
> - Indicated mellow tobacco
> - Friendlier, fresh feel
> - Coherent with brand loyalists (including females). (Colquhoun Associates, 1998b, p. 26)

Packs with a textured surface also indicate quality (Colquhoun Associates, 1998a, 1998b). This can come from using embossing techniques on the pack, which give a raised surface.

Packs 12 and 13 had a textured surface which was perceived to increase the impression of pack quality. (Colquhoun Associates, 1998a, p. 8)

Some consumers immediately noticed the embossed crest and were impressed by this detail. Once recognised as embossed, this feature was seen as reinforcing quality cues for the cigarette, via attention to detail in its packaging. (Marketing Perceptions Inc, 1992, cited in DiFranza et al., 2002, p. 101)

3.5.5 Pack structure

Innovation in pack structure, particularly shape and method of opening, is closely linked with providing novelty for young consumers (see section 3.4.1). The US documents provide numerous examples where tobacco companies have experimented with novel pack shapes such as cylinders, triangles, semi-circles, ovals and octagonal shapes, packs with rounded or bevelled edges, packs with different opening styles such as hinged lids, slide out drawers, flip open tops and booklet openings, packs with smaller and slimmer shapes, and packs with re-sealable openings made from Velcro or snaps (DiFranza et al., 2002; Kotnowski & Hammond, 2013). While the functional benefit of this type of pack innovation is considered useful, more importance is placed on whether these different pack configurations provide added value to the brand. The perceived effort put into innovative designs, and the projected imagery of novel pack structures, can be a useful signifier of a high-quality product and can justify a premium price (M&C Saatchi [n.d.b]). For example, a re-launch of the Parliament brand in Japan aimed:

...to add value to the King Size Lights variant by repackaging it in a deluxe rounded-edge box and giving Lights a more premium image at the import mainstream price. (Philip Morris, 1993, cited in Kotnowski & Hammond, 2013, p.4)

Similar to other pack design elements such as colour, changes in pack configuration can have a useful impact on perceptions of product strength and taste. Rounded corners have been found to communicate a brand's 'lightness', slim shapes reinforce mild and low-tar perceptions and slide openings can create the expectation of a smoother taste (Kotnowski & Hammond, 2013). Innovative RYO own pack seals can contribute to the perception of tobacco freshness and moisture levels (Colquhoun Associates, 1998a). Roll-your-own smokers also report enjoyment from breaking pack seals and experiencing the fresh aroma, something termed the 'aroma ritual' (Colquhoun Associates, 1998b).

The US documents suggest variations in pack configuration can increase purchase intent among smokers.

> Few felt any reason or curiosity to try Virginia Kings until shown innovative packaging. Exposure to booklet or oval in either graphic design created a desire to try. (Philip Morris, 1992; cited in Kotnowski & Hammond, 2013, p. 5)

However, reported increases in market share suggest that some new pack structures have had an impact on actual purchase, while others have had little impact (Kotnowski & Hammond, 2013). Additionally, DiFranza et al. (2002) highlight that few novel pack structures have had lasting appeal in the US.

3.6 The influence of cigarette design

Several industry document studies indicate that cigarette appearance is also manipulated to increase tobacco's appeal to specific target groups (Bero, 2003; Carpenter et al., 2005; Cummings et al., 2002; Hastings & MacFadyen, 2000). Similar to packaging, segmented groups of consumers are carefully researched to understand how cigarette features can tap into their needs and concerns. Parallels can be drawn between the product perceptions resulting from pack design features and those resulting from cigarette

appearance. The colour of the filter paper and the length and diameter of cigarettes can make the product more appealing to both young 'starter' smokers and females, and can help to boost sales and market share (Carpenter et al., 2005; Cook et al., 2003; Cummings et al., 2002). Similar to packaging, the use of white on cigarettes, particularly white filter tips, has been found to reinforce low tar perceptions and is associated with 'light' and menthol cigarettes (Carpenter et al., 2005; Mustoe Merriman Herring & Levy, 1998). Longer cigarettes reinforce femininity and thinness, and are evaluated as stylish and glamorous (Carpenter et al., 2005). Slim cigarettes help the tobacco industry create the image of a safer cigarette by implying 'ease of draw' and less sidestream smoke and tar (Bero, 2003; Carpenter et al., 2005). Females also associate the thinness of slim cigarettes with weight control.

> There is little question that a slimmer product, by its physical dimensions, clearly communicates style-fashion-distinctive female imagery... because they contain a little less tobacco, slim cigarettes deliver lower tar but provide both taste and ease of draw comparable to brands of relatively higher deliveries... Slim products will, in essence, be positioned against 'lights' as an innovative means of achieving lower tar smoking. (BAT [n.d.], cited in Carpenter et al., 2005, p. 842)

> Over riding the perception of its stylishness is an impression that this cigarette has potential health advantages because there is so much less tobacco being consumed. (Philip Morris, 1987, cited in Carpenter et al., 2005, p. 842)

This 'ease of draw' and 'lower tar smoking' is thought appealing for starter smokers as cigarette characteristics that reduce negative perceptions and indicate smoothness and mildness have been identified as important for young smokers (Ferris Wayne, & Connolly, 2002). The positioning of slim cigarettes with 'lights', also has possible appeal for established smokers who are trying to quit.

The UK documents also show that product appearance is perceived as a useful marketing tool. Shorter length cigarettes were considered a potential development area by Gallaher. The objective was to communicate a quick, convenient smoke for workers, and a smaller smoke for low tar smokers. For smokers of higher tar cigarettes, a shorter but thicker diameter cigarette was considered. Similar to an 'espresso' coffee, this would offer a quicker smoke, but with a strong taste hit (M&C Saatchi, 1997b). During the development phase for B&H Yellow - a new product specifically designed to appeal to young smokers with its novel bright yellow pack - the design agency suggested yellow could also be used to differentiate the cigarette out of the pack.

> Ways of banding the sticks `Yellow' were discussed:
> - Yellow colouring for cigarette/filter etc
> - Yellow leaves/tobacco
> - 'Yellow' was agreed to be an asset, but no conclusions were reached.
>
> Differentiating the cigarette out-of-pack was agreed to be desirable. (M&C Saatchi [n.d.a], p.26)

Research has also explored how limited cigarette designs are by length and diameter. That these features of cigarette appearance enable consumers to distinguish between different product types and brands provides opportunities for tobacco companies. It has been suggested that cigarette appearance is an under-utilised tool for aiding promotion (Interbrand UK Ltd, 1997).

3.7   Recent developments in pack and product design

Two audits of the main UK tobacco retail press, the first from January 2002 to January 2009, and the second from January 2009 to June 2011, show a change in the level, and type, of tobacco packaging activity in the UK in the last decade since the release of internal industry documents (Ford, 2012; Moodie & Hastings, 2011). Four popular UK trade publications (The Grocer, Off Licence News [OLN], Convenience Store, Forecourt

Trader), were manually searched to monitor any changes in respect to tobacco packaging. The audits monitored three strategies of tobacco packaging - innovation, image and value – and found that the level of tobacco packaging activity, for all three strategies, had increased. There were also reports that these pack changes had resulted in increased market share and sales.

Greater numbers of innovative, image (graphic)-based, and value packs appeared within the much shorter time frame of the second audit. Innovative structural changes to packaging introduced into the UK market, included new slimmer pack shapes, bevelled and rounded pack edges, and novel methods of openings such as side slide and flip-top lighter style openings (Ford, 2012). These innovative developments were predicted by tobacco analysts as a response to the introduction of health warnings, further highlighting the pack's strategic use against external industry pressures (see section 3.3.5).

> With the front and back of packs now almost entirely dominated by health warnings, manufacturers are starting to think quite literally outside of the box when it comes to new designs and re-launches. The launch of different shaped packs, boxes with curved edges, flip-tops or side draws are set to become more commonplace over the course of 2010. (Walker, 2009)

A new type of innovative packaging also appeared during the second audit – sensory packaging. Marlboro Bright Leaf, launched in 2009, was the first pack to produce a 'click' sound when the lid is opened and closed. The pack also has a tactile finish, something a number of other brands have tried to replicate with textured designs, such as the Silk Cut 'touch' pack, Virginia S by Raffles, Marlboro Gold Touch, and Vogue Perle - all arguably more feminine-oriented packs (Ford, 2012).

Brands appear to be in a continuous cycle of modernisation through graphical pack redesign, with a stark increase in limited edition packaging found in the second audit.

Articles within the trade press promoting the new packs highlighted that most of these developments were aimed at younger adult smokers (Ford, 2012). This is a particular concern as while tobacco companies are careful to name young adults as a key target market (Cummings et al., 2002; Hastings & MacFadyen, 2000; Perry, 1999), designers working alongside tobacco companies have outlined the inevitable knock-on effect of tailoring designs for this audience (Helk, 2007).

New cigarette pack sizes such as 14 and 19 packs, different RYO pack sizes, and greater numbers of packs displaying price-flashes were also introduced during the second audit (Ford, 2012).

Additionally, the audits identified that tobacco companies increasingly offer brand variants that feature alternative cigarette diameters, decorative designs and lengths. Continuing from the successful introduction of the slim Silk Cut Superslims cigarettes in 2008 (Moodie & Hastings, 2011), two new sizes were introduced in 2011. Vogue Perle, described as the 'first demi-slim cigarette on the market' (OLN, 2011), was positioned between slims and superslims, and Marlboro Gold Touch was 'slimmer to the touch' than the original, at 7.1mm in diameter (Convenience Store, 2011b). Further superslims sizes were introduced for Allure and Richmond in 2011. The 2010 limited edition Silk Cut Superslims also had a purple floral design covering one end of the cigarette, something not usually seen in the UK (Ford, 2012). Exemplifying the potential for product design to influence growth, sales of slim cigarettes grew by 50% from 23,855 million sticks in 2000 to 35,673 million sticks in 2010 in Europe, despite a general decline in factory manufactured cigarette sales (European Commission, 2012).

It appears that tobacco companies are increasingly finding new ways to use the pack and product as a means of promotion. Within the pack, inlays and innerliners extend its promotional ability (McEwen, 2011a). Outside the pack, printed tear tapes (McEwen, 2011b), 'soft-look' and easy open films (Glogan, 2010), and special coatings to produce 'surface-feel effects' (Glogan, 2013), aim to enhance the tobacco brand experience.

3.8 Conclusion

Chapter 2 established that packaging across consumer goods is a sophisticated marketing tool which communicates the brand to the consumer and helps to build consumer-brand relationships. Both the academic and practitioner marketing literature suggests that it may even be more important than advertising at communicating brand values because the consumer is surrounded by, lives with and interacts with packaging. Individual elements of the pack influence consumer perceptions, while the overall pack design can have an impact on cognitive, affective and behavioural responses. Packaging is also designed to target and identify with the values of segmented populations.

By examining internal tobacco industry documents, Chapter 3 has identified that packaging is equally, if not more so, important to tobacco companies because of restrictions on other types of marketing such as advertising, promotions and sponsorship. A UK set of tobacco documents, housed at www.tobaccopapers.com supports findings from previous analyses of US documents. Tobacco companies are particularly concerned with the segmentation and targeting of young people, particularly through packaging which communicates desired imagery and novelty. The minutiae of graphic design elements, along with structural pack changes, are carefully studied to achieve the best possible outcomes in terms of consumer perceptions and behaviour. The chapter also highlights that, similar to the pack, the design of the individual cigarette – its colour, length and diameter – is also used as a communications and marketing tool. Audits of UK trade press journals suggest that the level of packaging activity in the UK has increased over the last decade. Existing brand packaging is constantly being redesigned, and new brands offer innovative pack and product developments to appeal to consumers. This dynamic nature of tobacco packaging, and that it is driven by creative and technological industries, poses a challenge for tobacco control.

Chapter 4 will critically examine the public health tobacco packaging literature to investigate whether there is acknowledgement of the power of this marketing tool,

recognition of the strategic and innovative nature of the design of packaging and product appearance, awareness that packaging influences different types of consumer responses, and an understanding of packaging's appeal for young people – a particular target for tobacco companies and the focus of this study.

Chapter 4: Tobacco packaging. A public health perspective

4.1 Introduction

Chapter 2 examined academic and practitioner marketing literature and established that packaging, across consumer products, is an important marketing tool which targets different consumer groups through packaging strategies such as value, or through novelty such as structural innovation or unusual graphic design. Through examination of internal tobacco industry documents, Chapter 3 concluded that tobacco companies are preoccupied with using these strategies to target young people. These chapters highlighted that individual elements of packaging such as colour, font, texture and structure provide cues which influence consumer brand and product perceptions, and there is evidence to suggest that packaging design plays a role in the three types of consumer responses – cognitive, affective and behavioural. Tobacco industry documents also show that design cues within cigarettes, such as length, diameter and colour of tipping paper, enable the product to be similarly used as a communications and marketing tool.

This chapter examines the public health perspective of tobacco packaging. It focuses on the primary research currently being used to inform the policy debate on plain packaging. It discusses the focus of this research and how it was presented in a systematic review prepared for the UK Department of Health (4.2), and a subsequent update to this review (Moodie et al., 2012a, Moodie, Angus, Stead, & Bauld, 2013). Searches for the evidence base contained within these two documents were conducted by colleagues working within the Institute for Social Marketing. The search strategy included published and unpublished primary plain packaging research with human populations. Plain packaging primary studies which focused on retail transaction times, for example, were excluded. All relevant studies were assessed for reliability and validity, but no studies were excluded from either review on quality appraisal. In total, twenty-two bibliographic databases were searched, covering the fields of health and

addiction, public policy, business and marketing, social sciences and psychology, and a further sixteen catalogues and websites (see Moodie et al., 2011 for further details of the search protocol). All retrieved documents contained the terms 'tobacco' and 'plain packaging'. The systematic review (Moodie et al., 2012a) covered the time period January 1980 to August 2011, and the review update covered August 2011 to September 3013 (Moodie et al., 2013). The studies included in both reviews were analysed to focus on the three potential benefits of plain packaging identified by the Framework Convention on Tobacco Control (FCTC): reduced appeal; increased salience of health warnings; and reduced false beliefs about the harmfulness of tobacco products.

The researcher then employed a similar search strategy in April 2014 to identify further plain packaging research papers since the review update. A smaller number of databases were searched for published articles only, with the key words 'tobacco' and 'plain packaging': Business Source Premier, PubMed and Web of Science. Resulting papers from this search, the body of work identified by the systematic review and the update were examined in line with the key findings from chapters 2 and 3. This enabled discussion on whether the public health research explores the full extent of the influence that branded packaging can have on consumers. The research studies were categorised and then analysed according to the gaps identified in the literature with regards to: whether public health recognises the strategic nature of pack design (4.3); the awareness that packaging influences different types of consumer responses (4.4); and whether there is any recognition that cigarette appearance is also used as a marketing tool by tobacco companies (4.5). No relevant literature was excluded from inclusion within these sections based on quality. Within each of these areas, to what extent the literature focuses on young people is highlighted. The chapter concludes with a summary of findings and the intention to look for qualitative and quantitative evidence to fill these gaps (4.6).

While the primary research informing the plain packaging policy debate is consistent in its approach and findings, this chapter establishes that there are substantial gaps in the

literature which need to be addressed. Overall there is little research outside the tobacco industry demonstrating the importance and impact of strategic pack design such as novelty and value. While studies have successfully linked the pack to cognitive consumer responses, particularly perceptions of harm, attractiveness and quality, there have been few attempts to link it with affective responses (feelings and emotions) or behavioural responses. The focus on packaging as a communications tool has also meant that the important cues within cigarette appearance have been largely ignored. At a policy level plain packaging is often framed through the potential benefits to young people most at risk of smoking uptake (Department of Health, 2012). Plain packaging studies also often indirectly conclude that plain packaging is likely to reduce youth smoking uptake (Goldberg et al., 1995; McCool et al., 2012). While there is good evidence that plain packaging lowers the appeal of packs and products for adolescents, increases the salience of health warnings and reduces the opportunity for adolescents to be misled about the harms of smoking, there is a dearth of research examining how novelty packaging, and also cigarette design, impact on adolescents.

4.2   Potential benefits of plain packaging: A brief summary of the systematic review

A systematic review of plain packaging research was commissioned by the UK Department Health in 2011 to inform the public consultation on the plain packaging of tobacco products (Moodie et al., 2012a). This review, plus a subsequent update of the literature (Moodie et al., 2013a), have been independently appraised, commended and endorsed by others:

> The Stirling Review constitutes the most extensive and authoritative piece of work on the issue of standardised packaging yet undertaken. (Chantler, 2014, p. 5)

These reviews highlight that the primary research is consistent in its findings. The research is framed to explore the proposed benefits of plain packaging, with three areas highlighted. Plain packaging can: reduce appeal; increase the salience of health warnings; and reduce false beliefs about the harmfulness of tobacco products. A summary of both the systematic review and update with regards to these three areas is presented below.

4.2.1 Reduce appeal

Most plain packaging studies have assessed the impact of plain packs on the appeal of packs, brands and the product. The systematic review and subsequent update identified 37 studies, including 22 quantitative, three mixed methods, 10 qualitative, and two naturalistic studies, which focused on appeal. An assessment of the quantitative studies highlighted that plain packaging consistently reduced the attractiveness and quality of packs and products, and weakened positive smoker attributes associated with branded packs.

Attractiveness was measured by asking participants to rate packs according to items such as niceness (Centre for Health Promotion, 1993), fashionability, stylishness, coolness (Moodie et al., 2011) and attention grabbing (Gallopel-Morvan et al., 2010a). In all cases, plain packs were rated more negatively than branded packs. Studies comparing responses to progressively plainer packs, where the amount of branding is reduced over a series of plain packs, found that the plainest packs were given the lowest ratings on attractiveness measures (Germain et al., 2010; Hoek, Wong, Gendall, Louviere, & Cong, 2011; Wakefield, Germain, & Durkin, 2008; White, 2011).

Quality of cigarettes has been assessed by comparing branded and plain pack ratings of smoothness (Hammond et al., 2009), taste (Hammond, Doxey, Daniel, & Bansal-Travers, 2011; Hammond, Daniel, & White, 2013), quality (Bansal-Travers, Hammond, Smith, & Cummings, 2011), flavour (Wakefield et al., 2008) and cheapness (Centre for

Health Promotion, 1993). Plain packs were consistently rated more negatively on quality measures than branded packs, with progressively plainer packs attracting more negative responses (Germain et al., 2010, Wakefield et al., 2008; White, 2011).

To assess the impact of packaging on smoker identity, cross sectional surveys have most frequently been employed. Firstly, they have been used to identify the differences between branded and plain packs on ratings of personality attributes such as sociable, stylish (Wakefield et al., 2008), slim, glamorous (Doxey & Hammond, 2011), popular, sophisticated (White, 2011), trendy, young, and confident (Germain et al., 2010). Similar to the findings for attractiveness and quality, in all cases plain packs were rated more negatively than branded packs, with progressively plainer packs rated more negatively. Secondly, visual image experiments have found that plain packs are thought less appropriate for the image of the person who would normally be associated with the regular branded version of the pack (Goldberg et al., 1995; Swanson, 1997). Finally, several studies assessed whether packs were perceived to be targeted at a similar group to those participating in the study (Centre for Health Promotion, 1993; Donovan, 1993; Gallopel-Morvan et al., 2010a; Moodie et al., 2012b; Rootman & Flay, 1995). Overall, the findings show plain packs to be incongruent with the desired self-image of those involved in the study. Plain packs were rated appropriate for old people, while branded packs were perceived to be for cool and young people.

The systematic review outlined that the qualitative studies exploring pack appeal suggest several areas which may contribute to the negative perceptions surrounding plain packs. Plain pack colours were associated with negative connotations such as budget packaging (van Hal et al., 2012), death (CNCT, 2008a), dirt and poison (Gallopel-Morvan, Gabriel, Le Gall-Ely, Rieunier, & Urien, 2010b). Plain packs were found to weaken attachment to brands by making it more difficult for smokers to relate to their own brand when presented in a plain pack (Centre for Behavioural Research in Cancer, 1992; CNCT, 2008b; Moodie & Ford, 2011). Plain packs take away the opportunity to infer symbolic meaning from the design cues, removing the connection with desired smoker identity

(CNCT, 2008b; Hoek et al., 2012, Rootman & Flay, 1995). This means that plain packs expose the reality of smoking as something that's harmful and dirty (Hoek et al., 2012a; Moodie et al., 2011). For all these findings there is good evidence of the reduced appeal of plain packaging for young people and adults alike.

4.2.2 Increase the salience of health warnings

The reviews found that 20 studies, which used a range of methodologies such as experimental designs, cross sectional surveys, mixed methods and qualitative focus groups, have assessed pack design on warning recall, the attention paid to warnings and the perceived seriousness and believability of health warnings. Overall, plain packaging was found to enhance recall of, attention to, and the seriousness and believability of warnings, although this appears to be moderated by warning message, size and position on the pack.

Warning recall was consistently assessed by exposing participants to packs and then asking them to recall the information they could remember from the packs (Al-Hamdani, 2013; Beede & Lawson, 1992; Gallopel-Morvan et al., 2010a; Goldberg et al., 1995; Germain et al., 2010; Rootman & Flay, 1995). Four out of six studies found that recall was greater for plain packaging compared with regular packaging (Al-Hamdani, 2013; Beede & Lawson 1992; Gallopel-Morvan et al., 2010a; Rootman & Flay, 1995). Mixed results were reported in the Goldberg et al. (1995) study. In a matching exercise, participants were more likely to match the correct warning with the branded pack for two out of three warnings. However, in an unaided recall exercise, warning recall was higher for the plain pack. The authors proposed that the very brief exposure time within the study design may have affected results. Germain et al. (2010) compared two plain packs with different sized warnings and failed to find any differences. It was suggested that familiarity with the warning, which had been on packs for several years at the time of the study, may have influenced the findings.

Visual attention to packaging has been explored in three studies with experimental designs (Maynard, Munafò, & Leonards, 2013; Munafò, Roberts, Bauld, & Leonards, 2011; Ramunno, Mandeville, & Yarrow, 2012). These studies employed eye-tracking technology to measure eye movements towards warnings on branded and plain packs. Maynard et al. (2013) observed more eye-movements towards warnings on plain packs than branded packs for experimental and weekly smokers, but not for non-smokers. Munafò et al. (2011) observed the same finding for weekly smokers and non-smokers. Neither study observed an impact on daily smokers. Ramunno et al. (2012) found that more time was spent looking at other areas on the pack front than the warning, for branded and plain packs. However, the time spent on the warning was greater for the plain pack than branded pack, supporting the findings of the other two studies.

Qualitative studies shed some light on why the above findings may occur. Firstly, the branding or 'clutter' on regular packs has been found to distract from the health warning. Taking away the competition from colour and other graphical design elements made health warnings more noticeable on plain packaging (CNCT, 2008b; Gallopel-Morvan et al., 2010b; Scheffels & Sæbø, 2013; van Hal et al., 2012). Secondly, the dullness of a plain pack enhanced the seriousness and believability of warnings (CNCT, 2008b; McCool et al., 2012; Moodie et al., 2011; van Hal et al., 2012). McCool et al.'s (2012) study also found that the branded packs with health warnings often presented a contradictory message. This resulted in scepticism among participants about the credibility of the warning message.

Much of this work on warnings salience has included young people within their samples (age < 18), eleven in total, with six exclusively youth samples (Beede & Lawson, 1992; Germain et al., 2010; Goldberg et al., 1995; McCool et al., 2012; Rootman & Flay, 1995; van Hal et al., 2012).

4.2.3 Reduce the false beliefs about the harmfulness of tobacco products

Twenty-three studies were identified as having assessed the impact of pack design on perceptions of product harm and strength. Primarily of quantitative design, respondents were usually asked to rate plain packs against branded packs to see how they differ, or to rate different designs of plain packs to see which is the most effective at communicating harm. Measures included perceptions of the amount of tar and/or nicotine, the level of harmfulness, and how easy the pack and/or product would be to quit. The review findings show that pack colour and on-pack product descriptors affect responses.

Generally, studies using white plain packs showed a reduced perception of harm compared to branded packs (Bansal-Travers et al., 2011; Germain et al., 2010; Hammond et al., 2009). One qualitative study highlighted that, in line with information within tobacco industry documents (see also sections 2.5.1 and 3.3.2), consumers are accustomed to colour-coding for tobacco packs, with a white pack colour indicating weaker 'low tar' products (Moodie & Ford, 2011). Conversely, studies examining the impact of darker plain packs - most commonly brown (Hammond et al., 2011, 2013; Wakefield et al., 2008; White, 2011) but also grey (Gallopel-Morvan et al., 2012) - generally find that plain packs are rated significantly more harmful than branded packs (Gallopel-Morvan et al., 2012; Hammond et al., 2011, 2013; Wakefield et al., 2008; White, 2011), and associated with higher levels of nicotine and tar (Wakefield et al., 2008).

On-pack descriptors have also consistently been shown to influence perceptions of harm. Although, descriptors such as 'light' and 'mild' have been banned in the EU since 2003 as they were found to mislead consumers with regards to the health risk of smoking (Shiffman, Pillitteri, Burton, Rohay, & Gitchell, 2001; Wilson et al., 2009), tobacco companies have replaced these with alternatives such as 'smooth', 'gold' and 'slims' (Mutti et al., 2011). To assess the impact of these descriptors, participants have been asked to rate packs with descriptors, against those without, both on branded and plain

pack designs. Branded pack descriptors assessed as indicating 'lighter' cigarettes are perceived to be easier to quit than regular branded packs (White, 2011). For plain packs, those with descriptors have been found to be associated with lower tar, lower health risk and easier to quit than plain packs without descriptors (Hammond et al., 2009).

Only seven of the 23 studies included in the reviews have included young people in their samples (Environics Research Group, 2008a; Gallopel-Morvan et al., 2010a; Germain et al., 2010; Hammond et al., 2009, 2013; McCool et al., 2012: Moodie et al., 2012b), with only three exclusively youth samples (Germain et al., 2010; McCool et al., 2012; Moodie et al, 2012b). However, these studies support the findings that, for younger participants, darker and plain packs, and packs with no descriptors, are also associated with increased harm.

Summary

Highlighting the potential benefits of plain packaging clearly demonstrates one side of the argument for implementing plain packaging policy. This approach provides consistent and robust evidence, utilising differing methodologies, of how plain packaging could work as a tobacco control measure. Furthermore, there is evidence that the three benefits of plain packaging would likely impact on young people. However, this body of work tends to overlook the other side of the plain packaging argument, which is that branded packaging is a powerful marketing tool, strategically used to influence consumers. Demonstrating this side of the argument strengthens the case for placing controls on packaging design. While many research papers acknowledge at the outset that packaging is an important marketing tool, often referencing US tobacco industry documents, few go into any depth to explain this further or provide empirical evidence to show the influence of branded packaging design.

4.3 Strategic pack design

Chapters 2 and 3 established that packaging design is strategically used to communicate with, appeal to and target segmented groups of consumers (sections 2.4, 3.4). Common strategies across consumer products include value packaging, such as price-marked packs and alternative size offerings (section 2.4.3), and novelty packaging such as special-editions (section 2.4.2) and structural and tactile innovation (section 2.4.1). All of these strategies aim to engage consumers with the brand, enhance product perceptions, and reinforce brand imagery. Similarly, communicating desired imagery, providing value and offering something 'new' through novelty packaging are particular strategies used by tobacco companies to appeal to young people (section 3.4.1). Audits of recent trends in tobacco pack design (section 3.7) have shown increasingly frequent redesign of packs and rising numbers of limited-edition packs, new size offerings and innovative pack shapes, textures and methods of openings (Ford, 2012; Moodie & Hastings, 2011). Relatively few studies, however, have included these different types of packaging within their designs to assess the impact on consumers.

Gallopel-Morvan et al. (2012) is the only study to examine the impact of limited edition packaging. This study utilised a nationally representative sample in France (n=836) and conducted in-home face-to-face computer assisted interviews to survey adult smokers and non-smokers. Three pack types for each of three popular brands in France were examined on-screen: a 'regular' branded pack; a 'limited edition' branded pack; and a grey 'plain' pack version of the same brand. For each brand, respondents were asked to rate which of the three packs was (a) most effective in getting attention, (b) most attractive, (c) most effective in convincing young smokers to start, (d) most effective in motivating smokers to quit, (e) most effective in motivating smokers to reduce consumption, and (f) most effective for motivating youth to purchase the pack. For all three brands, the regular pack was perceived less attractive and less likely to gain attention or motivate youth purchase than the limited edition pack. Furthermore, younger adults (aged <35 years) were significantly more likely than older adults to rate the

limited edition packs more positively than the regular pack on these three measures. Comparing the limited edition pack against the regular pack highlights the added value that this type of packaging provides tobacco companies. In contrast, for each brand, the plain pack version was viewed significantly more negatively than the regular and the limited edition pack on all measures.

Six studies have included packs with innovative shapes or methods of openings within their designs. Moodie and Ford (2011) utilised a qualitative study design to explore young adult perceptions of structural pack innovation. Using purposive sampling, eight focus groups were conducted with 18 to 35 year olds (n=54) in Glasgow, Scotland. Groups were segmented by age (18-24, 25-35), gender, social grade (ABC1, C2DE), and heaviness of smoking (light/moderate smokers, heavy smokers). Participants were shown three branded packs with innovative openings: a side slide opening pack; a pack which opens like a book; and a pack with a 'Zippo' lighter-style opening. While the female smokers showed greater interest in the novel openings than male smokers, both genders perceived that these packs would have little impact on brand selection. Participants were then shown a branded 'perfume' type, tall and narrow superslims pack, which was a new and unfamiliar pack at the time of the study. While the males appreciated and were impressed by the design, they considered it to be a feminine-oriented pack and said they would not be tempted to use it. In contrast this pack generated much enthusiasm and interest among the females, particularly the younger females, some of who expressed a desire to purchase. The smaller size of this pack communicated positive attributes and functionality to the females in the study. It was perceived as trendy and feminine, a convenient size for a handbag or a night out, and was indicative of reduced harm. In an attempt to explore the impact of structural innovation alone, this study also showed participants three different types of plain brown packs (a regular flip-top pack, a 'perfume' type pack, and a side slide opening pack). While males preferred the standard flip-top pack, females still favoured the 'perfume' type plain pack with some still seeing positive aspects in the small design despite finding

the pack to be an unappealing colour. This suggests that even with other branding elements removed, pack shape alone is able to influence perceptions.

The three plain packs explored in Moodie and Ford (2011) which differed in method of opening and shape were further assessed in an online survey with 10 to 17 year olds (n=658) (Moodie et al., 2012b). Within this study participants were shown an on-line image of the three brown plain packs and were asked (a) which pack they liked the most and (b) which pack people their age would most likely smoke. Ever-smokers were more likely than never-smokers to express a preference, with the largest proportion of young smokers favouring the side slide opening pack. Among the never smokers, those classed as susceptible were more likely to state a preference, again with the highest proportion favouring the slide pack. Of those who made a judgment about the style of pack they thought someone their age would smoke, the highest proportion of ever-smokers chose the slide pack, while the highest proportion of susceptible never-smokers chose the regular flip-top pack. This contrast in findings between the pack preferences of young adults (Moodie & Ford, 2011) and adolescents (Moodie et al., 2012b) suggests that novel pack designs may have greater appeal for younger smokers, and those susceptible to smoking, in line with findings from industry documents (see section 3.4.1).

A further study by Borland, Savvas, Sharkie and Moore (2011) compared innovative structural pack design in the context of plain packaging. In a web-based survey of young adult ever-smokers aged 18 to 29 years (n=160), Borland et al. utilised an experimental design to compare five plain cigarette packs with different shapes and five plain cigarette packs with different methods of opening. Respondents viewed computer-generated on-screen images of the beige plain packs and were asked to rate them in terms of perceived attractiveness, quality of the cigarettes, and the distraction from the health warning. For pack shape, the two packs with novelty edges (a pack with rounded edges and a pack with bevelled-edges) were rated more attractive, and with higher quality of cigarettes, than three rectangular shaped packs. When respondents were asked which shape they would prefer their cigarettes to come in, the most preferred packs were

the same two packs with novel edge designs. There were fewer differences between the packs with regards to method of opening. However, the slide side opening pack was rated higher than the pack with the regular flip-top opening on quality of cigarettes. When asked for their preferred pack, participants' most preferred method of opening was the regular flip-top opening. This is consistent with the findings of Moodie and Ford (2011) where young adult smokers perceived novel methods of openings to have little impact on brand choice. Borland et al.'s study also found that novel shapes and methods of openings were significantly higher in the degree of distraction from health warnings than a 'regular' shaped pack with flip-top opening.

Three studies with a similar experimental design, but different samples, explored the impact of female-oriented packaging on young females (Doxey & Hammond, 2011; Hammond et al., 2011, 2013). However, while these studies included novel slim and superslim feminine pack shapes within their designs they fail to highlight the impact of these pack shapes compared to more regular shaped packs. Doxey and Hammond (2011) surveyed 18 to 25 year olds in Canada (n=512). Participants were asked to view eight cigarette packs on screen according to one of four conditions: (1) fully branded female-oriented packs including slims and superslims packs; (2) the same female-oriented packs with brand descriptors removed; (3) a 'plain' white pack version of the same female-oriented packs; (4) fully branded Canadian packs without any feminine characteristics. Participants rated each pack on four measures: brand appeal; brand taste; tar delivery; and health risk. They were also asked to rate each pack according to eight smoker traits: female/male; glamorous/not glamorous; cool/not cool; exciting/boring; popular/not popular; attractive/unattractive; slim/overweight; and sophisticated/not sophisticated. While the study misses an opportunity to examine differences in perceptions between the different pack shapes, the findings do provide further evidence that increasingly plainer packs are rated more negatively. Fully branded female packs were rated higher on appeal and taste, and were also associated with more positive smoker traits, than the same packs without descriptors, 'plain' packs, and non-female brands. This highlights the influence of the design cues within female-oriented packaging such as slims and superslims packs.

There were however, few differences with regards to tar delivery or perceptions of health risk.

A similar methodology was subsequently utilised by Hammond et al. (2011) and Hammond et al. (2013). While these two studies used a brown plain pack instead of white, and targeted different female populations (826 18 to19 year olds in the US and 947 16 to 19 year olds in the UK respectively), the findings were similar to Doxey and Hammond (2011), showing that plain versions of feminine-oriented packaging are viewed more negatively than branded versions of feminine-oriented packaging, and that this finding holds in different geographical locations with different samples.

Summary

Despite an increase in novel pack designs within the UK (see section 3.7), there appears to be a dearth of research exploring their impact. Although seven studies in total have included novel packs within their designs, only one study has explored the impact of limited edition packaging (Gallopel-Morvan et al., 2012). A further three studies have explored the impact of innovative method of opening and pack shape compared to a regular pack shape. While there is evidence within industry documents that innovation holds particular appeal for youth only one of these studies included a fully adolescent sample (Moodie et al., 2012b). The reliance on two-dimensional computer generated images within these studies, while apt, particularly for surveys with large sample sizes, does raise questions on whether the true dimensions of packs with an innovative shape, method of opening and size can be fully appreciated by participants. The lack of qualitative research has also limited the opportunity to explore perceptions of novel pack designs in any depth. Finally, there has been no attempt to explore the impact of value or sensory packaging, despite increasing numbers of price-marked packs, new size offerings and tactile packs on the market.

4.4   Consumer responses to pack design

Bloch's model of responses to product form, outlined in Chapter 2, is conceptually useful for examining the scope of consumer responses to packaging (see Figure 2.3). This model suggests that responses to design exist on cognitive, affective and behavioural levels, with likely interaction between the three types, and moderated by other influences such as design goals and constraints, individual design preferences, cultural context and consumer characteristics. Within the public health literature, both qualitative and quantitative studies of tobacco packaging tend to examine cognitive responses, i.e. pack and product beliefs and categorisation. For example, qualitative studies have assessed attitudes towards branded and plain packs (Goldberg et al., 1995; Hoek et al., 2012a; Moodie & Ford, 2011) and the brand imagery generated in the minds of participants (Beede et al., 1990; Centre for Health Promotion, 1993; Rootman & Flay, 1995). Within experimental studies, participants are often asked to evaluate and make judgements on pack attractiveness, product quality, and smoker identities, by rating packs against pre-defined descriptors. Less attention has been paid to observing behavioural responses to tobacco packaging, or whether packaging, as is the case with advertising, impacts on feelings and emotions – affective responses (Figure 4.1). The studies which have included elements of behavioural and affective responses are discussed below.

Figure 4.1: The three dimensions of consumer responses to packaging
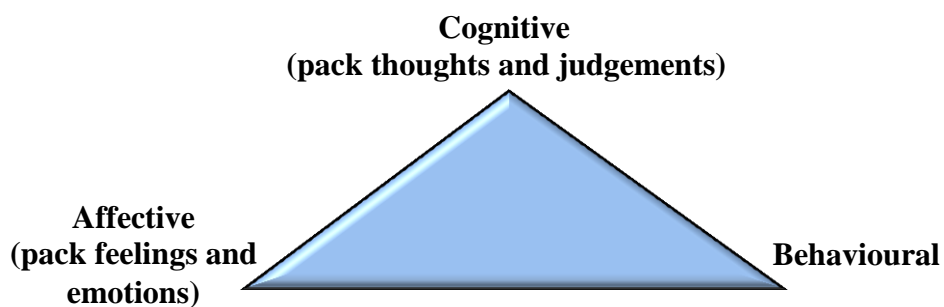
4.4.1 Behavioural responses

Rather than providing direct evidence of whether packaging impacts on behaviour, most of the research in this area has relied on asking participants to make judgements on the potential impact of plain packaging, on either their own, or other people's, smoking behaviour. For example, both adults and young people have been repeatedly asked within quantitative and qualitative studies whether plain packaging would deter young people from trying smoking (Centre for Health Promotion, 1993; Donovan, 1993; Gallopel-Morvan et al., 2012; Goldberg et al., 1995; Hoek et al, 2012a; Moodie & Ford, 2011; Scheffels & Sæbø, 2013; Uppal, Shahab, Britton, & Ratschen, 2013; van Hal et al., 2012). While the response has been mixed, the majority of studies conclude that plain packaging is perceived to have a likely positive impact on reducing youth uptake. A similar pattern emerges with regards to the perceived impact on smokers in general, with most studies concluding that plain packaging would likely have a positive effect on cessation (Beede et al., 1990; CNCT, 2008a; Environics Research Group, 2008a, 2008b; Gallopel-Morvan et al., 2012; van Hal et al., 2012). Qualitative studies have suggested that this potential effect may occur from plain packaging triggering quitting thoughts and also removing the temptation to smoke (CNCT, 2008a; van Hal et al., 2012).

A slightly different approach by Pechey, Spiegelhalter & Marteau (2013) elicited the opinions of 33 tobacco control policy experts via telephone interviews. The experts were provided with a copy of the original systematic review (Moodie et al., 2012a) and asked to provide a best guess estimate of expected prevalence for adult smoking, and children trying smoking, two years after the hypothetical introduction of plain packaging in their geographical location. The experts expected that the impact on children trying smoking would be greater than the impact on adult smoking, with a median estimate of a three percentage point decline in children smoking, compared with a one percentage point decline in adults. However, most of the experts agreed that the two-year time frame given was not substantial enough to see an impact in prevalence rates, with most considering a greater impact over a longer term. While these studies provide data on the

perceived impact of plain packaging from young people's, adults and tobacco control experts perspectives, it leaves a substantial gap in the literature, as few direct behavioural responses to packaging have been observed.

In an attempt to address this issue, five studies have included a behavioural pack selection task within their methodologies, asking participants to choose between branded and plain packs. Wakefield et al. (2012) surveyed 1203 Australian smokers (age >18) on-line. Respondents were allocated one of six cigarette pack conditions which varied by size of pictorial health warning and whether the pack was plain brown or branded. Within each condition each participant viewed six brands including premium, mainstream and value brands. Respondents were asked: 'If you ran out of cigarettes and only the packs below were available in the store you went to, which pack would you be most tempted to buy?'. Respondents could either choose one of the packs they had seen or none. Respondents who viewed the plain pack condition were more likely to indicate that they would not choose any of the packs they had seen compared with those who viewed branded packs. Older respondents were also more likely to indicate that they would not buy any of the packs they had seen than younger respondents.

Two studies with comparable experimental designs produced similar findings (Hammond et al. 2011, 2013). Within these studies non-smoking and smoking young females were asked which pack, from their experimental condition, they would like to be sent upon completion of the study. Similar to Wakefield et al. (2012), respondents who viewed the plain pack condition were significantly less likely to accept the offer of a pack. No differences were observed between conditions for smoking status or age.

Two studies with younger samples included a pack selection task as part of their focus group designs. D'Avernas et al. (1997) asked participants aged 12 to 13 and 16 to 17 to choose which pack they would most like to take home from a choice of existing US packs with branded or plain beige pack designs. None of the 12-13 year olds and only 6% of 16-17 year olds chose the plain pack, compared with 88% of 12-13 year olds and

73% of 16-17 year olds choosing the branded pack. However, in a previous study by The Centre for Health Promotion (1993), when 16-17 year olds were offered either a plain white pack or branded pack as payment for participating in the research, no significant difference was found, but more males chose the plain pack over the branded pack. While the authors attribute this finding to a novelty effect, critics argue that as this is one of the few behavioural responses assessed within the literature, it discredits one of the main arguments for plain packaging: that it makes the product less appealing (Amit, 1994; Decima Research, 1994; Imperial Tobacco, 2008; Keegan & Company, 2008).

Despite the limited evidence showing direct behavioural responses to packaging, plain packaging studies often indirectly conclude that plain packaging is likely to reduce youth smoking uptake (Goldberg et al., 1995; McCool et al., 2012). This contrasts with research intended to inform other types of tobacco marketing control measures. Here the public health literature, through observational and longitudinal studies, has consistently demonstrated a robust association between exposure to, and appreciation of, tobacco advertising and promotions and adolescent smoking susceptibility, a predictor of future tobacco use, or actual smoking behaviour. (DiFranza et al., 2006; Lovato et al., 2011; National Cancer Institute, 2008). Recently, a similar association has been found with point-of-sale (POS) displays (Paynter & Edwards, 2009; MacKintosh et al., 2012; Spanopoulos et al., 2014). Evidence demonstrating links between different forms of tobacco marketing and youth smoking provides the main rationale for implementing bans on tobacco advertising, promotion and sponsorship and the open display of tobacco products within the retail environment; young people are influenced by these forms of marketing and must therefore be protected against them. Surprisingly, for tobacco packaging, a key marketing tool, there has been no attempt to demonstrate a link between pack design and adolescent smoking. This is despite the recognition within public health that wider environmental factors such as tobacco marketing influence young people's smoking, along with individual factors such as demographics, personality and smoking attitudes, and social factors such as family and peer influences

(Amos, Hillhouse, Alexander, & Sheehy, 1992; Amos, Angus, Bostock, Fidler, & Hastings, 2009).

The difficulty in examining behavioural responses to plain packaging is that until December 2012 plain packaging did not exist in any jurisdiction. Two naturalistic studies, identified in the systematic review and update, have attempted to provide evidence of how young adult smokers respond to plain packaging in a real world setting before it is introduced. Moodie et al. (2011) asked male and female smokers in Scotland, aged 18 to 35 years (n=140), to use a plain brown pack for two weeks and their own regular branded pack for two weeks. Participants completed a questionnaire twice a week in which they were asked to report any behaviour change and/or avoidant behaviour. When using the plain pack, participants were significantly more likely to report keeping the pack out of sight, covering the pack, smoking less around others and forgoing a cigarette, than when they were using their regular pack. While the study's statistical analysis does not allow for any gender differences to be observed, an apparent gender difference emerged in post-study telephone interviews with 18 of the original participants. Within the interviews, more females than males spoke of reducing their consumption, offering cigarettes to others less frequently and hiding the pack so others could not see it when smoking from the plain pack. To further investigate this, the initial study was then replicated with a larger sample of young adult female smokers aged 18 to 35 (Moodie & MacKintosh, 2013). As before, participants reported that they were more likely to keep the pack out of sight, cover the pack, forego cigarettes and smoke less around others when using the plain pack. Reported consumption was also lower with the plain pack.

The authors of the naturalistic study acknowledge however, that smokers may respond differently if only plain packs are available on the market. In December 2012, Australia was the first and remains the only country to have introduced plain packaging. This provides a unique opportunity to provide real world observations of the impact of plain packaging on behaviour. Currently the evidence base is small as only two studies have

emerged from Australia so far (Wakefield, Hayes, Durkin, & Borland, 2013; Young et al., 2014).

The first study from Australia, conducted during the implementation phase of plain packaging, examined the introductory effects of the legislation on quitting thoughts and intent to quit (Wakefield et al., 2013). Australian adult smokers (n=536) were asked via a telephone survey to rate how much quitting was a priority in their life, how often they had thought about quitting in the past week, whether they were planning to quit in the next month, and whether they were considering quitting in the next six months. Those respondents smoking from a plain pack at the time of the study reported that quitting was a significantly higher priority in their life than those smoking from a branded pack. Smokers of plain packs were also twice as likely to have thought about quitting in the past week. There were no differences, however, between smokers of plain and branded packs, with regards to quit intentions within the next month or the following six months. The results are confounded, however, by the availability of both branded and plain packs at the time of the study. Smokers with differing intentions may have purposely avoided, or sought, to use a plain pack.

Young et al. (2014) assessed the number of calls to a smoking cessation helpline during the introduction of plain packaging in 2012 comparative to the number of calls made during the introduction of pictorial health warnings in 2006. The study found that the increase in calls was comparable for both measures. However, this behavioural response to the plain packaging legislation continued for a longer period of time: the increase in the number of calls was sustained throughout the study period, suggesting that plain packaging may be linked with quit attempts. In this regard, both of the naturalistic studies and the two Australian studies present similar findings in that plain packaging increased the desire to quit or thoughts about quitting.

Summary

It is likely that direct behavioural evidence from Australia on the impact of plain packaging will emerge as further data is collected. However, for the most part the public health literature has failed to consider the potential impact of branded packaging design, for example, on purchase and consumption, but also on the kind of approach behaviours as defined by Bloch (1995), such as spending time examining a product or displaying and showing the product to others (see section 2.8). One study by Goldberg et al. (1995) noticed physical reactions when 12-17 year olds were shown plain packs such as 'grimaces, squirming in their seats, laughter and verbal exclamations' (Goldberg et al., 1995, p. 42). Qualitative studies provide unique opportunities to observe and record such behavioural responses. However, of particular value to policy makers trying to justify the necessary control of branded packaging design would be evidence which establishes whether an association between branded packaging and youth smoking exists.

4.4.2   Affective responses: Feelings and emotions

While relatively few studies have directly considered affective responses to tobacco packaging, there is some evidence that this type of response exists. Two quantitative naturalistic studies have explored negative smoker feelings in relation to pack usage (Moodie et al., 2011; Moodie & MacKintosh, 2013). The first naturalistic study asked young adult male and female smokers to rate, on five-point scales, feelings generated by using a plain brown pack in comparison to their own branded pack: 'embarrassed/not embarrassed'; 'ashamed/not ashamed'; and 'unaccepted/accepted'. Participants were also asked to rate their feelings about smoking: 'enjoyable/not enjoyable' and satisfying/not satisfying'. Participants reported feeling more embarrassed, ashamed and unaccepted when using the plain pack. They also rated the smoking experience as less enjoyable and satisfying (Moodie et al., 2011). The second naturalistic study with young adult female smokers produced similar findings (Moodie & MacKintosh, 2013). When a small sample of participants were followed up via telephone interview one week after the original study, participants, notably females, also reported feeling 'different',

'guilty', 'mortified', and 'horrible' when using the plain pack. It was primarily females who also reported within the interviews that they had observed a change in their smoking behaviour while using the plain pack.

While it is not possible to know whether these negative feelings played a role for those who reported a reduction in consumption, a possible link between negative affective responses, such as disgust, and smoking cessation has been suggested by Hoek, Hoek-Sims & Gendall (2013). However, the lack of research in this area has been noted:

> We know little about how disgust-arousal affects feelings of personal vulnerability, or whether it stimulates cessation-related responses, elicits reactance, or has other effects. (Hoek et al., 2013, p. 9)

Within anti-smoking advertising, emotional responses have been linked to greater message effectiveness when trying to communicate with young people (Biener & Ming, 2004; Terry-Mcelrath et al., 2005). Similarly, Hoek et al. (2013) explored anti-smoking messages in the form of pictorial health warnings to see which types of messages could elicit the strongest emotional responses. Seventeen in-depth interviews were conducted with young adult smokers in New Zealand, aged 18 to 30. Participants viewed novel pictorial health warnings and were asked to discuss their interpretation of the message and how the warnings made them feel about smoking. The warnings depicting social risk, such as those highlighting smoking's social unacceptability and smokers' loss of attractiveness resulted in more negative feelings among participants than the warnings depicting long-term health risks. This finding was heightened among social smokers. One possible explanation for this provided by the authors is that the social risk warnings conflict with the identity which smokers seek, generating thoughts that they would be perceived unattractive and undesirable by non-smokers. These messages also portrayed social isolation from smoking rather than acceptance. In this regard, the warnings reduced the symbolic elements of smoking, such as glamour or rebellion, and reminded

smokers of the negative connotations of smoking. This in turn enhanced participants' negative feelings about smoking.

Although Hoek et al.'s (2013) study focused on feelings generated from the health warning only, within other qualitative packaging studies there is evidence that a plain pack design can also strip away the symbolic properties associated with branded design, and be associated with negative feelings. Within focus groups with 18 to 25 year old smokers, participants discussed the shame which plain packaging communicates by representing an object which reduced social standing rather than one with symbolic meaning which can foster social standing (Hoek et al., 2012a).

Other qualitative research has associated negative feelings specifically with plain pack colour. A focus group study by Gallopel-Morvan (2010b) with 15 to 45 year old French smokers found that a grey plain pack was associated with sadness and a brown pack with warmth, while a white plain pack was associated with cleanliness – one of the main reasons why white is not recommended as a plain pack colour. Negative feelings in response to a plain brown pack were also observed in focus groups with young adult smokers aged 18 to 35 in Scotland (Moodie & Ford, 2011). In this instance smokers reported that smoking from a plain pack would make them feel differently and worse about smoking as the brown colour had negative associations such as excrement, dirt and tar.

Summary

These studies provide evidence that plain packaging can arouse negative feelings in smokers, with the suggestion that this may have a role to play in reducing consumption (Hoek et al., 2013). The assumption which can perhaps be taken from these studies is that, conversely, branded tobacco packaging would have the ability to generate positive affective responses. However, there is lack of research in this area. Furthermore, the attention has been focused on young adult smokers. Only one study has included adolescents from the age of 15 within its sample (Gallopel-Morvan et al., 2010b). With

adolescents most susceptible to the symbolic properties communicated by branding (see section 2.7), and with this symbolism closely linked to feelings (Hoek et al., 2012a, 2103), evidence in this area would help further understand the power of packaging.

4.5 Cigarette appearance

Marketing literature suggests that cigarette characteristics, such as length, diameter, colour and decorative elements, are intrinsic product cues which contain the message of the product and infer product attributes (see section 2.6). Tobacco industry documents have highlighted that these external design elements of cigarettes are used by tobacco companies to target and communicate to segmented groups of consumers, notably females and 'starter' smokers (see section 3.6). While this marketing role of the individual cigarette is acknowledged within tobacco control, only two research studies outside the tobacco industry have examined consumer response to cigarette appearance.

Borland and Savvas (2013) was the first published study which examined whether cigarette appearance is used as a method of product differentiation. This experimental study examined 18-29 year olds (n=160) perceptions of on-line images of cigarettes which differed in length, diameter, tipping paper colour and decorative and branding design. Respondents were asked to rate cigarettes on attractiveness, quality and taste. Cigarettes with a standard length and diameter were perceived most attractive and highest quality, with gold bands and branding elements contributing to these perceptions. Males were also more likely to rate slimmer cigarettes as less attractive.

This gender difference is unsurprising given that slimmer cigarettes have been traditionally marketed at females (Carpenter et al., 2005). In a qualitative study, Hoek, Robertson, Hammond, & McNeill (2012b) explored how young adult females, aged 18 to 24 (n=14), interpret different cigarette characteristics using photographs as visual stimuli. Results from in-depth interviews showed young females' preference for slim white cigarettes. Although a small sample size, this exploratory study showed how slim

designs helped to distance participants from the negative associations of smoking by portraying a glamorous, slim, elegant and clean image. Furthermore, the study explored the potential benefit for dissuasively coloured cigarettes, such as cigarettes with dark green filter tips. These designs were strongly disliked and evoked thoughts around the health implications of smoking, leading the authors to conclude that dissuasive sticks could be used to complement plain packaging legislation.

Summary

Both these studies highlight the promotional role of cigarettes and provide some support for legislation which controls cigarette appearance. These studies also demonstrate the usefulness to tobacco companies of being able to differentiate cigarettes through branding elements and cigarette dimensions. However, no research to date has examined the impact of cigarette appearance on adolescents and whether slimmer cigarettes impact on product attributes such as perceived attractiveness or level of harm, in line with the TPD initial recommendations. It is also uncertain whether the reliance on two dimensional computer generated images of cigarettes, as per the two studies outlined above, enables the true dimensions of slimmer cigarettes to be appreciated.

4.6 Conclusion

The focus of the public health literature has been to highlight the potential benefits of plain packaging. A systematic review of the evidence and a subsequent update of the literature have shown that there is good evidence demonstrating that plain packaging reduces the appeal of packs and products, increases the salience of health warnings and reduces the opportunity for consumers to be misled about the harms of smoking. Within each of these areas there is evidence of the impact on adolescents. However, based on the findings of chapters 2 and 3, there are substantial gaps in the evidence base, which does not fully reflect the sophistication of packaging as a marketing tool. Few studies have included packs other than 'regular' branded packs in their designs, assessed affective or direct behavioural responses to packaging, or explored whether cigarette

appearance also functions as a marketing tool. Furthermore, this chapter has established that for each of these areas, there has been a lack of empirical research conducted with adolescents.

As stated at the outset of the chapter, the primary research within this study aims to fill these gaps. Firstly, exploratory qualitative methods will examine if, and how, adolescents engage with different styles of packaging, such as novelty and value, which are used to specifically target adolescents. It will also explore adolescent perceptions of cigarette appearance to determine whether tobacco companies use intrinsic product cues to influence consumers (Chapter 6). Secondly, quantitative research methods will be used to establish whether or not an association between adolescent smoking and tobacco packaging exists (Chapter 7). The quantitative research will also build upon the qualitative research by testing hypotheses developed from the qualitative findings. On a methodological level, both qualitative and quantitative methods will investigate whether it is possible to observe adolescents' cognitive, affective and behavioural responses to packaging.

The following chapter will describe the study objectives, the study design and the mixed methodology used.

Chapter 5: Methodology

5.1 Introduction

The previous chapters have identified the need for research which examines if, and how, different styles of packaging and product design impact on adolescent responses. Firstly, this chapter will describe how the extended literature review informed the overarching aims of the study and highlighted the need for primary research (5.2). It will then discuss the rationale for selecting a mixed methods approach (5.3), followed by a description of the study design (5.4) and some mixed methods considerations (5.5). Finally, the chapter will then discuss the qualitative (5.6) and quantitative (5.7) data collection stages.

5.2 The research objectives

This study attempts to bridge the gap between marketing and public health. It aims to bring a deeper understanding of whether, and how, tobacco packaging and product design act as a marketing tool, and what effect this has (if any) on adolescents. A review of the academic and practitioner marketing literature identified that packaging is a sophisticated tool which uses a variety of strategies and design elements to influence consumers. Bloch's (1995) conceptual model of responses to product form, suggests that packaging may impact on cognition, affect and behaviour.

An examination of internal tobacco company documents highlighted that tobacco companies actively target young people. Packaging strategies such as novelty and value are specifically designed to appeal to this group and the pack's strength in communicating brand imagery, a particular concern of young people, was highlighted. The documents also show that product form is used to communicate messages to consumers.

However, despite an increase in the availability of novelty packaging, such as limited editions and packs with innovative structures, limited attention has been paid to these designs within public health packaging research. While the research demonstrates cognitive impacts of branded and plain packaging on consumer perceptions such as level of harm, there is a scarcity of research which has examined affective or behavioural responses. Furthermore, there has been no attempt to establish whether or not a direct link between packaging and youth smoking exists. Finally, while public health attention has been focused on showing the possible benefits of plain packaging, the impact of product form as a marketing tool has largely been ignored, while the availability of new cigarette sizes has increased. This thesis attempts to address these gaps in the public health evidence base and has the following overarching aims. This is articulated via two research objectives and one methodological consideration:

Research objectives

- To explore if, and how, adolescents engage with different styles of packaging and product design.
- To establish whether or not an association between tobacco packaging and adolescent smoking exists.

Methodological consideration

- Is it possible to observe and measure adolescents' cognitive, affective and behavioural responses to tobacco packaging?

The secondary research within chapters 2 to 4 involved thorough searching and analysis of secondary data. This extended literature review included published articles in academic and practitioner marketing journals, internal tobacco industry documents, and public health packaging research. An 'essential step in the problem definition process' (Malhotra & Birks, 2003, p. 41), the secondary research was an economical source of

information, providing context and exploration of how packaging works as a marketing tool (McGivern, 2003; Webb, 1992). Primary data, however, allows the researcher to become closer to the 'truth' than secondary data (Leedy & Ormrod, 2001). Furthermore, the research gaps identified highlight that secondary data alone provides incomplete coverage of the research problem (Webb, 1992). None of the data sources, for example, adequately address the impact of contemporary pack design. This study therefore requires primary research to fulfil the research objectives. While primary research can never uncover the 'absolute truth', it can strengthen the integrity of the study and provide a unique dataset specific to the particular research problem (Burton, 2000; Leedy & Ormrod, 2001).

5.3   Rationale for a mixed methods study

Public health research increasingly draws on methodological diversity, with qualitative and quantitative methods combined (Brannen, 2005; Creswell, Klassen, Plano Clark, & Smith, 2011; Sale, Lohfield, & Brazil., 2002). A mixed methodology approach reflects the fact that lived experience and reality is multi-dimensional, with both qualitative and quantitative methods required to understand the complex nature of public health problems (Baum, 1995; Mason, 2006).

Qualitative research is most appropriate when the study is exploratory in nature, when there has been little prior study of the issue and the objective is to gain general insights and an understanding of the dynamics of a particular subject (Kinnear & Taylor, 1991; Parasuraman, 1991). Within public health, qualitative methods are necessary to explain how wider environmental factors, such as economic, political, social and cultural factors, affect health (Baum, 1995). For example, previous qualitative work has produced compelling evidence to explain:

...the power of tobacco companies and marketing strategies, the reasons people continue to smoke despite strong evidence about the health risks it entails and the social meaning of smoking. (Baum, 1995, p.464)

As qualitative methods provide insight and understanding into social phenomena they offer a useful contribution to the policy making arena (Bulmer, 1982). Brannen (2005) highlights that while British Governments have tended to prefer quantitative evidence to inform policy in the past, increased demands for policy-based evidence has encouraged a shift towards a more practical approach, rather than a scientific one.

Quantitative research has an equally important, but different, role within public health. Quantitative methods are central in demonstrating causal links between variables, for example, the relationship between smoking and lung cancer, revealed over time through cohort studies (Baum, 1995). Randomised control trials can also provide evidence of the effectiveness of interventions. However, such methods are criticised as they don't reveal participant's experiences, whereas understanding those experiences, along with participants' interpretations and meanings, is at the heart of qualitative research (Mason, 2006).

Both qualitative and quantitative research is therefore recommended for addressing public health issues. Viewing a problem only on one dimension runs the risk of 'impoverished' and 'inadequate' understanding, while a multi-method approach can 'enhance capabilities for explanation and generalisation' (Mason, 2006, p. 10).

Neither qualitative nor quantitative information can stand alone if our aim is to come somewhere close to understanding the richness of the communities we live in and how we might make them healthier. (Baum, 1995, p. 467)

The main research objectives within this study suggest that different data collection methods are necessary to achieve them. Brannen (2005) highlights that implicit within

research questions, are different methodological implications. The 'context of enquiry' (Brannen, 2005, p. 176) therefore determines not only the appropriate methods, but it may also suggest a combination of methods. The objective to *explore* adolescent responses to tobacco packaging and product design calls for qualitative research to understand adolescent meanings and constructs. Establishing whether or not an *association* between tobacco packaging and adolescent smoking exists calls for a quantitative approach. Investigating whether it is possible to *observe* and *measure* adolescent's cognitive, affective and behavioural responses calls for both qualitative and quantitative methods: with an attempt to measure quantitatively any responses observed through qualitative methods. Combining two approaches in this way can produce a more complete, valid and robust 'picture' of the area under study (Mason, 2006). Furthermore, it provides an opportunity for one method to build upon the findings of another (Creswell et al., 2011).

Triangulation - the cross-validation of findings from different data collection methods - is traditionally cited as justification for a mixed methods approach (Bryman, 2006; Denzin 1978). Yet, when findings are reported, triangulation has been found to be rare (Greene, Caracelli, & Graham, 1989; Bryman, 2006). This likely occurs as it is impossible to know whether corroboration of the findings will occur from different methods at the study outset. Triangulation is often misrepresented as the integration of qualitative and qualitative data (see section 5.5.3). Instead, a mixed methodology was used here to achieve *complementary* results. With a complementary approach, the research:

> ...seeks elaboration, enhancement, illustration, clarification of the results from one method with the results from another. (Greene et al., 1989, p.259)

In this way, a more complete and comprehensive account of if, and how, tobacco packaging and product design impact on adolescent responses can be established, with the strengths of one method used to enhance the other (Bryman, 2006).

5.4 The research design

There are three basic designs of mixed methodology studies depending on the flow of activities: a sequential exploratory design, a sequential explanatory design, and a convergent, or concurrent, design (Creswell, Plano Clark, Gutmann, & Hanson, 2003; Teddlie & Tashakkori, 2006; Fetters, Curry, & Creswell, 2013).

In a concurrent design, the two strands of research are conducted and then analysed simultaneously. This is appropriate for studies with two relatively independent phases of research as one part of the study is not required to inform the other. Concurrent studies can be useful to strengthen findings by using two different methods. However, it can be difficult practically to conduct two studies simultaneously. It is also challenging to adequately study one phenomenon with two different methods and analyse two different types of data so they can be directly compared (Creswell et al., 2003).

Sequential designs answer two distinct types of questions in a chronological order and evolve in a predictable manner (Teddlie & Tashakkori, 2006). They are useful for exploratory and confirmatory research and allow for conclusions to be made from the first set of data, which inform the design of the second stage of research. Studies which conduct the quantitative component first follow a sequential explanatory design. Here the quantitative stage is followed by a qualitative stage which helps explain and interpret the quantitative findings. This design is useful when the findings from the quantitative data are surprising or unexpected (Creswell et al., 2003).

Study designs which seek to explore and understand phenomena first with qualitative methods follow a sequential exploratory design. Findings from the qualitative stage can then be tested in the subsequent quantitative stage, with a view to generalising the results (Morgan, 1998). This type of design is particularly useful when designing new quantitative instruments, such as measures to be included in a survey (Creswell et al., 2003). In consumer marketing research, this type of design is used to gain insights into

consumer behaviour. From the qualitative insight, hypotheses about that behaviour are generated and then tested in a quantitative component (Teddlie & Tashakkori, 2006).

A sequential exploratory design was chosen for this study as it was considered the most appropriate option for achieving the study objectives. A basic visual representation of the flow of the study stages in a sequential exploratory design is outlined in Figure 5.1.

Figure 5.1: Sequential exploratory design

| QUAL data collection | → | QUAL data analysis | → | Quant data collection | → | Quant data analysis | → | Interpretation of entire analysis |
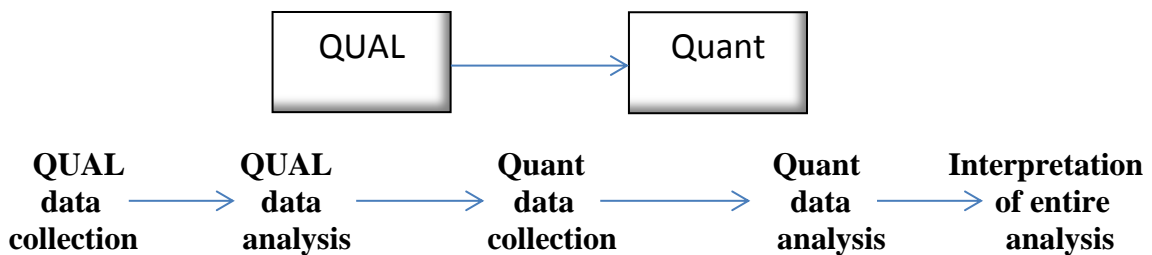
Source: Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research*. Thousand Oaks: Sage, p. 180.

Within this design two stages of research are conducted and analysed separately, before bringing the findings together (Creswell et al., 2003). It was decided that it was most appropriate to use qualitative focus group research first, to explore how adolescents engage with packaging and product design, and to observe their responses. The exploratory qualitative stage of the research design is discussed in detail in section 5.6. While this stage of research was designed to be a standalone study, it was also crucial for informing the quantitative stage. The qualitative data collected on adolescents' responses to packaging were used to generate hypotheses to test in the quantitative research. It also led to, and informed, an important survey development stage prior to quantitative data collection. Figure 5.2 is therefore a more appropriate representation of the flow of research in the study as it highlights the multi-stage process used to generate and test items for inclusion in a cross-sectional survey. The quantitative stage of the research is described in detail in section 5.7. However, before presenting the two stages of research, some important mixed methodological concerns are discussed.

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Figure 5.2: The research design and achieved samples at each stage

Phase 1 Qualitative Research

Timeline	Research phase	
April 2011	**Qualitative Data Collection**	8 focus groups (n=48) with 15 year olds, segmented by gender and socio-economic status
April - October 2011	**Qualitative Data Analysis**	Immersion in field notes, observations, photographs and transcripts. Thematic analysis using QSR Nvivo 9. Hypotheses develoment
May 2011 - November 2013	**Qualitative Findings**	Dissemination via presentations at conferences and tobacco control meetings, CRUK-funded report, and academic journal and media publications

Phase 2 Quantitative Research

Timeline	Research phase	
May - July 2011	**Quantitative Instrument**	Develop survey measures. 6 focus groups (n=36) and 12 cognitive interviews with 11-16 year olds, segmented by age, gender and socio-economic and smoking status
August - September 2011	**Quantitative Data Collection**	UK-wide survey administered to 1373 adolescents aged 11-16 years by FACTS international
November 2011 - February 2013	**Quantitative Data Analysis**	Explore pack profiles. Determine differences using Wilcoxon test. Reduce survey items using Principal Component Analysis. Determine any association between pack ratings and future smoking behaviour using logistic regression
November 2011 - October 2013	**Quantitative Findings**	Dissemination via presentations at conferences and tobacco control meetings, BMJ Open and media publications

Source: Adapted from Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research*. Thousand Oaks: Sage, p. 191.

5.5 Considerations within the mixed methods design

5.5.1 Epistemology

It is usual within research for the researcher to consider and describe her epistemological stance. This is inherently problematic within mixed methods research given the 'paradigm debate' which questions whether the distinct philosophies of qualitative and quantitative research are compatible and can ever be linked (Cook & Reichardt, 1974). Quantitative research stems from a philosophy of positivism, where the researcher considers that they are separate from the phenomena being observed and can therefore maintain objectivity. Conversely, qualitative research is based on interpretivism, which argues that no single reality exists, only the subjective reality constructed by the researcher. Therefore the researcher can never be separate from what is being observed (Johnson & Onwuegbuzie, 2004). Each paradigm usually considers its approach ideal, which leads to an 'incompatibility thesis' (Howe, 1988), where qualitative and quantitative research methods cannot and should not be mixed.

Creswell et al. (2003) note, however, that this debate has largely passed given that most research is based on a pragmatic approach, where researchers should 'forge ahead with what works' (Sale et al., 2002, p. 47) and:

> ...draw on techniques that provide appropriate information rather than on a method used for its own sake. (Baum, 1995, p. 464)

It has been suggested that mixed methods research should be regarded as a third research paradigm, where the strengths of both positivism and interpretivism can be utilised (Johnson & Onwuegbuzie, 2004). Some authors have therefore posed the question whether it is still necessary for the researcher of a mixed methods design to embrace and acknowledge their philosophical perspective (Creswell et al., 2003; Creswell et al., 2011). Others have suggested that mixed methods researchers should always be explicit

about their position (Greene & Caracelli, 1997; Mason, 2006). To aid this, Creswell et al. (2003) suggest that the design of the study can indicate which paradigm is best. The sequential exploratory design of this study implies a qualitatively driven research study (Mason, 2006), and therefore a more interpretive perspective. However, despite the importance of the qualitative stage in developing the measures for the quantitative stage, the researcher attempted to give equal priority to both stages of research.

5.5.2 Priority

Morgan (1998) argues that the researcher has to make a difficult decision about whether any priority, or weight, will be given to the qualitative and quantitative research within a mixed methods study. A priority can occur for many reasons: practical constraints of data collection; the requirement to understand one form of data before collecting the other; greater researcher comfort with one approach over the other; or audience preference for one form of data (Creswell et al., 2003). However, rather than prioritise the qualitative or quantitative research, the decision made for this study was to give equal weight to both. Throughout the study, the researcher has attempted to achieve equal priority. This is represented by both qualitative and quantitative orientated research objectives and extensive discussion and depth about the qualitative and quantitative data collection. While the text reporting the findings of the qualitative research within the thesis is greater in length, equal importance was given to the findings of both stages of research.

Although it was the intention to give equal priority, it is possible that the sequential design, where it was necessary to collect the qualitative data first to inform the quantitative research, and the background experience of the researcher which is primarily qualitative, may have placed greater emphasis on the qualitative component. Ultimately, however, it is the reader who 'makes an interpretation of what constitutes priority, a judgement that may differ from one inquirer to another' (Creswell et al., 2003, p. 173).

5.5.3 Integration

Achieving integration within a mixed methods study is considered crucial or the methods may sit in parallel, representing isolated multiple studies, and not 'mixing', which is the essential component of a mixed methods design (Creswell et al., 2011; Tashakkory & Teddlie, 2003; Yin, 2006). As mixed methods draw on the strengths of qualitative and quantitative methods, it is the integration of the methods which is considered to enhance the value of choosing a mixed methods design (Bryman, 2006). To avoid mixed methods designs which are not necessarily integrated, it is important to consider the stages at which integration will occur. Fetters et al. (2013) suggest three levels for integration, building on integration principles from Tashakkory and Teddlie (2003), Yin (2006) and Creswell and Plano Clark (2011).

Firstly, there must be integration at the study design level (Fetters et al., 2013). The sequential exploratory design ensured that the second stage of research (the quantitative) was designed to build upon the first (the qualitative). Secondly, is the requirement for integration at the methods level and there are several ways in which this can happen: through *connecting* one type of data with another, for example, using one sample to select the sampling frame for the other; through *merging*, where two databases are combined for analysis and comparison; and through *building*, which occurred in this study, where the initial qualitative data collected informed the subsequent quantitative data collection procedure. The qualitative data generated hypotheses to test in the quantitative stage and it also identified constructs, such as the feelings participants described in relation to different packs, which could be included as items in the survey. Finally, a mixed methods study needs integration at the interpretation and reporting level, primarily through *narrative*. This study follows several of the possible approaches to integrating the findings. It has used a *contiguous approach* to integrating the findings, where the findings are presented in a single report, but in different sections, as is the case with Chapters 6 and 7 of this document. However, bringing the two sets of findings together in the discussion chapter (Chapter 8) follows a *weaving approach*, where the

qualitative and quantitative findings are discussed together, by theme. It has also followed a *staged approach*, where the results of each stage are reported as the data is analysed and published. Firstly, the qualitative findings were published in 2012 (Ford, 2012), and then the quantitative findings were published in 2013 (Ford, MacKintosh, Moodie, Hastings, & Richardson, 2013a). The latter briefly mentioning the importance of the first qualitative stage in designing the study.

5.5.4 Reflexivity

Reflexivity is a process associated with qualitative research and is a tool that can demonstrate quality in qualitative research and the integrity of the researcher. Within mixed methods research, the use of reflexivity is rare and often left out of consideration (Hesse-Biber, 2010a). Indeed, the place of reflexivity can be questioned because of the philosophical dichotomy between qualitative and quantitative research (Walker, Reid, & Priest, 2013). Hesse-Biber (2010a, 2010b), however, argues that it is especially important for the mixed methods researcher to make their position transparent.

> Methods are very different in terms of their philosophy, the ontological and epistemological assumptions that sit underneath them... if you are going to include qualitative and quantitative methods in one study, you have to declare your underlying assumptions... it is not just a matter of mixing some techniques, it's actually a matter of mixing some assumptions about knowledge, assumptions about the type of data... assumptions about the world we live in. (Cheek, 2010, cited in Hesee-Biber, 2010b, p. 31)

With reflexivity, the researcher tries to critically be aware of, and reflect on, the ways in which potential biases can permeate research activity (Mason, 2002). These biases can impact the validity of research findings no matter how well the research is conducted (Hesee-Biber, 2010a). Alvesson & Sköldberg (2000) note that culture, language, selective perception, subjective forms of cognition, social conventions, politics,

ideology, power and narration, all in a complicated and messy way, pervade research practice and the interpretation of data. Reflexivity is a way of acknowledging that backgrounds and beliefs are relevant to the research process and offers opportunities for others to scrutinise the 'objectivity' of the investigation (Ritchie, Lewis, Nicholls, & Ormiston, 2013).

It was outlined above that this qualitatively driven mixed methods design implies an interpretative perspective (section 5.5.1). This is in line with my epistemological position which is interpretive and constructionist, rather than positivist. I am often drawn to using a qualitative approach because of my previous research experience and training. This awareness of a methodological preference highlights a set of value assumptions, 'axiology', that the researcher brings to the study (Lincoln & Guba, 1985). I share the belief that research findings are actively constructed through study design, the collection, selection and interpretation of data, and the influence of the researcher. Research findings are particular to the environment the researcher has created and the dynamics of the relationship between the researcher and research participants. It is therefore important to reflect on how the researcher shapes the study and also the impact of the researcher and participants on each other (Guba & Lincoln, 1989; Finlay, 2002). At a minimum reflexivity means:

> ...acknowledging the existence of researcher bias and explicitly locating the researcher within the research process. (Finlay, 2002, p. 536)

Finlay (2002) suggests that reflexive analysis can be applied through the various research stages. The pre-research stage is an opportunity to reflect on the researcher's relationship with the topic, the motivations, assumptions and interests which could influence the direction of the research. Within this study it was particularly important to be continuously mindful of the department within which the research was conducted and who the study was funded by. The studentship for this thesis was funded by the UK Centre for Tobacco Control Studies and hosted by the Institute for Social Marketing.

Funding to conduct the exploratory qualitative focus groups, the survey development stage and the survey itself came from Cancer Research UK. All of these organisations have a known position on tobacco control and strive to improve health by providing evidence to inform health policy. At the time the research was conducted, evidence of the impact of plain packaging on young people was needed to inform policy debates. I was aware early on in the research process that this could potentially influence my interpretation of the literature reviews and primary research. There was certainly a tension between being a researcher, conducting a study in the area of tobacco control and a personal interest in reducing smoking uptake and prevalence among adolescents. I therefore had to guard against the desire for plain packaging to be introduced at policy level and I was careful to focus on how participants responded, and what they thought was important, through what they said and the terminology they used. In this regard reflexivity continued into the data collection and analysis stages of research.

Throughout the data collection stage I also reflected upon my role as researcher and the influence I may have had on participants. Section 4.4 highlighted that it is common in plain packaging research to ask participants about the perceived impact of plain packaging on their own or others smoking behaviour. I have often wondered about the extent that asking such questions within health research invites a particular response. While I did ask the focus group participants what they thought would happen in the event of plain packaging (the findings are presented in section 6.10) throughout the thesis I have placed more importance on observing behavioural responses and intent, rather than asking people what they think the outcome of such a policy would be. This is one reason why this theme was not included in the survey.

Reflective thought was also given to how the researcher-researched power imbalance was managed. Similar to the account given by Gough (1999, cited in Finlay, 2002, p. 539) I noted that I frequently used humour and the act of laughing with participants, not only to endeavour to relax them, but also to try to endear myself to participants and reduce the distance between them (15 year olds) and myself (a 33 year old researcher).

Alternative situations occurred however which may have negatively influenced rapport. On several occasions participants reversed the researcher/researched dynamic and asked me about my smoking status. On these occasions I told them that I did not smoke, as I did not want to lie. I was also concerned that not answering would have affected rapport. However, my response may have in some way influenced their responses for the remainder of the session, especially if they then interpreted this as holding anti-smoking views.

Reflexivity within the data analysis stage also made me carefully consider what I identified as key themes and what I excluded. For example, one important component of plain packaging is the potential influence of the on-pack health warning. However, as I was focusing on the young people's responses to packaging I prioritised trying to see packaging through their eyes rather than judging the value of this through tobacco control eyes. Therefore, despite health warnings being a key policy consideration, especially at EU level with the new Tobacco Products Directive, I did not identify this as a major theme. It may also be that from my own interest I prioritised pack design over health warnings. This could therefore be a potential area for further investigation.

Within this section, reflections on the process by which the research was constructed have been presented. Throughout the exploratory focus groups I also kept a reflective diary on the methodological process. How this influenced the focus groups design is presented in section 5.6.3, along with examples of some of the field notes.

The qualitative and quantitative stages of the research design are now discussed in turn.

5.6 Stage 1: Qualitative research

5.6.1 Purpose

Qualitative research was conducted with adolescents aged 15 years. Eight focus groups were employed to explore if, and how, adolescents engage with, and respond to, packaging and product design. Specifically, the research explored:

- How packaging, across consumer goods, is understood and experienced by adolescents;
- Adolescents' awareness and appreciation of tobacco packaging;
- Adolescents' responses to, and perceptions, of different tobacco pack styles; and
- Whether cigarette appearance may act as a promotional and communications tool, influencing adolescent perceptions of appeal and harm.

The qualitative research helped inform the development of the hypotheses and quantitative measures used in stage two of the study.

5.6.2 Selecting the qualitative research method

A review of possible qualitative research methods highlighted that focus groups, combined with observations, would be the most appropriate method for the qualitative research. In reaching this decision, a number of factors were taken into account: the strengths and weaknesses of different methods; the age of respondents; and the research objectives.

Individual depth interviews are described as 'a conversation with a purpose' (Kahn & Cannell, 1957, p. 149). These one-to-one interviews explore the issue in-depth, usually follow an unstructured, open-ended approach, and can provide context rich data and detailed description. They allow for immediate follow-up and clarification, for example,

casual remarks can be explored which may uncover hidden issues or critical insights into the main subject (Malhotra & Birks, 2003; Proctor, 2003). The interviewer can also be flexible, reacting and adapting the interview accordingly (McGivern, 2003). Depth interviews allow rapport and trust to be established so can be more appropriate for sensitive issues. In this regard the interviewer is critical in the success of the interview. Participants may feel uncomfortable with the situation and are more susceptible to the interviewer's influence (Malhotra & Birks, 2003; Marshall & Rossman, 1999). Ultimately, individual issues generate different types of data to focus groups, and are more appropriate when it is important to understand a topic without the influence of what other group members may say or think (McGivern, 2003).

Focus groups, on the other hand, assume that individuals' attitudes do not form in a vacuum, 'people often need to listen to others' opinions and understandings in order to form their own' (Marshall & Rossman, 1999, p. 114). One-to-one interviews can be 'impoverished' if the participant has not had the opportunity to reflect on the issue (Marshall & Rossman, 1999). Focus groups encourage discussion and different opinions. They are considered a useful way of creating an informal setting and getting participants relaxed and able to freely express beliefs and attitudes (Barbour & Kitzinger, 1999; Gray, Amos, & Curry, 1997; Morgan, 1988). Interaction distinguishes focus groups from individual or group interviews and encourages participants to engage with one another. Kitzinger (1994) notes that a greater variety of communication, such as teasing, joking, and acting out among peers, can be observed when participants provide an audience for each other:

> Tapping into such variety of communication is important because people's knowledge and attitudes are not entirely encapsulated in reasoned responses to direct questions. Everyday forms of communication such as anecdotes, jokes or loose word associations may tell us *as much,* if not *more,* about what people 'know'. In this sense focus groups 'reach the parts that other methods cannot reach' - revealing dimensions of understanding that often remain untapped by the

more conventional one-to-one interview or questionnaire. (Kitzinger, 1994, p. 109)

Focus groups therefore offer a social context and encourage natural conversations among participants, using their pace, language and logic (Malhotra & Birks, 2003). The researcher may feel a loss of control over a focus group, however, as time may be lost to the discussion of irrelevant issues, and participants may feel pressure to conform to the group norm (Malhotra & Birks, 2003; Marshall & Rossman, 1999).

Observation is a method which involves the recording of events and behaviours within the study setting. Observations can be useful to give first hand accurate accounts of participants' responses, demeanours, body language and behaviours as they happen and do not rely on the eloquence of participants (Proctor, 1997). This method assumes that behaviour is 'purposeful and expressive of deeper values and beliefs' (Marshall & Rossman, 1999, p. 107). It focuses on what people do rather than what they say (McGivern, 2003). Observations can either be structured, such as recording notes on behaviours according to a checklist, or unstructured, which provide a more holistic description of events (Marshall & Rossman, 1999; Proctor, 2003). Observations are considered a fundamental element of qualitative research regardless of the method chosen, i.e., whether using a depth interview or focus group, the researcher should be tuned into cues such as the participant's body language.

A crucial aspect of choosing the appropriate method is the age of respondents. Marshall and Rossman (1999) state that the researcher needs to sensitively consider the needs of the age group. Adolescents have been highlighted as particularly self-conscious and taciturn, and may feel more comfortable in a supportive environment with the presence of peers. In this regard, focus groups may offer a greater sense of security, be less daunting, and enable participants to 'open-up' (Malhotra & Birks, 2003; McGivern, 2003). Focus groups with peers can also be a useful way of striving for a power balance between researcher and researched. When participants are children and adolescents, the

researcher can assume the role of supervisor, leader, observer or friend. It is thought beneficial for researchers to try and break down the social distance between them and participants, and reduce formal barriers (Malhotra & Birks, 2003; Marshall & Rossman, 1999). Assuming the role of friend with children in qualitative research is considered the most fruitful (Fine & Sandstrom, 1988). This role allows for greater interaction, trust and reduced authority. Despite researcher efforts, however, 'age and power differences between adults and children are always salient' (Marshall & Rossman, 1999, p. 116).

Interaction, group dynamics, relaxation, and observing responses in addition to conversation were identified as important considerations in exploring the issue of packaging with adolescents. Focus groups, combined with observations, were therefore decided to be the best method to understand the meanings that adolescents hold for packaging.

5.6.3 Focus group design

The focus groups took place in April 2011, in a modern community centre in Barrhead, Glasgow. Conducting the groups during the Easter school holidays maximised the opportunity to access young people. Each group lasted approximately 90 minutes. The focus groups provided an opportunity for participants to handle packaging and cigarettes, rather than viewing images, which is the common approach in public health research (Borland et al., 2013; Hoek et al., 2012b). This allowed a true representation of tactility, dimension and colour.

The researcher operated a reflexive process throughout the data collection period, continually monitoring the questions, activities and methods used throughout the focus groups. Field notes were written up after each group. This included an assessment of the methods used and initial thoughts for analysis. This reflection is considered essential in qualitative research as 'the researcher is the primary instrument of data collection and

analysis' (Watt, 2007, p. 82). It provides a way for improvement of the research process (Glesne & Peshkin, 1992) and led to the modification of some tasks and questions.

Due to the age of participants, the groups were designed to be as interactive as possible by involving participants in a range of activities such as grouping and ordering items according to statements written on show cards. These activities were designed to be stimulating and to encourage participants to enjoy the group as much as possible. The researcher noted after the first two groups that early interaction between participants, and also interaction with the products used as stimuli, facilitated a better discussion, as highlighted in the field notes:

> There was not enough interaction with the products or each other. Try changing the format so participants have to touch products from the outset. Instruct them to remove the products from the bags and put them on the floor, ask them to take time to familiarise themselves with these items, and also to pass packs and cigarettes onto other participants. (Field note, 5th April, 2011)

This interaction was crucial for groups where it was apparent that the participants were not immediately at ease with each other. While no stipulations were made at the recruitment stage on whether participants could be known to each other, the researcher's notes on the group dynamics showed that groups containing obvious friendship groups were much more relaxed from the outset, with greater interaction and communication between participants. Friendship peer groups have been found helpful in offering support and helping participants overcome embarrassment, generating more natural conversation and providing insight into social norms (Kitzinger, 1994). A change in the format of the activities helped to engage and relax participants:

> Changes made to the format worked well. Getting participants to take the products out of the two bags, and also passing round packets and cigarettes, encouraged much more interaction and involvement straight away. It also

allowed extra time for participants to look at and process the different stimuli they would be working with. (Field note, 7th April, 2011)

In addition to grouping and sorting exercises, the focus groups utilised projective techniques. These are techniques which originated in clinical psychology after World War II but are now commonly used in consumer and market research (Donoghue, 2000). Such techniques encourage in respondents 'a state of freedom and spontaneity of expression' (Webb, 1992, p. 125) to uncover a deeper, subconscious level of data. This differs from the data usually obtained through direct questioning which tends to come from a cognitive or conscious level (Schlackman, 1989; Schlackman & Chittenden, 1986).

> A basic, and important, principle about a projective technique is that it creates a situation in which the individual can express feelings, thoughts and emotions which basically come from the self of the respondent, but which are not necessarily seen by the respondent to emanate from the self or indeed to be part of her conscious views. More often than not, under these conditions, the projections are seen to be other people's thoughts and feelings, rather than one's own, or they may simply be attributed to 'imagination'. (Schlackman, 1989, p. 66)

Firstly, word association, where participants use words to raise whatever thoughts come to mind when viewing products, helped to uncover attitudes and beliefs which participants may have found difficult to articulate (Webb, 1992). Secondly, personification, where the participant imagines the pack as a person, and is asked to describe the characteristics of that person, allowed participants to freely express opinions without any anxiety, which may have been aroused if they had been asked directly about the associated user of a particular pack (Schlackman, 1989). These techniques allowed participants to link concepts with product appearance, helping to uncover symbolic

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meanings inherent within the designs and develop brand imagery profiles. As described in the researcher's field notes:

> Personification works really well. Even with the first shy group, it is something they can really get into and they seem to genuinely enjoy it. It brings an element of fun to the discussion and gives participants the freedom to be critical without insulting anyone. They are really talking about the user of the pack here. (Field note, 5th April, 2011)

Finally, asking participants to hold their favourite pack and project their imagination that this was their pack, and to describe how they felt, proved an effective method to capture participants' awareness of their affective responses. The data occurring from many projective techniques are from a 'paradigm of imagination' (Schlackman, 1989, p. 66). This approach is an enabling technique, which helps participants become aware of other dimensions which they might not be aware of. The field notes show that minor tweaks were made to assist participants' awareness and descriptions of the feelings which packs aroused:

> In today's boy group, getting them to choose a branded pack and directly compare this with the plain pack worked well. In future instruct them to hold both packs and describe the differences in how it feels. Ask them to compare, for example, 'you said one makes you feel disgusting/dirty, how does the other make you feel?' (Field note, 12th April, 2011)

Two moderators were present for each group. Each was dressed casually to help accentuate the informal nature of the groups. The researcher, who was the lead moderator, used a semi-structured topic guide (see Appendix 1) so the same questions could be asked across groups while allowing flexibility in the group discussions. A second moderator observed and recorded participants' non-verbal reactions to the packs and products on an observation sheet (see Appendix 2). Body language, facial

expressions and verbal exclamations were systematically recorded, to ensure that other, but no less important, responses were not missed. This also enabled participant approach/avoidance behaviours in response to different designs to be monitored (Bloch, 1995). The discussions were digitally audio-recorded with participants' consent. Photographs were taken to record the results of grouping and ordering activities. This was also with participants' consent.

5.6.4 Ethical considerations

Ethical approval for the qualitative research was applied for and granted by the departmental ethics committee at the Institute for Socio-Management at the University of Stirling.

Overall the risk to people participating in the study was considered to be minimal. If at any point during the focus groups participants appeared embarrassed or sensitive to certain issues the researcher would have suggested taking a break or ending the session. However, past focus group research with adolescents and young adult smokers exploring responses to cigarette packaging, and tobacco marketing communications generally, suggested that this would be unlikely (MacFadyen, 2001; Moodie & Ford, 2011). Furthermore, while discussion around tobacco may be constructed as sensitive or controversial by adults, this is often not the case for young people (de Meyrick, 2005). De Meyrick highlights that preventative initiatives aimed at reducing youth smoking uptake must be based on research of that very group and the societal benefit justifies young people's participation. In this regard, it was thought possible that the outcomes of the study would inform future public policy.

Because of potential sensitivities involved in exposing young people to tobacco packaging and cigarettes, the researcher decided to end each focus group session with a discussion to ensure the group did not encourage participants to look favourably on cigarettes or smoking. As the groups included viewing, handling and discussing packs

and cigarettes, it was thought possible that participants may find some of these interesting and appealing. Upon completion of the focus groups, the researcher verbally emphasised that it was not the intention to promote smoking in any way and reiterated the harms from smoking and the importance of not starting smoking, or, for those who already smoke, the importance of giving up smoking.

All participants were given an information pack, specifically developed for a youth audience, to take away. These materials were obtained from W-WEST (Why Waste Everything Smoking Tobacco?), a group which the researcher had previously worked with to help develop an on-line youth survey. W-WEST is run by young smokers and non-smokers aged 12 to 17 years and funded by NHS Greater Glasgow and Clyde as part of the National Smoking Prevention Action Plan. The pack included information on short and long-term smoking related health risks, harms associated with second hand smoke exposure, the addictive nature of tobacco, available help for quitting (for those who were smokers) and information explaining how tobacco marketing may promote smoking among young people. Educating young people on why and how they are a particular target of tobacco companies has been found to be an effective prevention intervention (Lantz et al., 2000).

The Institute for Social Marketing adheres to the standards set by the Market Research Society (MRS) Code of Conduct (MRS, 2010). Given the age group of participants for the study, extra safeguards were put in place in line with the MRS guidelines for research with children and young people (MRS, 2006). This included restrictions on recruitment procedures, parental and participant consent, participant, arranging appropriate transportation for participants, and enhanced disclosure certificates for the moderators.

5.6.5 Recruitment and consent

Using purposive sampling, participants were recruited through a professional market research recruiter in Greater Glasgow. From an analysis of focus group recruitment strategies, McCormick et al., (1999) note that there is no one best method of recruiting adolescents into tobacco research studies. They suggest that the researcher should go with the specific needs of the study. For this study, the strict timeline between the first stage of qualitative research and the subsequent survey going into field meant that the more efficient method of employing a professional recruiter was invaluable.

Using quota sampling, possible participants were approached via door to door of residential properties and in the street. In line with MRS guidelines (MRS, 2006) the recruiter, who has a history of recruiting both children and young adults for previous qualitative studies conducted by the Institute for Social Marketing, was advised not to approach anyone in the street who appeared to be under 16 (unless they were with a parent or guardian) and not to recruit within the vicinity of a school without prior permission of the head teacher. Participants were recruited according to a short recruitment questionnaire (see Appendix 3). This questionnaire was designed to gather information on age, socio-economic grouping and smoking status. Socio-economic grouping was determined by the occupation of the chief income earner within the household. Adolescent reporting on parental occupation as a proxy for social class is often used within research and has been associated with good accuracy (Lien, Friestad, & Klepp, 2001; Pueyo, Serra-Sutton, Alonso, Starfield, & Rajmil, 2007). Regular smoking was defined in line with the 'Scottish Schools Adolescent Lifestyle and Substance Use Survey' (Black et al., 2011). Participants who reported that they 'smoke one or more cigarettes a week' were identified as regular smokers. Those who had 'never smoked a cigarette before', or had 'tried in the past but do not smoke now', were classified as non-smokers.

Informed participant and parental consent was obtained through the recruiting process prior to the focus groups. While this is standard practice when researching so called 'vulnerable groups', there is some debate on whether parental consent is always necessary. Masson (2000) argues that a young person who has the capacity to understand the implications of participating in a research study should not need parental consent. De Meyrick (2005) also highlights that the rights of the young person to be heard should take priority, with the societal benefit of participation justifying participation. However, in line with the standards set by the MRS (MRS, 2010), and also the university ethics policy, both parental and participant consent was obtained.

Participants and parents were provided with an information sheet which presented a brief overview of the research (see Appendix 4, 5). This explained what the study was concerned with, what it would involve and the potential risks attached to participation. It also explained that participation was voluntary and participants were free to withdraw at any time. In order to eliminate the socially desirable responses which can result from research with a public health focus, care was taken to disguise the health related aspect of the research. Participants were informed that the study purpose was to explore the marketing of products to young people and that they would be exposed to a range of consumer goods including tobacco and alcohol. Participants received £15 in cash for taking part. This was given as both an incentive - cash or cash equivalent has been identified as the most productive incentive for recruiting this age group (McCormick et al., 1999) - and as a token of appreciation. The incentive was outlined in both the participant and parent information sheets. Parents were asked their permission for the young person to receive this incentive. Participants wishing to take part were required to sign a consent form (see Appendix 4). Parents were also required to sign a consent form for their child to be eligible for participation (see Appendix 5).

5.6.6 Sample

In total eight focus group discussions were conducted with adolescents aged 15 years (n=48). Each group comprised six participants. Focus groups can contain between four and 12 participants, however, a small group of six is considered most comfortable for participants, less daunting for an adolescent age group, and easier for the moderator to conduct than a larger group (Krueger & Casey, 2000; McGivern, 2003). The intention was to explore responses across gender, socio-economic grouping (ABC1 – middle class/C2DE – working class) and smoking status (regular smoker/non-smoker). Balanced quotas across the three variables were sought. Table 5.1 shows a breakdown of the intended sample:

Table 5.1: Intended sample composition for stage 1 qualitative focus groups

Group	Gender	Age	Social grade	Smoking status
1	Female	15	C2DE	Smoker
2	Male	15	ABC1	Smoker
3	Female	15	ABC1	Smoker
4	Male	15	C2DE	Smoker
5	Female	15	ABC1	Non-smoker
6	Male	15	C2DE	Non-smoker
7	Female	15	C2DE	Non-smoker
8	Male	15	ABC1	Non-smoker

It was decided to focus on 15 year olds because of their greater involvement with smoking than younger age groups, e.g. 13% of 15 year olds in Scotland are regular smokers (smoke one or more cigarettes a week), compared to 3% of 13 year olds (Black et al., 2011), suggesting that 15 is a key age for smoking onset. Single gender groups were designed to explore different gender perspectives, for example, previous studies have indicated that plain packaging may hold less appeal for adult females than males (Moodie et al., 2011), and also to minimise any potential inhibition caused by mixed genders. Groups were split by social grade as this has important implications for smoking among adolescents, e.g. smoking among 15 year olds is higher among those who live in more deprived areas (Black et al., 2011). Finally, it was considered important to explore findings by smoking status as this has been associated with

differences in adolescent attitudes towards tobacco packaging, with non-smokers holding more negative views (Germain et al., 2010).

Recruiting equal numbers of smokers and non-smokers, however, proved problematic and it was not possible to split the groups evenly by smoking status as intended. Within the sample, 19% (N=9) identified as regular smokers on the recruitment questionnaire and 81% (N=39) as non-smokers. This smoker/non-smoker split is roughly in line with comparative national figures (Black et al., 2011). All of the smokers were from the C2DE economic grouping, with five girls in one group and four boys in another (Table 5.2).

Table 5.2: Achieved sample composition for the stage 1 qualitative focus groups

Group	Gender	Age	Social grade	Smoking status
1	Female	15	C2DE	Smoker*
2	Male	15	ABC1	Non-smoker
3	Female	15	ABC1	Non-smoker
4	Male	15	C2DE	Smoker**
5	Female	15	ABC1	Non-smoker
6	Male	15	C2DE	Non-smoker
7	Female	15	C2DE	Non-smoker
8	Male	15	ABC1	Non-smoker

* Group 1 comprised a majority of smokers with five participants reporting as regular smokers on the recruitment questionnaire, and one non-smoker.
** Group 4 comprised a majority of smokers with four participants reporting as regular smokers on the recruitment questionnaire, and two non-smokers.

From the resulting discussions, the reliability of these numbers can be questioned. The moderators suspected the true number of smokers to be higher, with around one-third of the sample, if not regularly smoking, experimenting or smoking occasionally. With hindsight, the study may have benefitted from the recruitment questionnaire capturing those currently experimenting or smoking occasionally. However, certainly within the sample there was a good range of smoking experience which was the initial intention. The self-identification of smoking status before the group discussion takes place has been found problematic in other research studies with adolescents. McCormick et al. (1999) note that it is usual to find under-reporting of 'deviant' behaviours such as tobacco or alcohol use, with the recruitment of young smokers more difficult than non-

smokers. It is not unusual to find that once the group starts, those reporting as non-smokers are, in actual fact, smokers.

5.6.7 Procedure

At the start of each group, participants were informed that there were no right or wrong answers, and that the researcher was only interested in what they thought. The groups started with a warm-up discussion on general shopping habits before moving on to consumer goods packaging. Each group was then asked to familiarise themselves with the consumer products (see section 5.6.8 for information on materials) contained in two shopping bags. Participants were asked to work together and group the items in whatever way they thought appropriate using a grid placed on the floor. If the items were grouped by product category, participants were asked to do this again but to consider appearance rather than product type. This was followed by ordering products from 'appealing' to 'unappealing' and 'for someone like me' to 'not for someone like me'. Groupings, orderings and the reasoning behind participants' decisions were discussed. In this way, participants spoke of product packaging likes and dislikes, identified good and bad features, product expectations, what they thought the packaging was trying to say, and projected imagery. Figure 5.3 illustrates an example a grouping activity.

Participants were then informed that the remainder of the session would focus on tobacco as a product category. To introduce participants to the topic, they were initially asked to think about and describe the packs they had seen, where they had seen them and who had them. This was followed by showing participants a range of tobacco packs, including the plain pack, which they were asked to spend time examining and opening. Following the same procedure, participants first grouped the packs however they thought appropriate and then ordered the packs 'appealing'/'unappealing' and 'for someone like me'/'not for someone like me'. Based on participants' discussions and emerging themes, the discussion focused on individual packs. Prior awareness of packs was explored and

participants discussed their thoughts and associations. Participants were also asked to describe their feelings in response to packaging.

Figure 5.3: An initial grouping activity for consumer products

Participants then did further ordering activities using show cards and a smaller set of tobacco packs, selected to explore different packaging types: novelty and innovation, and value. Due to time constraints four of the focus groups were allocated Group A show cards and the remaining four groups were allocated Group B show cards. Group A items were: 'attractive/unattractive'; 'stylish/not stylish'; 'poor quality/good quality'; 'a pack I would like to be seen with/a pack I would not like to be seen with'; and 'most harmful/least harmful'. Group B items were: 'eye-catching/not eye-catching'; 'cool/uncool'; 'my friends would like this pack/my friends would not like this pack'; appealing to someone thinking of starting smoking/not appealing to someone thinking of starting smoking'; and 'strongest/weakest'. Orderings were discussed and participants were asked to draw contrasts between packs that were placed differently.

Participants were then shown eight plain packs which differed in shape, size and method of opening. These were grouped together in whatever way participants thought appropriate and ordered in terms of attractiveness, strength and harm.

The discussion then turned to product awareness. Participants were asked to think about cigarettes they had seen and to describe where they saw them, what they looked like and any differences. Eight cigarettes, which differed in length, diameter, colour, and decorative design, were then shown to participants. To explore messages young people infer from cigarette design, participants were asked to group the cigarettes in whatever way they thought appropriate. Projective imagery techniques were used to explore associations. Participants then ordered the cigarettes 'attractive/unattractive', 'strongest/weakest' and 'most harmful/least harmful' and to order in terms of attractiveness, strength and harm.

The groups ended with a discussion on packaging to explore the role of packaging generally in brand choice, followed by a more specific discussion around the importance of packaging for tobacco products. Lastly, participants' views on the introduction of plain packaging and what they thought it would mean for young smokers and non-smokers were sought.

5.6.8   Materials

Consumer products packaging

To encourage thinking about packaging generally rather than restrict the focus to tobacco packaging from the outset, participants were shown several items each of toiletries, cosmetics, confectionary, crisps and soft and alcoholic drinks. These were categories chosen for being the types of products that this age group were likely to have had experience with. The products were chosen to represent variations in price, brand (i.e. economy, mid-priced and premium), gender and age orientation as well as packaging style including materials, structures, dispensing method and graphical design

elements. These are all strategies used in consumer goods packaging, as identified in Chapter 2. See Appendix 6 for the full product list and design features. Some of these products can be seen in Figure 5.3. This photograph illustrates a focus group exercise where the boys divided the products by packaging type.

Branded tobacco packs

The branded tobacco packs used in the groups had recently been or were on sale in the UK at the time of the research. The stimuli were chosen to include examples of novel designs, innovative structures and value packaging, therefore representing the range of tobacco packaging currently on offer, as identified in Chapter 3. Novelty packs included limited edition packs or packs with distinct and bright designs. Innovative packs included different shapes, methods of openings or texture. Value-based packs included packs with a price flash or packs of different sizes. The packs varied in terms of colour, price, likely target group and included cigarettes and RYO tobacco. Appendix 6 shows the full list of tobacco packs used and their design features, along with photographs illustrating the different pack strategies.

Plain pack

A standard plain pack was made up for the purpose of the study. This was a standard 20 king size shaped box with a dark brown colour (previously identified in focus groups with young adults as the most unappealing), and a made up brand name 'Kerrods', found to have few associations in the minds of young adult smokers (Moodie & Ford, 2011). The plain pack featured a text health warning on the front, a pictorial warning and UK duty paid label on the back, and emissions information on the side - in line with current UK regulations for tobacco packaging (Figure 5.4).

Plain packs which differed in shape, size and method of opening

Eight packs which differed in shape, size and method of opening, all packs on sale in the UK at the time of the research, were spray painted dark brown for the purposes of the study. Brand names were covered up to explore the impact, if any, of the different

structures. As with the standard plain pack, all legal markings required in the UK were displayed. The packs included a standard flip top king size box, a taller superkings box, a slide pack, two styles of superslims boxes, one slims box with bevelled edges, a 14 sized pack, and a 19 sized pack with bevelled edges. Figure 5.5 shows these eight packs being used in a focus group activity.

Figure 5.4: Plain pack

Figure 5.5: Plain packs differing in shape, size and method of opening
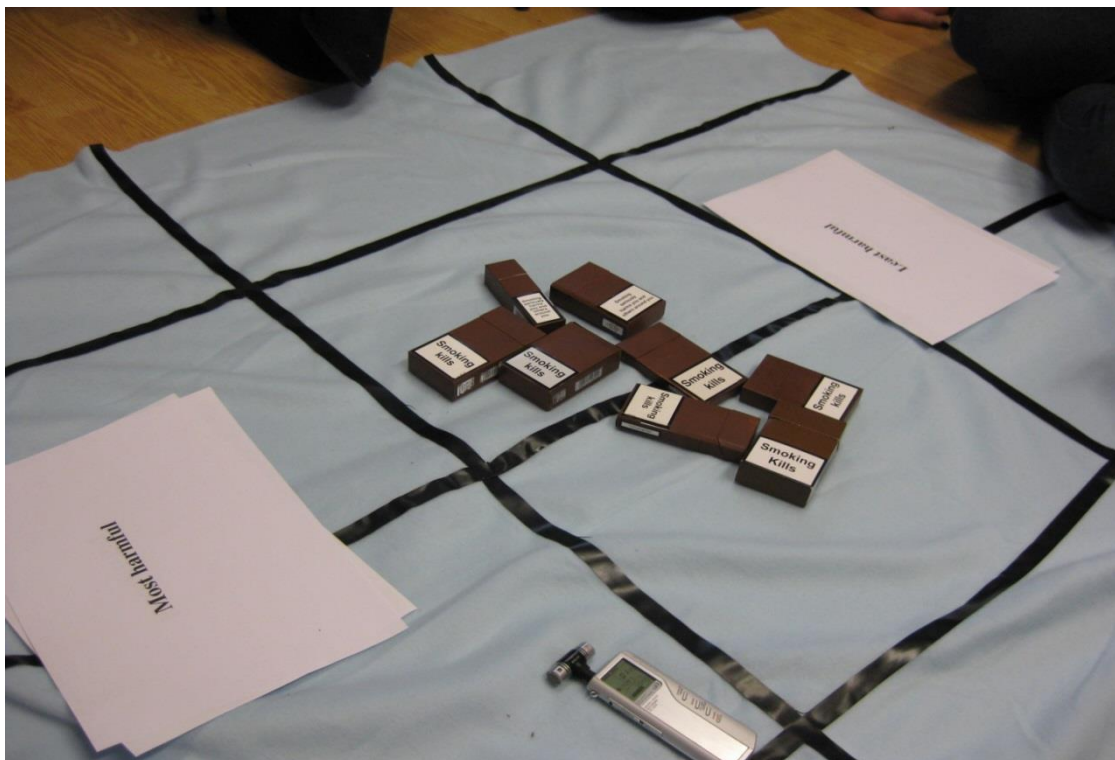
Cigarettes which differed in length, width and colour

Eight cigarettes which differed in length, diameter and decorative design were chosen for inclusion in the study. All the cigarettes were available on the UK market at the time of the research. The eight cigarettes were: a longer length brown cigarette, a superking size with an imitation cork tip, three narrow slims and superslims cigarettes with white tips and decorative elements, a standard king size cigarette with an imitation cork tip, a white tipped king size cigarette and a short unfiltered white cigarette (see Figure 5.6).

Figure 5.6: Cigarettes used as focus group stimuli.

(A) Longer length brown cigarette with gold More brand name and band.
(B) Superking-size cigarette with imitation cork filter and Superkings brand name and symbol.
(C) Slim-size cigarette with white tip and purple decorative design.
(D) Superslim-size cigarette with white tip and purple floral design.
(E) Superslim-size cigarette with white tip and Vogue brand name in blue decorative font.
(F) King-size cigarette with imitation cork filter and Mayfair brand name.
(G) King-size cigarette with white tip and green Mayfair brand name.
(H) Shorter filterless cigarette with Woodbine brand name

5.6.9 Analysis

In a debriefing session after each focus group, the two moderators would reflect on the discussion and observations, and field notes were written up. At this early stage, emerging themes were identified for analysis. The field notes also contained information

on the mood of the group, group dynamics, such as dominant members, and impressions of participants' smoking behaviour as it became quickly apparent that those identifying as non-smokers may have had greater involvement with smoking,

The focus groups were fully transcribed verbatim and the transcriptions were checked against the recordings for accuracy. Data from the transcriptions were supplemented by the focus group observations, photographs and field notes. For each of the focus group exercises, a record was made of the ranking of each pack from the photographs. The observation sheets were fully typed up and then coded by pack. A document was prepared with headings for each pack. Any observations were listed beneath each pack for ease of reference. A thematic analysis was then undertaken across the data set. This is described as 'a form of pattern recognition within the data' where themes are used as the categories for analysis (Fereday & Muir-Cochrane, 2006, p. 4). In line with the analysis stages outlined by Braun and Clarke (2006) the documents were initially read several times in order to become familiar with the data. At this stage notes were made on the transcripts which highlighted particularly interesting areas and documented ideas for codes which were then built upon in the next stage. References to specific packs in the transcripts were cross-referenced with the pack's ranking in the exercises and any observations. This helped the researcher to fully understand how participants regarded individual packs and verified what participants had said in the discussions. The observations, however, were also used as a distinct type of data which indicated approach/avoidance behaviours.

The transcriptions were imported into QSR NVivo9, which was used as a data management tool to help organise and code the data. Coding is a way of sorting data into segments which can then be examined in a meaningful way (Boyatzis, 1998). The data was systematically explored in two ways, following a 'hybrid approach' of methods of thematic analysis (Fereday & Muir-Cochrane, 2006). Data was coded in line with pre-defined categories to address the study objectives, such as packaging awareness and affective pack responses. Coding by pack design elements (i.e. shape, method of

opening, novel colour) also enabled meanings and imagery to be attributed to different packaging types. This approach is a deductive 'top-down' approach, and is driven by the researcher's methodological interest in the topic (whether affective responses to packaging could be observed) and analytical interest (the differences between different pack designs) (Braun & Clarke, 2006). Running alongside this, however, was an inductive, 'bottom-up' method, to allow codes to emerge direct from the data (Fereday & Muir-Cochrane, 2006). This 'data driven' approach led to codes which had little relationship to the questions asked in the group discussions and were not led by the methodological interest in the topic (Braun & Clarke, 2006). Themes such as 'adolescents interpretations of regular packaging', 'smoking attitudes', and 'functionality and discretion of packaging' were identified in this way.

Coded data is different from the 'units of analysis', which are the themes developed in the next stage of analysis - the interpretative stage (Braun & Clarke, 2006, p. 18). At this stage, the codes were examined by gender and socio-economic group to note any differences. For smoking status, it was only possible to note differences for the two groups reporting as regular smokers. Because of the uncertainty over the true smoking status of those reporting as non-smokers, it is not feasible to attribute participant quotes according to smoking status. The synthesis of the coded data, pack rankings and observations into the themes which structure the study findings (Chapter 5) occurred through writing, which is 'as much about creating results as it is about reporting them' (Ezzy, 2002, p. 13). Writing is considered an integral part of qualitative data analysis (Braun & Clarke, 2006), and it was through writing that interpretation of the different types of data occurred and themes were reviewed in an iterative approach.

5.7 Stage 2: Quantitative research

5.7.1 Purpose

Quantitative research was conducted with adolescents aged 11 to 16 years. A cross-sectional survey was employed to test the hypotheses developed from the qualitative findings (Figure 5.7; see section 6.12.2). In line with the overarching study aims, the hypotheses seek to test the impact of different pack styles on adolescents, across the three types of consumer responses: cognitive, affective and behavioural. From the literature review and the qualitative stage of research it is expected that the style of packaging design may influence adolescents' pack ratings and feelings. It is also expected that greater awareness and more positive ratings of tobacco packaging may be associated with future smoking behaviour.

Figure 5.7: Hypotheses

Alternative hypotheses	Null hypotheses
Pack ratings *H1: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack ratings items.* *H2: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack ratings items.*	*$H1_0$: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack ratings items.* *$H2_0$: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack ratings items.*
Pack feelings *H3: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.* *H4: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack feelings items.*	*$H3_0$: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack feelings items.* *$H4_0$: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack feelings items.*
Behavioural intent *H5: Adolescents who are aware of tobacco packaging will be more likely to be susceptible never-smokers.* *H6: Adolescents who rate tobacco packaging positively will be more likely to be susceptible never-smokers.* *H7: Adolescents who are receptive to tobacco packaging will be more likely to be susceptible never-smokers.*	*$H5_0$: Adolescents who are aware of tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.* *$H6_0$: Adolescents who rate tobacco packaging positively will be <u>less or equally</u> likely to be susceptible never-smokers.* *$H7_0$ Adolescents who are receptive to tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.*

5.7.2   Selecting the quantitative research design

A cross-sectional survey was considered appropriate for the aims of the study as it enables a large sample to be surveyed at the same time, providing a 'snapshot' of responses at that particular time point (McGivern, 2003). A cross-sectional study also allows any relationships between variables to be determined (Leedy & Ormrod, 2001; Webb, 1992). This fits with a key objective of the study, which was to investigate whether any relationship exists between pack ratings and future smoking behaviour. A cross-sectional study is relatively easy to conduct as it involves only one wave of data collection from a sample (Leedy & Ormrod, 2001).

An alternative approach is a longitudinal design, where data is collected at multiple time points, from the same respondents at each wave. With a longitudinal design the time order of events and causal direction can be established and it is possible to detect change in a sample (McGivern, 2003). Longitudinal designs are also able to link behavioural changes to specific variables (Malhotra & Birks, 2003). If a longitudinal design had been selected for this study, it could have possibly linked the onset of adolescent smoking with packaging. Longitudinal studies are, however, much more difficult and more expensive than cross-sectional studies to conduct. They suffer from attrition - the drop-out of participants. This happens as it can be challenging to monitor participants' whereabouts over time. With high attrition, and to avoid a small sample which may be unrepresentative, it often becomes necessary to replenish the sample with new participants. Another potential problem of a longitudinal study is that it might draw people's attention to a particular issue and there may be an effect from the research. Also, when people respond to the same survey measurement instruments, they are likely to improve with the 'practice', even though no real improvement has occurred (Leedy & Ormrod, 2001). While it would have been advantageous for the packaging evidence base to demonstrate a causal link between packaging and youth smoking, the practicalities of conducting a longitudinal study suggested that a cross-sectional design was more appropriate.

5.7.3   The survey design

The quantitative research utilised an existing repeat cross-sectional study to collect the data. The timing of this study coincided with Wave 6 of the Youth Tobacco Policy Survey (YTPS) and it was considered appropriate by the YTPS's principal investigators that Wave 6 included a new module of questions on tobacco packaging (see Appendix 7). The researcher led this module of the survey.

The YTPS is a long running, repeat cross-sectional study examining the impact of tobacco control policies on young people (see for example, Brown & Moodie, 2009;

MacKintosh et al., 2012; Moodie, MacKintosh, Brown, & Hastings, 2008). The YTPS has been conducted every two to three years since 1999. It tracks tobacco brand and marketing awareness, and youth prevalence of, and attitudes to, smoking over time, providing comparable but independent samples at each wave. It allows the effectiveness of tobacco control policy measures to be monitored.

The YTPS utilises an in-home interviewer-administered face-to-face approach. Alternative possible methods include self-administered postal, emailed, web-based or school surveys and interviewer-administered telephone surveys. While self-administered postal and emailed surveys are more cost and time efficient, they run the risk of low response rates and must be easy for the respondent to complete (Leedy & Ormrod, 2001). This means, for example, that multi-part questions and routing are not advised within these surveys. Web-based surveys which use software rather than emailing a text-based form as an attachment are able to offer functions such as routing and question rotation. However, as with all self-administered methods, these surveys need to be short to keep the attention of the respondent and researchers need to take care that web surveys are compatible with the range of possible browsers (Malhotra & Birks, 2003). Self-administered surveys within schools have the advantage of high response rates but it can be difficult to obtain access to schools through 'gatekeepers' such as the local education authority and head teachers. Furthermore, the school environment can have an impact on the reporting of 'illicit' behaviours such as smoking.

Telephone interviews are an economically efficient method of collecting data but again require simple and quick questioning techniques and do not allow use of visual prompts. In market research, specialist telephone centres generally use computer assisted telephone interview (CATI) systems which provide streamlined processes for call-backs, data-entry and analysis. This method is particularly useful for researching a wide geographical sample, including those who it may be otherwise be difficult to reach (McGivern, 2003). As telephone surveys are interviewer-administered, they provide greater quality control than self-administered methods and while it is more challenging

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for the researcher to develop rapport over the telephone than face-to-face, respondents may feel a greater sense of perceived anonymity which can help with sensitive issues. Telephone interviews are a common approach in market research but suffer from low response rates (although response rates are higher than with postal surveys) and can suffer from inadequate sampling frames (MacFadyen, 2001).

In comparison, face-to-face interviewer-administered surveys allow greater participant cooperation as rapport can be established; they tend to yield high response rates for survey research (Leedy & Ormrod, 2001). As the interviewer is present, interviewers can clarify questions and probe participants if they appear to be having any difficulty responding. Face-to-face interviews are more costly than alternative survey methods and a major drawback is the risk of socially desirable responses, especially to more sensitive questions, from the presence of the interviewer. Face-to-face interviews can be conducted in the street or in-home. Generally, street interviews are short, i.e. no longer than 10 minutes, as people generally don't want to stand around answering questions for longer, and are inadequate for discussing sensitive issues (McGivern, 2003). In-home interviews allow a longer interview to take place, up to an hour, and can provide a relaxed environment for participants. They enable visual prompts (often a requirement in marketing communications research) and more complex questioning to be used. The sampling strategy can also make in-home interviews the most suitable approach, for example, if a geographical classification system is used to identify areas which are likely to contain people who fulfil the sampling criteria, and recruitment within these areas is door-to-door (McGivern, 2003).

A face-to-face in-home interviewer-administered survey was therefore considered the most appropriate method for the YTPS as it allows for a longer and more complex interview, higher response rates and it is compatible with a sampling strategy which was considered most appropriate (see section 5.7.3) (MacFadyen, 2001). Before the first wave of the YTPS in 1999, extensive survey development and piloting work, funded by

the Health Education Board for Scotland, informed this decision (MacKintosh, MacFadyen, & Hastings, 1999).

Data for Wave 6 were collected between July and September 2011. To maintain consistency with previous waves, the overall survey design was kept identical in terms of recruitment, sampling and fieldwork procedures. FACTS International, a market research company, was appointed to recruit respondents and conduct the survey. The fieldwork comprised an in-home face-to-face interview, accompanied by a self-completion questionnaire. A number of stages between April and July 2011 informed the development and refinement of the survey items to be included in the packaging module.

5.7.3   Development of the survey items and testing

The eight exploratory qualitative focus groups with 15 year olds provided understanding on how young people think about and respond to cigarette packaging and packaging in general. This generated ideas for statements to use in the questionnaire, based around emerging themes, and using, as far as possible, the terms that the young people used. The focus groups also generated ideas on how to format questions about packaging and provided insight into which brands to focus on. It was considered important to try and separate the feelings based attitudes from the other survey items, thus capturing one particular form of affect (Burke & Edell, 1989). Feelings and semantic judgements of the characteristics of advertising have been found to be conceptually different, suggesting that the two things should be assessed on independent scales (Edell & Burke, 1987).

The development stage of the survey items included a set of six further focus groups followed by 12 cognitive interviews. Throughout this stage, survey measures were developed and refined, in line with Churchill's (1979) paradigm for developing better measures of marketing constructs. Churchill argues that a transparent process should be presented in order to show the decisions as to which measures were used. In line with

the statement development stage of Churchill's paradigm, a sample of items for potential inclusion in the questionnaire was developed from the findings of the eight qualitative focus groups, already validated marketing measures (Bearden, 1999), and the findings of the three literature review chapters. In total fifty survey items were presented to participants over six focus groups. The findings helped to edit and reduce this number so a manageable number of items could be included in a draft questionnaire and pilot tested. The survey measures were critically appraised throughout this phase of research in order to select the highest quality of measures which best tapped into the dimensions communicated by different pack styles.

Focus groups

Ideas for survey items, question styles, and visual prompts for the 2011 YTPS were examined in a further six focus groups (Table 5.3), segmented by gender, age (11-12, 13-14, 15-16 year olds) and socio-economic and smoking status. These were conducted in May 2011, and tested out statements and question styles for the five modules contained within the survey: tobacco marketing awareness, illicit tobacco, smoking in cars, point-of-sale display and packaging. Time was allocated to cover each of these areas, with the packaging section taking up approximately 30 minutes of a 90 minute session. As per the qualitative focus groups conducted in stage 1, participants were recruited via professional market research recruiters. The groups took place in two informal community venues in different areas of Glasgow, Scotland. Each group comprised six participants.

Table 5.3: Sample composition for the survey development focus groups

Group	Age	Gender	Social grade	Smoking status
1	11-12	Female	ABC1	Non-smoker
2	13-14	Male	C2DE	Non-smoker
3	15-16	Female	ABC1	Smoker
4	11-12	Male	C2DE	Non-smoker
5	13-14	Female	C2DE	Smoker
6	15-16	Male	C2DE	Smoker

Two moderators were present at each group, with the researcher taking the lead in moderating the packaging section. The groups were audio-recorded but not transcribed as the intention was not to extend the previous qualitative stage of research through analysis, but to understand ease of response to questions, statements and visual prompts. The two moderators took notes throughout the groups. These notes reflected the moderators' observations on participants' responses, whether they appeared to understand questions, survey items, and photographic images of packs, and how quickly and decisively they responded. After each group the moderators would reflect on which questions and measures were most easily understood and make any necessary changes to these for the next group.

One key objective for the packaging section was to decide on the type of visual prompt to use in the survey (photographs of packs versus real packs). Participants were presented with photographs of packs and real packs. They were asked to describe the packs, their thoughts and feelings about the packs and the lead moderator explored any attributes they assigned to the packs. Whether photographs or packs were shown first to participants was rotated throughout the groups. When the photographic images of packs were shown first, participants were also asked what size and colour they thought the pack was and how they thought it opened. When subsequently shown the real pack they were then asked whether that is what they had expected when shown the photograph. With this approach the researcher was able to compare the two types of stimuli and assess the extent the photographs represented, and drew out the same reactions as, the physical pack. The groups confirmed the appropriateness of using photographic images, as well as confirming which brands to use to highlight different pack styles.

Nine brands were tested in the groups for potential inclusion as survey stimuli. These packs represented the packaging strategies identified in Chapter 3 and had generated consistent responses in the qualitative focus groups. The stimuli therefore focused on four styles of packaging: 'plain', 'regular', 'novelty' and 'value'. For the 'plain' dark brown pack, participant responses were similar across the photographic image and pack.

Mayfair king size had been selected as the 'regular' pack and this also drew similar responses across image and pack. For 'novelty' packaging with a different shape, responses to Silk Cut and Vogue Superslims were assessed. Of these two packs, the shape of the tall and narrow Silk Cut pack appeared to be understood best in the image, while the flat shape of the Vogue pack did not come across to participants (see Appendix 6 for an image of these packs). For 'novelty' packaging with an innovative method of opening, Marlboro Bright Leaf (Zippo lighter style opening) and B&H Silver (side slide opening) were compared. Responses to the image of the Marlboro pack versus the actual pack were similar and participants could clearly describe how this pack opened from the image. However, responses to the B&H pack were not so consistent and there was some confusion over how this pack opened from the image alone. A bright pink Pall Mall pack and gold holographic Lambert and Butler pack were chosen to represent 'novelty' packaging with a distinctive colour. While the responses to the physical packs and images were similar for both packs, the pink colour of the Pall Mall pack was thought by participants to be best represented in the image.

From these results, photographic images of the 'plain' dark brown pack, 'regular' Mayfair pack, and 'novelty' Silk Cut Superslims, Marlboro Bright Leaf and Pall Mall were chosen at this stage for potential inclusion on the survey. While two different brands of a '14' pack size had also been tested in the groups, they were both disregarded for potential inclusion as the smaller size of these packs did not come across well in photographs to participants. The 'value' strategy of these smaller packs was also not communicated well to participants.

The groups also provided insight into the types of questions which could work best within the questionnaire. As the research was concerned with testing consumer attitudes towards packaging, the questionnaire drew on market research questioning techniques. Market research frequently utilises sets of rating scales so that more than one dimension of an individual's attitude towards something can be measured at the same time (Webb, 1992). The most common scales are the Likert scale, where an individual indicates their

agreement or disagreement with a statement, usually on a five point scale, and the semantic differential scale, where an individual rates the position of their attitude, again usually on (although not restricted to) a five point scale. Each item on a semantic differential scale is characterised by bipolar adjectives or statements (e.g. fun/boring, worth looking at/not worth looking at) and indicates a person's direction and intensity of attitude (Chisnall, 1992). Weiers (1988) suggests that up to 30 pairs may be included within a questionnaire. This approach is frequently used to assess attitudes and beliefs towards advertising, packaging and brands. It is considered particularly useful in assessing the imagery of different brands as profiles can be derived and compared easily (Chisnall, 1992). Questions using both types of scales were tested in the groups. It was found that semantic scales worked better to show the different messages the packs communicated, offered a more balanced questioning style, and were easier for participants to respond to.

To capture the difference between cognitive and affective responses to packaging, the survey measures tested in the groups were split into pack ratings and pack feelings. Pack ratings measures were developed to capture: the visibility of the pack, i.e. the impression at point-of-sale; the information the pack communicates; the functionality of the pack; and a more engaged response to the pack, including measures which link in with smoking behaviour. Figure 5.8 shows the full range of pack ratings measures developed for testing in the focus groups. The items for the information category were further separated into seven dimensions: trend, age, gender, fun, beauty, identification, and product information, to help eliminate repetitive statements. In the focus groups participants were asked to rate packs against these descriptors and their reasoning was explored. Throughout these exercises the moderators noted which measures appeared to work best in terms of ease of response, understanding, and applicability of the statements to the range of tobacco packaging examined. Items were eliminated if they were found to be repetitive and where an alternative measure appeared more meaningful and easier to respond to for participants. The focus group findings led to 13 items being disregarded before the next stage of questionnaire development and testing (Figure 5.8).

Figure 5.8: Pack ratings measures developed for testing

Pack Ratings		Excluded after focus group testing
Visibility	Attractive/Unattractive	-
	Eye-catching/Not eye-catching	-
	Worth looking at/Not worth looking at	-
	Bright/Dull	-
	Colourful/Not colourful	Similar to 'Bright' & 'Eye-catching'
Information	**Trend**	
	Uncool/Cool	-
	Stylish/Not stylish	Confusion whether this relates to pack or user
	Fashionable/Not fashionable	'Cool' dimension more age appropriate
	Trendy/Not trendy	'Cool' dimension more age appropriate
	Age	
	Grown up/Childish	-
	Gender	
	Masculine/Feminine	More important to see how genders respond rather than ask who they think pack is targeted at
	Manly/Girly	Problematic as communicates both age and gender
	Fun	
	Fun/Boring	-
	Exciting/Unexciting	Not readily applicable to tobacco packaging
	Beauty	
	Beautiful/Ugly	-
	Cut-Not cute	Problematic as links with gender of pack, i.e. feminine packs more likely to be seen as cute
	Identification	
	Meant for someone like me/Not meant for someone like me	-
	Product information	
	Very harmful/Not at all harmful	-
	Makes the health risks very clear/Hides the health risks	-
	Dirty/Clean	-
	Smelly/Not smelly	-
	Friendly/Not friendly	-
	Poor Quality/Good Quality	Participants uncertain of 'quality' in pack context
	Pleasant/Unpleasant	Confusion over whether pack or product is pleasant
Functionality	Fits easily in pocket or bag/Hard to fit into pocket or bag	-
	Looks like cigarettes/Does not look like cigarettes	-
	Easy to carry around/Difficulty to carry around	Regular packs not necessarily difficult to carry
	Easy to use/Difficult to use	Regular packs not necessarily difficult to use
	Well-designed/Poorly designed	Uncertain what is being used to make this judgement – structure or on-pack design
Response	Puts me off smoking/Tempts me to smoke	-
	I would like to have this pack/I would not like to have this pack	-
	I like this pack/I do not like this pack	-
	This pack makes me want to but it/This pack does not make me want to buy it	-

A similar process occurred for the pack feelings measures. Participants were asked to rank packs in terms of how they made them feel, according to the statements written on show cards. The full range of items tested is given in Figure 5.9 along with reasons for those excluded after the focus groups. In total 10 of the items tested were excluded. Some of these, i.e. 'Trendy' and 'Grown-up' were duplicate measures which had also been tested in the pack ratings section to see where they best fitted, while others such as 'Glamorous' 'Elegant' and 'Pretty' were excluded for being too gender specific. There were also problems with the measure 'Ashamed', as this linked in with being a smoker rather than feeling ashamed by the pack, and 'Upper/Lower class' which lower age groups had difficulty understanding.

Figure 5.9: Pack feelings measures developed for testing

Pack Feelings	Excluded after focus group testing
Embarrassed/Not embarrassed	-
Disgusting/Not disgusting	-
Dirty/Clean	-
Good/Not good	-
Attractive/Unattractive	-
Smelly/Not smelly	-
Proud/Not proud	-
Ashamed/Not ashamed	Links too much with being a smoker
I would feel part of a crowd/I would not feel part of a crowd	Not an obvious emotion
Glamorous/Not glamorous	Too gender specific
Upper class/Lower class	Not understood by lower ages
Like I fit it with other people my age/ Like I stand out from other people my age	Not an obvious emotion
Depressed/Not depressed	'Feel good' statement more appropriate
Elegant/Not elegant	'Elegant' problematic term and gender specific
Trendy/Not trendy	Best within pack ratings section as 'cool'
Grown-up/Childish	Best within pack ratings
Pretty/Not pretty	Too gender specific

From these findings, twenty pack ratings and seven pack feelings measures were included in the first draft of the questionnaire and pilot tested. This included some duplication of items to test whether some measures fitted best as pack ratings or pack feelings.

Cognitive interviews

After the six focus groups, a draft questionnaire was then developed. The packaging section initially included twenty pack ratings and seven pack feelings measures thought appropriate for testing from the focus groups findings. The draft questionnaire was piloted with 12 participants aged 11-16 years (Table 5.4) and went through several stages of redrafting during this process. Participants were recruited through the same method as the focus groups participants and were recruited according to quota controls on age, genders and smoking status.

Table 5.4: Sample composition for piloting the survey and cognitive interviews

Interview	Age	Gender	Social grade	Smoking status
1	11-12	Male	ABC1	Non-smoker
2	13-14	Female	ABC1	Non-smoker
3	15-16	Male	ABC1	Smoker
4	11-12	Female	ABC1	Non-smoker
5	13-14	Male	ABC1	Smoker
6	15-16	Female	ABC1	Smoker
7	11-12	Male	C2DE	Non-smoker
8	13-14	Female	C2DE	Non-smoker
9	15-16	Male	C2DE	Smoker
10	11-12	Female	C2DE	Non-smoker
11	13-14	Male	C2DE	Smoker
12	15-16	Female	C2DE	Smoker

A professional market research interviewer administered the pilot questionnaire, observed by the researcher, to test the flow of the questionnaire, timing, comprehension of questions and visual stimuli. Initially, the questionnaire, with twenty-seven packaging measures, was much longer than the final questionnaire was intended to be, to allow for a range of statements to be tested, in order to choose the ones which worked best. There was also intentional duplication of statements, with slightly different wording, so different formats could be tested. The pilot questionnaire included an image of the five different packs identified as being most suitable from testing in the focus groups: the 'plain' dark brown pack, the 'regular' Mayfair pack, and the 'novelty' Silk Cut Superslims, Marlboro Bright Leaf and pink Pall Mall packs. The timing of asking participants to rate each item, on each pack, was carefully monitored as the fieldwork was constrained by a maximum interview length. The inclusion of all five packs in the

final questionnaire needed to be based on the overall length of interview and the ability of participants to deal with the repetition within the packaging module.

On completion of the questionnaire the interviewer left the room to enable the researcher to conduct a depth cognitive interview. Cognitive interviews are considered a useful and necessary process in developing survey items in order to extract valid data. They ensure that respondents interpret the items in the way they were intended by the researcher and that responses can be chosen which best represent respondents' attitudes (García, 2011). The cognitive interviews assessed respondent comprehension of the questions and whether the statements and measures were meaningful and relevant to young people. The interviews also assessed ease of responding and ability to respond. Participants were asked, for example, to describe in their own words what the question was asking, how easy or difficult it was to answer, what the measures meant to them and also to describe what they were thinking about when they responded. The ordering of how items were presented, to have a balance of positive and negative starts, was also carefully assessed, i.e. whether a low score of 1 indicated a negative response (unattractive) or a positive response (attractive). In some instances, there was a natural ordering to the measure, for example, having not harmful as 1 and harmful as 5. It was also noted throughout the interviews where participants appeared confused with the ordering, especially where there was a change in direction of positive or negative. To eliminate mistakes different versions of the questionnaire tried out different sequences of items.

The interviews took place at the start of the Scottish summer school holiday period, in July 2011, in a school in Glasgow. Interviews were conducted at least every second day to allow time for changes and further refinement to the questionnaire. The number of items was reduced throughout the pilot testing stage to make the questionnaire a manageable length. Figure 5.10 shows the full list of measures included in the initial draft questionnaire and the reasons are given for the exclusion of items during this process. This led to a selection of 11 pack ratings and 4 pack feelings measures to be included in the final questionnaire.

Figure 5.10: Draft questionnaire statements

Statement	Excluded after pilot testing
Pack Reactions	
Attractive/Unattractive	-
Eye-catching/Not eye-catching	-
Worth looking at/Not worth looking at	-
Uncool/Cool	-
Grown up/Childish	-
Fun/Boring	-
Meant for someone like me/Not meant for someone like me	-
Very harmful/Not at all harmful	-
Puts me off smoking/Tempts me to smoke	-
I would like to have this pack/I would not like to have this pack	-
I like this pack/I do not like this pack	-
Beautiful/Ugly	'Attractive' works better in packaging context
This pack makes me want to but it/This pack does not make me want to buy it	Implies purchase where ownership captured by 'I would like to have this pack' more appropriate
Makes the health risks very clear/Hides the health risks	Duplicate of 'Harmful' which is easier to read and answer
Dirty/Clean	'Disgusting' in feelings section more appropriate
Smelly/Not smelly	'Disgusting' in feelings section more appropriate
Friendly/Not friendly	Problematic term in pack context
Bright/Dull	'Eye-catching' is easier to understand
Looks like cigarettes/Does not look like cigarettes	More appropriate for qualitative data than survey
Fits easily in pocket or bag/Hard to fit into pocket or bag	Regular style packaging not necessarily difficult to fit
Pack Feelings	
Embarrassed/Not embarrassed	-
Disgusting/Not disgusting	-
Proud/Not proud	-
Good/Not good	-
Attractive/Unattractive	Captured better by 'feel good' statement
Smelly/Not smelly	Captured better by 'feel disgusting' statement
Dirty/Clean	Captured better by 'feel disgusting' statement

5.7.5 Ethical considerations

Ethical approval for the YTPS was applied for separately from the qualitative stage 1 research. Approval was granted by the departmental ethics committee at the Institute for Socio-Management at the University of Stirling. Ethical approval for this stage of research included the survey development focus groups and cognitive interviews, but as

the ethical considerations for these components are similar to those already outlined, they are not repeated here. This section concerns the survey only.

The risk to people participating in the survey was considered to be minimal. The survey interviews take place in the participants' home. It is recognised that the young people may be apprehensive about appearing too knowledgeable about tobacco issues and expressing their views about smoking, particularly if a family member is also present in the room. From the outset of the YTPS in 1999, the questionnaires have been carefully designed to minimise the opportunity for others to follow the responses given by participants. The face-to-face survey makes frequent use of show cards which enable participants to read responses from the card and give the number which corresponds to their answer. The most sensitive questions relating to smoking behaviour are placed within a self-completion questionnaire which the participant seals in an envelope before handing back to the interviewer. This approach protects participants' privacy by making it difficult for anyone else in the room to follow what response has been given.

Great care is taken in the design of the questionnaire to make it clear, easy to administer (for the interviewer) and easy to answer (for the respondent), with balanced questions which reflect young people's thoughts within each of the topics explored. These are basics which the YTPS strives for in order to ensure credibility of results and further benefit the respondents by ensuring that they don't feel drawn or pressured towards particular answers. The survey development work is crucial in this respect.

Unlike the qualitative stage where participants are encouraged to interact with tobacco packs and cigarettes, the survey relies on visual images of items. Participants are only given brief exposure to the photographs to gauge reaction to the stimuli. As such, the potential for the survey element to raise interest in these products is minimal. The marketing questions are also set within the context of a range of questions about tobacco control, providing an overall balance within the survey. Given this balance within the

questionnaire it was decided that providing participants with an information pack, as is done at the end of the focus groups, was not required.

It is the appointed market research agency's responsibility to ensure that the fieldwork is conducted to full Interviewer Quality Control Scheme (IQCS) standards and ISO 20252 standards. This is in line with the Market Research Society Code of Conduct (MRS, 2010). While the university researchers are required to have Enhanced Disclosure it is not a requirement for all market research interviewers to have Disclosure checks, Criminal Records Bureau (CRB) checks or Protecting Vulnerable Groups (PVG) checks. To ensure confidentiality of the interview data, participants are not identified by name and the cover page of the questionnaire, containing contact details, is removed as soon as possible upon the interviewer's return to the offices of the appointed fieldwork agency.

5.7.6 Sampling strategy and recruitment

For the YTPS, random location quota sampling is used to generate a sample of 11-16 year olds from households across the United Kingdom. The first stage of the sampling process involves random selection of 92 electoral wards, stratified by Government Office Region and A Classification Of Residential Neighbourhoods (ACORN) classification (a geo-demographic classification system that describes demographic and lifestyle profiles of small demographic areas) to ensure coverage of a range of geographic areas and socio-demographic backgrounds. Wards covering the islands, areas north of the Caledonian Canal, or with fewer than three urban/sub-urban Enumeration Districts, are excluded from the sampling frame for cost and practicality reasons. Interviewers are allocated electoral wards within which to work and are instructed to approach households within their ward, achieving a quota of 15 interviews in each, balanced across gender and age.

The final stage of sampling relies on non-probability sampling, due to the absence of reliable and accessible sampling frames for 11 to 16 year olds. However, interviewers

have limited discretion over the selection of respondents, given the very specific age group being sought and the often resultant difficulty in finding eligible respondents. In situations where the ward area is exhausted before the full quota of interviews was obtained, interviewers are instructed to gradually work outwards of the ward boundary to a maximum radius. Despite the reliance on quota selection for the final stage of sampling, the samples obtained in the YTPS can still be generalised to the UK adolescent population. Smoking prevalence in the YTPS has been found to be comparable with prevalence rates reported in a large national survey of schoolchildren. Among 11 to 15 year olds in previous waves of the YTPS, the proportion of regular smokers has been 9%, 10%, 9% and 6% respectively, in 2002, 2004, 2006 and 2008 compared with estimates of 10%, 9%, 9% and 6% obtained from a large school-based sample of 11 to 15 year olds in respective years (Fuller, 2009).

In each selected ward for Wave 6, a quota sample, balanced across gender and age groups, was obtained. As the survey is part of a repeat cross-sectional survey, taking several measures at different time points, sample size was determined on the basis of enabling within survey sub-group analyses in addition to between wave analyses. The survey aims for a minimum of 1150 per wave, with a corresponding sampling error of approximately +/- 3% and has the potential to detect changes in proportions of approximately 6% between waves with 80% power, alpha = 0.05. At each wave, the sample provides a sub-group sample of approximately 100 per age, within gender, to allow sub-group analyses. A total sample of 1373 was achieved.

5.7.7 Procedure

Parental and participant consent were secured prior to each interview. Parental and participant information sheets were provided during the recruitment process and parental and participant consent forms were incorporated into the front pages of the questionnaire (see Appendices 8, 9, 10). Each respondent was given a £5 Love2shop shopping voucher for taking part.

The interviews were conducted by trained professional market research interviewers. Participants completed the face-to-face interview first. They were first asked for their awareness of novelty and value cigarette packaging. Participants then viewed an image of five cigarette packs and were asked to rate each pack on 11 pack ratings items and four pack feelings items. These questions were displayed on show cards which participants were asked to read and give the number corresponding to their answer. Once the face-to-face survey had been completed, participants were asked to answer the questions in the self-completion booklet. Once completed, this was placed in a sealed envelope by the respondent before handing back to the interviewer.

5.7.8 Selection of packages

In the face-to-face interview an image of five cigarette packs was presented to respondents. This consisted of four branded packs currently available in the UK and one plain brown pack. For all packs, the brand name was concealed in an attempt to eliminate prior brand knowledge informing pack ratings. The five cigarette packs were selected to reflect a range of design features (Figure 5.11). Pack A (Mayfair), a popular and familiar brand, represented an everyday pack without any notable design features, other than the blue colour and was often referred to as 'standard'. It therefore provided the potential for use as a benchmark 'regular' pack against which other packs could be compared. Three packs (packs B-D) were selected to represent a range of 'novelty' packs, with innovative and distinctive designs and a range of colours. Pack B (Silk Cut Superslims) was an innovative, smaller and slimmer than usual pack shape with elegant and feminine aspects. Pack C (Marlboro Bright Leaf) provided an example of an innovative method of opening, resembling a flip top 'Zippo' cigarette lighter, more masculine features and dark colouring. Pack D (Pall Mall) represented a classic pack style but with a striking and unique bright pink colour. Pack E (a plain brown pack) represented a pack that was void of all design features.

Figure 5.11: Visual stimuli shown to participants

Pack A = 'regular' pack (Mayfair)
Pack B = innovative slim shape and size (Silk Cut Superslims)
Pack C = innovative method of opening (Marlboro Bright Leaf),
Pack D = distinctive and unique colour (Pall Mall)
Pack E = plain pack

5.7.9 Measures

General information

Demographic information (age, gender) and smoking by parents, siblings and close friends was obtained. Parental smoking was determined by the questions: 'Does your mum smoke at all nowadays?' and 'Does your dad smoke at all nowadays?' Sibling smoking was determined by the question: 'Do you have any brothers or sisters who smoke?' To each question participants could respond either 'yes', 'no' or 'I'm not sure'. For parental smoking participants could also respond: 'I do not see/have this person'. Close friends smoking was determined by the question: 'As far as you know, how many of your closest friends smoke at least one cigarette a week?' Participants could tick one box out of 'All of them', 'Most of them', 'About half of them', 'A few of them', 'None of them', or I'm not sure'. Socioeconomic status was determined by the occupation of the chief income earner within the participant's household.

Smoking behaviour

Smoking behaviour was determined in line with the 'Scottish Schools Adolescent Lifestyle and Substance Use Survey' and the 'Smoking, Drinking and Drug Use among Young People in England' survey. Never smokers were those who answered that they

had 'never tried smoking, not even a puff or two'. Respondents were classed as having tried smoking if they answered 'I have only ever smoked once' or that 'I used to smoke sometimes, but never smoke cigarettes now'. Current smoking included occasional and regular tobacco use. Occasional smokers were those who answered 'I sometimes smoke cigarettes now, but I don't smoke as many as one a week'. Regular smokers included all those who said they smoked more than one a week and included those who responded 'I usually smoke between one and six cigarettes a week' or 'I usually smoke more than six cigarettes a week'.

Smoking susceptibility

Susceptibility captures adolescents' future smoking intentions. It is a well-validated measure and predictor of future smoking behaviour (DiFranza et al., 2006; Lovato et al., 2011; National Cancer Institute, 2008). Never smokers were categorised as those who had 'never tried smoking, not even a puff or two'. Susceptibility, defined by the absence of a firm decision not to smoke (Pierce, Choi, Gilpin, Farkas, & Merritt, 1996) was assessed across three items. Never smokers were classified as non-susceptible if they answered 'definitely not' to the questions 'If one of your friends offered you a cigarette, would you smoke it?' and 'Do you think you will smoke a cigarette at any time during the next year?' and to the likelihood that 'you will be smoking cigarettes at 18 years old'. Participants who answered anything other than 'definitely not' to any of the three items were classified 'susceptible'.

Packaging awareness

Packaging awareness of novelty and value packaging was measured via the item, 'Have you seen anything like this in the last 6 months: New or unusual pack design?; Pack with the price marked on it?'

Pack ratings

Eleven items assessed ratings of the five different pack designs. These items primarily assess the cognitive component of attitudes, but do include one affective component -

liking. Participants were asked: 'Can you tell me the number that best describes each pack?' and were assessed via scales: (a) Attractive/Unattractive; (b) Eye-Catching/Not eye-catching; (c) Cool/Not Cool; (d) Not at all harmful/Very harmful; (e) Fun/Boring; (f) Worth looking at/Not worth looking at; (g) Meant for someone like me/Not meant for someone like me; (h) Grown-up/Childish; (i) Puts me off smoking/Tempts me smoke; (j) I dislike this pack/I like this pack; and (k) I would not like to have this pack/I would like to have this pack. Responses were provided on five-point semantic scales (e.g. 1 = 'Attractive' to 5 = Unattractive'). Prior to analysis, items (a – g) were reverse coded to make a low score (1) indicative of a negative rating and a high score (5) indicative of a positive pack rating.

Pack feelings

Four items assessed feelings across the five different pack designs. Respondents were asked: 'Can you tell me the number that best describes how you think you would feel if you had pack A-E?' and were assessed via scales: (a) Feel embarrassed/Not feel embarrassed; (b) Feel proud/Not feel proud; (c) Feel disgusting/Not feel disgusting; and (d) Feel good/Not feel good. Responses were provided on five-point semantic scales. Prior to analysis, items (b) and (d) were reverse coded to make a low score (1) indicative of a more negative feeling a high score (5) indicative of a more positive feeling.

5.7.10 Analysis

All data were analysed using SPSS version 19. Descriptive statistics were initially used to explore the data. This preliminary exploration of the data is an important first step in survey analysis to help summarise and simplify data in a meaningful way (Lee & Forfother, 2006). The mean, standard deviation and standard error, for each response item, for each pack, was examined. Within market research, the mean is frequently used to interpret consumer attitudes collected via semantic differential scales (Chisnall, 1992; Webb, 1992). From this, a profile analysis of each pack can be derived. Plotting the mean scores on a simple line chart produces a pack profile and introduces where likely

differences occurred between packs. This visual display of data is considered useful in drawing initial comparisons and highlights patterns which might otherwise be difficult to observe with a large set of measures (Egger & Carpi, 2008).

Inferential statistics were then used to test the hypotheses to see if any statistical differences occurred between packs, for all measures. Such statistics allow inferences to be made about large populations from a smaller sample (Leedy & Ormrod, 2001). As the data resulting from the five point scales is ordinal, it is often argued that only nonparametric procedures should be used (Jamieson, 2004). Nonparametric statistics are not based on the same assumptions as parametric statistics: that the intervals between the values on a scale are equal and the data fall in a normal distribution (Grace-Martin, 2008). Some statisticians, however, state that parametric tests can be legitimately used in some situations (Lubke & Muthen, 2004; Gregoire & Driver, 1987). In a comparison of the parametric *t* test and nonparametric Wilcoxon signed rank test (tests suited to paired data), De Winter and Dodou (2010) found the two tests to have equivalent power in most instances. However, the Wilcoxon test had the stronger power when the data formed a skewed distribution.

Within the analysis, a combined approach was taken. Paired t-tests were first used to produce mean scores of the 11 items for: a) the 'regular' pack (Mayfair) relative to the mean scores for each of the three 'novelty' packs (Silk Cut Superslims, Marlboro Bright Leaf and Pall Mall); and b) the plain pack relative to the mean scores of each of the other four packs. This provided data on the paired means which was easy to understand and present. Given the negative skew of the data from the survey scales, it was decided to use the Wilcoxon test to test for significant differences between the ratings.

For the multivariate analysis used to investigate whether any association existed between ratings of packaging and susceptibility to smoke, it was first necessary to conduct a principal components analysis (PCA) on the 11 pack ratings items. This explored the potential for reducing these 11 items to a smaller number of composite measures which

could then be used in the analysis. PCA is considered useful when the researcher expects some of the variables to be correlated. It allows a subset of variables from a larger set to be selected by extracting the most amount of variance with a small number of components (Field, 2009). PCA is often mistakenly referred to as exploratory factor analysis (EFA). However, it is noted that the two methods have distinct objectives. EFA is concerned with an assumption that the common factors extracted underlie a set of measures (Fabrigar, Wegener, MacCallum, & Straham, 1999; Russell, 2002). No such assumption of a causal structure exists within PCA. PCA simply identifies the items which share something in common.

Principal components were extracted using varimax rotation with the criteria of eigenvalues greater than 1, consideration of the scree plot and component loadings >0.40. The results of the PCA are provided in Appendix 11. Two composite measures were derived from nine of the 11 items. Five items combined to form a composite *pack appraisal* measure (Cronbach's a>0.80 for each pack): (a) Unattractive/Attractive; (b) Not eye-Catching/Eye-catching; (c) Not cool/Cool; (e) Boring/Fun; (f) Not worth looking at/Worth looking at. Four items combined to form a composite *pack receptivity* measure (Cronbach's a>0.70 for each pack): (g) Meant for someone like me/Not meant for someone like me; (i) Puts me off smoking/Tempts me smoke; (j) I dislike this pack/I like this pack; (k) I would not like to have this pack/I would like to have this pack. Composite scores for each pack were derived by combining the pack ratings, with scores ranging from 5-25 for pack appraisal and 4-20 for pack receptivity. These scores were re-coded into binary variables to enable comparison of participants giving positive pack appraisal scores with those who gave non-positive appraisal scores, and comparison of those who were receptive with those not receptive. Participants were classified as having a 'positive pack appraisal' (coded '1') if they scored 16 or more on the composite pack appraisal measure and 'non-positive pack appraisal' (coded '0') if they scored 15 or less. Participants were classified as 'receptive' (coded '1') to a pack if their composite receptivity score was 13 or more and 'not receptive' if their score was 12 or less (coded '0').

In total, twelve separate hierarchical binary logistic regression models were then constructed with susceptibility as the categorical outcome variable. This section focused exclusively on the never smokers in the sample. For each of the five packs, two hierarchical binary logistic regression models were constructed to examine whether any association existed between 1) positive pack appraisal and susceptibility, and 2) receptivity to the pack and susceptibility. Logistic regression models were also constructed to examine whether an association existed between awareness of 1) novelty packaging and 2) value packaging and susceptibility. Responses on pack awareness were recoded into binary variables to facilitate the analyses. 'No' and 'do not know' were coded as '0' to indicate no awareness of the packaging type and 'yes' was coded as '1' to indicate awareness.

Each model controlled for the potential influence of demographic and smoking-related factors identified in past research as influencing youth smoking (Amos et al., 2009). These independent variables were entered in blocks. In each model, block one controlled for whether the majority of close friends smoke, any siblings smoke, and either parent smokes. Block two controlled for gender, socio-economic group, and age. Adding the pack awareness, appraisal and receptivity measures to the model in a third and final block, enabled investigation of whether these measures made a contribution to the model over and above what it already known about youth smoking influences.

5.8   Conclusion

This chapter has explained and justified the mixed methodology design. It has demonstrated the need for multiple methods to adequately research public health problems. The sequential exploratory design first uses qualitative focus group research to explore and understand how adolescents engage with, and respond to, tobacco packaging and product design. The qualitative findings are presented in Chapter 6. This was designed to be a standalone study, but this first stage of research was also crucial in

helping to inform the subsequent quantitative stage. The quantitative research used a multi-stage process to develop items for inclusion in a cross-sectional survey, which was administered to 11-16 year olds across the UK. From these survey items, hypotheses derived from the initial qualitative research could be tested. The quantitative findings are presented in Chapter 7.

Chapter 6: Qualitative findings

6.1 Introduction

As demonstrated in Chapter 4, there is a substantial evidence base highlighting the potential benefits of plain packaging. It reduces appeal, increases the salience of health warnings and reduces the false beliefs about the harmfulness of tobacco products. Within each of these areas there is evidence of the impact on young people. There is less evidence, however, of how the design strategies identified in chapters 2 and 3 such as novelty, innovation, and value, impact on the responses of adolescents. This is despite the recognition in industry documents that young people are most concerned by having something 'new' and portraying the 'right' image to others. Structural and graphic design presents cues through which symbolic properties of brands can be communicated. This can help young people create identities. With new pack and cigarette designs increasingly available on the market, this study attempts to fill gaps in the literature by exploring how adolescents engage with, and respond to, novel tobacco packaging and cigarette design.

This chapter presents the findings of the focus groups with 15 year olds (n=48). It will firstly examine how adolescents engage with consumer goods packaging generally (6.2) before moving on to tobacco packaging and then cigarette appearance. It will explore tobacco packaging awareness (6.3), the pack's role in youth smoking (6.4), how adolescents respond to novelty and value packaging (6.5, 6.6, 6.7), plain pack perceptions, including plain packs which differ in shape and size (6.8), whether tobacco packaging impacts on affective responses such as feelings and emotions (6.9), the perceived impact of packaging on behaviour (6.10), and what, if any, impact cigarette appearance has on adolescent perceptions (6.11). Finally the chapter will conclude with a summary of key findings and the development of hypotheses to be tested in the quantitative stage of research (6.12)

Pack design had a powerful influence on participants' cognitive perceptions and affective responses. Approach behaviours in response to pack design were also observed. Novelty packs were the most highly appraised packs. Smaller and lighter coloured packs implied reduced harm. Brighter coloured packs and those with distinctive designs generated strong positive user imagery and were associated with young, attractive and happy people. In this regard, packaging was able to soften participants' negative smoking attitudes. Of particular concern, benefits were presented through tobacco packaging: functional benefits, including convenience and discretion; emotional benefits, particularly positive feelings about themselves and smoking; and information on harm and strength, due to shape and colour. Comparatively, plain packaging reduced these benefits. It simply exposed tobacco as being harmful and dirty, something for older heavy smokers. With regards to cigarette design, slim and superslim cigarettes with white filter tips and decorative features were viewed most favourably and rated most attractive across gender and socio-economic groups. The slimmer diameters of these cigarettes communicated weaker tasting and less harmful looking cigarettes. This was closely linked to appeal as thinness implied a more pleasant and palatable smoke for young smokers. A long brown cigarette was viewed as particularly unattractive and communicated a stronger and more harmful product.

Figure 6.1: Dissemination of the qualitative findings

The packaging findings are published in *Education and Health* (Ford, Moodie, MacKintosh, & Hastings, 2013b) and the Cancer Research UK funded report 'The packaging of tobacco products' (Ford, 2012).

In November 2013 the research was cited in a House of Lords debate highlighting support for amendment 264 to the *Children and Families Bill*. This amendment sought to introduce a clause under the *Tobacco Advertising and Promotions Act 2002* to allow the Secretary of State for Health to introduce regulations to specify tobacco packaging requirements (HL Deb, November 18 2013, Col. GC368).

The findings relating to cigarette appearance are published in the *European Journal of Public Health* (Ford, Moodie, MacKintosh, & Hastings, 2014).

6.2 Consumer goods packaging

Across consumer goods, participants had clear preferences for different packaging styles, were tuned into the implications of different designs, valued the effort put into design and easily drew messages from design features such as colours, fonts, materials and structures. While there were no apparent differences between socio-economic groupings, some gender differences were observed, and these are noted throughout the text where relevant. Participants were particularly drawn to more colourful items, and items with innovative features such as the Lynx deodorant spray twistable opening and L'oreal spray tan nozzle. At the early stages of the focus group discussions, without any mention of tobacco or plain packaging, consumer products with plainer designs were grouped together as unappealing and boring. Packaging clearly communicated messages of price, target market, product quality and convenience. For example, plastics were often indicative of a cheaper product, while metal or secondary packaging indicated a more expensive and better quality product. It was easy for participants to form user images from packaging, often providing detailed descriptions on the level of income, style, appearance, age, interests and personal attributes of the product user.

6.2.1 Packaging at point-of purchase and post-purchase

Participants were clear about the importance of packaging in their brand choice of consumer goods. Some participants said it was as important as the product and that it played a part in their purchasing decisions. Others acknowledged that while it was important, brand and reputation were also significant. Participants also commented that people were not drawn to plain and boring looking items. The particular appeal of colour to young people was also highlighted.

> I think the package is a big part of the product....
> Probably just as important as the product. (Girls, C2DE)

It's very important, if it doesn't look appealing no one is going to buy it. (Girl, ABC1)

Say if something is aimed at young people then it needs to be appealing to the younger people but like older people don't really mind as much about like colours and brightness. (Girl, C2DE)

All groups could give examples of situations where they had been drawn to products because of the packaging. For girls, the packaging of cosmetics and perfume appeared especially important and boys repeatedly spoke of being influenced by the design of energy drinks. Both genders described being attracted to the colourful wrappers of confectionary and crisps. One girl also highlighted that convenience, and whether they were likely to display the product packaging in public, was also taken into account in purchasing decisions.

Makeup, like mascara, the other day I was going to buy one just because it had a nice pattern on it. (Girl ABC1)

I liked Relentless [energy drink] cos the writing. The dark background and the writing stood out because of that.... I only got it cos I looked at it and I thought it looks pretty good. (Boy ABC1)

Lip gloss is something you would use in public. You don't want to have to bring out something pure ugly.
If it's too big as well, so you can't carry it around with you. (Girls, ABC1)

Additionally, some of the girls described uses for packaging post-purchase. They often spoke of keeping and reusing attractive packaging for a different purpose. There was a sense of enjoyment in these items.

I've got a Paris Hilton box. I think you can actually keep it, it's dead nice, it's got jewels on it.

Do you use it for anything?

Jewellery. (Girl, C2DE)

I got a shoe box and I put all my make up in it... It was a bright yellow colour. It was about 2 years ago. (Girl C2DE)

If you buy jewellery and it comes in a box, you can keep your jewellery in it if it's a nice wee box...

Yeah if you get tins - presents and stuff. At Christmas I got wee mini deodorant things and the box was a photo frame as well. (Girls, ABC1)

6.3   Tobacco packaging awareness

Generally, there was little awareness of different styles of tobacco packaging apart from the key brand, which for the participants in this study, was Mayfair King Size. Most participants could describe Mayfair's blue pack design and this was viewed as a standard tobacco pack. It was seen as a popular, every-day pack, commonly smoked by family members and peers. It was also a pack to be seen with for 'fitting-in' purposes. Participants did not view this pack as particularly attractive or as a good design, but it was sometimes described as cool and good quality because of its popularity.

They're just normal – nothing special.

Everybody could smoke it. (Girls, C2DE)

They look like the classic thing you put your cigarettes in, cos whenever I think of a cigarette packet, I think of a blue packet. (Boy, ABC1)

Aside from Mayfair, there was little prior awareness of the packs used in the focus groups. A small number of participants had seen the innovative B&H slide side opening pack and the Marlboro Bright Leaf pack, with its 'zippo' lighter style opening before. On occasion, some participants could recall seeing the Lambert and Butler, Pall Mall and Silk Cut packs and the Golden Virginia pouch. However, it appeared that participants were seeing most of the packs used in the focus groups for the first time. This was despite a general perception that tobacco packs were everywhere and seen countless times a day in shops, vending machines, public smoking areas and on the ground.

6.4   The pack's role in youth smoking

To some extent the pack appeared peripheral compared with the cigarette in youth smoking, particularly at the initiation/experimentation stage. The general perception was that young people would either 'jump in', i.e. pool their money among a group of friends to buy a pack, or buy single cigarettes from someone in school known to have a pack. Asking older people to purchase tobacco on a young person's behalf was common, but some participants also knew of shops which would sell to those underage. Some said they never really saw the pack being used, it was just the cigarette that was passed around. Others said they saw both the cigarette and the pack. Only the boy group with four reporting as smokers, said that most people had their own pack, while another group said this was dependent on how much money they had at the time. Many participants described a smoking area in or around their school grounds where smokers could go.

> Somebody will have the packet and they all pay each other for them. (Girl, C2DE)

> They just pass round a cigarette out at a time...
> People would go the shop at lunchtime... jump in for their cigarettes. (Boys, ABC1)

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They always go like to a different place where they can't be seen, there's like a bit when you walk down it's where all the like the smokers kind of go and they've got them all lined up....They've like stuck packets up on the fence so there is like a big row of them. (Girl, C2DE)

6.5 Novelty packaging: Innovative pack structures

Packs with different methods of opening and unusual shapes sparked much interest and curiosity, resulting in some of the strongest responses and preferences among participants. Having something very different or unusual was seen as a positive. Several packs had bevelled-edges and one had rounded edges, however these features were largely ignored by participants. Two packs also featured what the tobacco industry has marketed as 'tactile' pack designs and although this feature was never referred to by participants, several participants, primarily boys, held the Marlboro Bright Leaf pack for prolonged periods. While they appeared to be focused on the method of opening, it is possible that the pack's tactility had a part to play in this. It has been suggested that sensory impressions can work on a subconscious level (Laird, 1932).

6.5.1 Method of opening

Two packs with innovative openings (Marlboro Bright Leaf and B&H slide) produced some of the strongest reactions across the groups. When shown the openings, all but one group were openly impressed and interested in the gadgetry, although this group still rated these packs positively. Initial reactions included several exclamations of 'wow' and the packs were repeatedly described as 'cool'. Some participants drew other's attention to the opening mechanisms and there were obvious displays of enjoyment in opening these packs: opening the B&H slide pack caused one girl to smile, while on a number of occasions participants sat playing with the Marlboro Bright Leaf opening. Some participants thought other people would be impressed: 'people might be stunned

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by it' (Boy, C2DE), with young people a particular target 'they are more attractive to young people' (Boy, ABC1).

In the initial 'appeal' rating exercise, all boy groups rated both packs as appealing, while only one girl group rated the Marlboro Bright Leaf as appealing. One explanation for this is that despite participants frequently describing the openings as 'cool', this was not viewed in isolation from other pack features when making decisions, suggesting that gadgetry alone, while having an initial impact, is not enough.

> I think the opening thing is cool but like I don't know…
> The whole packet isn't.
> It looks a bit tacky. (Girls, ABC1)

Furthermore, some participants questioned the functionality of the slide pack, describing the design as 'awkward' (Girl, C2DE), 'annoying' (Boy, ABC1) and 'inconvenient' (Boy, ABC1). Some also said the slide opening was 'pointless' (Girls, C2DE; Boys, ABC1) due to the extra packaging needed to manufacture this feature. It was seen as a novelty which would soon wear off.

> I couldn't be bothered with it all the time, cos when it was further down the packet, you'd be pure trying to get it out. You'd end up pulling it apart.
> It would frustrate you. (Boys, C2DE)

> You might try it cos it looks cool the way it opens.
> Then the fun would wear off. (Boys, C2DE)

In contrast, participants indicated no concerns over the Marlboro Bright Leaf opening, likened to a lighter and also a 'gun' (Girl, ABC1). The boys in particular were very positive about this pack, calling it 'snazzy' (Boy, ABC1), 'classy' (Boy, C2DE) and

'sophisticated' (Boy, C2DE). This opening was always viewed positively, as being better than a standard pack with a 'unique' selling point (Girl, C2DE).

> Unique point if that makes sense, it's like the Lynx you always know it's that one.
>
> **Is that a good thing, or bad thing, that it opens like that what do you think, is it appealing?**
>
> It's just different. It's good because it's different. (Girls, C2DE)

Additionally, those who perceived the Marlboro Bright Leaf pack favourably described the design as 'professional' and 'designer', like 'art' (Boys, ABC1). This was reflected in participants' price perceptions of this pack which was considered 'classy' and 'expensive' (Boys, C2DE). The B&H slide design produced similar perceptions, suggesting that young people view effort in packaging design to be a reflection of a quality product.

> It looks dearer and if it is dearer you probably get a better fag...
>
> They are not going to put a rubbish fag in a packet like that. (Girls, C2DE)

6.5.2 Pack shape

Both boys and girls responded positively to the slimmer, more feminine oriented packs. Initially, there was both curiosity and uncertainty as to exactly what or how many cigarettes the packs contained. Some participants thought that they contained filter tips, while others thought that they must hold only four or five cigarettes. This uncertainty led to one of the superslims tall and narrow 'perfume' type packs to be placed within the toiletries grouping in the first general packaging activity by one group of girls.

The Silk Cut Superslims pack was repeatedly referred to as looking like perfume or makeup, and the Vogue pack, like chocolate. That these packs did not resemble what

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participants perceived to be a standard cigarette pack generated interest among participants, particularly the girls.

> They don't look like cigarette packets.
> It's unusual and you'd want to buy it to see what it's like inside. (Girls, AB1)

> Because they look like other things, you want to look at them to see what they actually are. (Girl, C2DE)

The packs were repeatedly described as unusual and different to standard packs, something viewed positively by participants. One explanation for this may be that participants' smoking attitudes were generally negative (see section 6.9.1), and these more unusual packs, shed some of the negative associations of smoking.

> Cos it's different and people might look at them and not think they are cigarettes. (Boy, C2DE)

Of particular appeal was the difference in pack shape, but many participants were also drawn to the lighter colours of these packs. In terms of gender, the packs were consistently rated as 'appealing' by all but one group. However, while this group of boys didn't identify with the pack, they still considered these packs to be attractive and stylish. Similarly, a further two boy groups didn't think that these packs were for them or said they wouldn't like to be seen with them, but in all other aspects the packs were rated positively by the boys despite being of a more feminine design.

> They're not really cool to have, but they look quite nice. (Boy, C2DE)

> They are quite nicely packaged I guess. They look different. They don't look normal. (Boy, ABC1)

Generally liked by all, the packs were commonly described as 'cool', but also 'cute' (Girl, ABC1), 'compact' (Boy, ABC1) and 'skinny' (Girl, C2DE). They were perceived to contain less tobacco, resulting in lower harm perceptions. Overall, the user imagery of the superslims packs was positive, relating to a slim, attractive and classy female. Of particular benefit to participants, the packs' slimness gave added convenience as it was described as being easy to carry around in a pocket or bag.

That these packs were smaller and didn't immediately resemble cigarettes also gave an element of discretion, something this age group appeared to place great value on. A number of participants spoke of how these packs could aid hiding smoking from others, a particular advantage of the smaller pack design.

> They'd be easy to hide. (Girl, C2DE)

> It's like dead thin and easy to carry about and doesn't stand out if you put it in your pocket. (Boy, C2DE)

> You would just feel like if you had to take that out of your pocket it wouldn't be that bad.... like say if you went home, like and if you were smoking and you were trying to like hide it from your mum and dad and that like fell out your pocket or something it wouldn't be cigarettes. (Girl, C2DE)

6.6 Novelty packaging: Graphic design

The focus groups highlighted that all packaging can create a brand image from its design, whether positive or negative. The groups also showed young people to be adept at identifying how on-pack features, such as colour, font, brand name and background design, impact on their brand and product perceptions. Sometimes there was one overriding pack feature which impacted heavily on pack and brand impressions and while an attempt has been made here to illustrate the effect of these design elements, it

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must be highlighted that participants' perceptions of branded tobacco packaging generally came from the combination of pack elements. Mostly the health warnings appeared to be ignored by participants, but occasionally were noted by participants. The packs that created the strongest positive imagery, where participants were able to discuss their associations in great detail, tended to be the most eye-catching, brightly coloured packs, with prominent and bold designs.

6.6.1   Colour

Overall, darker coloured packs were described as boring and for older smokers. There was little apparent interest in these packs and they tended to be discarded quickly within sorting activities. Exceptions were the Sovereign limited edition and Marlboro Bright Leaf packs which were sometimes seen as cool, but for other design features such as the on-pack city scene (see section 6.6.3) or method of opening. Certainly darker coloured packs were associated with greater strength and harm. Additionally one female group associated the smokers of these packs to be ill.

> Just that it is dark.
> It represents like danger.
> Like the people that would buy them can take stronger things. (Girls, ABC1)

In contrast, lighter coloured, feminine packets were rated 'appealing to those thinking of starting' and 'weakest'.

> **So who would smoke these ones that you've put as weak ones?**
> People who are starting...
> They look cool, not friendlier, but they don't look as harmful.
> You wouldn't want to get into the strong stuff at the start. (Girls, ABC1)

See the packets with the white they look a lot less harmful.

Why is that?

Cos it's white, it just looks cleaner. (Boys, ABC1)

Two packs which drew particularly strong responses from participants were the pink Pall Mall pack and gold holographic Lambert and Butler back. These distinctive packs were not always liked, but associated with strong imagery.

Lambert & Butler

The gold holographic pack was consistently associated with parties and discos. Those that liked the pack said it was 'fun' (Boy, C2DE) and 'funky' (Girl, ABC1), while for others, the shiny appearance made the pack appear 'cheap' and 'tacky', for somebody 'trying too hard' (Girls, C2DE).

Some of them look pretty shiny. They don't look boring...

The way the lines are on it and the way the light hits it.

It looks like fun.

What makes it look like fun?

Cos it's like disco lights.

Looks really cool. (Boys, C2DE)

In terms of the user imagery, this was often described as a pack for both genders, and associated with a young 'bubbly' (Girl, ABC1), 'happy' (Boy, C2DE) and 'outgoing' (Boy, C2DE) person. It was also occasionally associated with somebody 'unique' (Girl, C2DE) and 'individual' (Boy, ABC1).

They probably make up their own style, they don't follow the crowd.

They're different.

It looks like none of them, it looks completely individual. (Boys, ABC1)

However, one girl group described a contradiction in the pack design. While the shiny colour was associated more with young people, other aspects of the pack, particularly the font, made the pack look like it was for an older person.

> The writing kind of reminds me of like an old man.
>
> That's what I was thinking they are like old but then…
>
> So if they are like old but then they've got the new bit on it if that makes sense like the shiny bit on it.
>
> Like an old man trying to let go of his young-ness. (Girls, C2DE)

Pall Mall

The bright pink Pall Mall pack was viewed as looking cheap and tacky by those that disliked it. It was not identified as a pack for boys. The girls who liked it were very enthusiastic. One held it up for the others to see with a look of amazement. The same participant later began to check how much money she had in her purse and asked others within the group if they had enough to purchase it from the moderators. The pack was described as 'bright' and 'happy' (Girls, ABC1) and it was associated with 'girly things' such as 'Barbie' (Girls, C2DE). One girl also thought the brand name font added to the pack's appeal. The consistent user image was a very young female.

> The pink just looks really like it would attract teenage girls. (Girl, ABC1)

> I don't see any older person smoking them.
>
> **How young do you think someone would be that would smoke that?**
>
> Sixteen. It's like a dead girly girl – someone like that who would buy that, cos it's dead pink. (Girls, C2DE)

6.6.2 Font and brand name

Fonts frequently impacted on pack perceptions and brand imagery. For example, the Chesterfield pack design was likened to a 'tattoo' (Girl, ABC1) and 'graffiti' (Boy, C2DE). Several groups thought the pack was 'cool' and it reminded them of 'rock and roll' (Girl, ABC1). It was also associated with the distinct style of fashion design Ed Hardy. While the background pattern had a role to play in these associations, the style of font was also important in creating these impressions.

> It looks like a designer, it's like motorbike stuff.
>
> That looks like the same type of writing.
>
> The same kind of writing and like style. (Girls, C2DE)

Another girl group also associated the Chesterfield pack with somebody 'posh' (Girl, ABC1), both because of the font used and how the name sounded. The Vogue brand name also appeared to have a big impact on the brand imagery. Here the brand name, font and pack shape all appeared to work in synchronicity, creating a consistent brand image. For the females 'Vogue' was associated with something 'classy' and 'glamorous' (Girls, ABC1), stemming from its repeated fashion associations. This had a positive impact on perceptions of the cigarette. A number of boy groups were also drawn to the style of font.

> The writing and colour and the way it blends in together is pretty well done. (Boy, C2DE)

> The name, Vogue... like a fashion magazine and I don't know it's just to do with glamorous stuff. (Girl, ABC1)

> Like you think of cigarettes as like disgusting but you think those ones are going to be fancy. (Girl, C2DE)

6.6.3 Limited edition packaging

Featuring much more decorative pack designs, limited edition packs often resulted in very different perceptions, level of appeal, associations and imagery, to the equivalent standard pack.

Sovereign

While not always a pack that appealed to participants, four groups, evenly split by gender rated the limited edition Sovereign pack more positively than the standard pack in terms of style, attractiveness, quality and coolness. In contrast, the equivalent standard pack was rated negatively. There was never an occasion where the standard pack was rated more positively than the limited edition pack. The limited edition's more unusual design was the sole reason for its more favourable response. It was consistently associated with the city, night time, New York and fast cars.

> That is more kind of fast paced.
>
> It looks like New York a bit.
>
> It looks classy. (Girls, ABC1)

In line with these associations, the user image was of a young 'outgoing' (Boy, C2DE) and 'party' (Boy, ABC1) person who enjoys nights out as opposed to the standard pack image of an older, more boring individual.

Golden Virginia

Similar to the two Sovereign packs the Golden Virginia RYO packs were not always well received by participants. However, two groups viewed the limited edition box much more favourably than the standard pouch - both boy C2DE groups. In these instances the pouch was negatively associated with older men or younger 'mosher people', a term used to describe an alternative youth subculture (Boy, C2DE). The box was considered

more attractive because it was different in structure to the usual RYO pouch, but the key source of its appeal appeared to be the background leaf design and brighter colour.

> The box is cooler, better colour and I like the design on it. (Boy, C2DE)

> It's better. It's a more attractive green. (Boy, C2DE)

The limited edition pack was also commonly associated with marijuana, with participants using terms such as 'grass' (Girl, ABC1) and 'weed' (Boys, ABC1). In line with this, one boy group described the user image of a 'laid back' person (Boy, C2DE).

> Cooler and kind of grassy.
> **What does that make you think of then?**
> Just having a good time. (Boys, C2DE)

One group of girls preferred the pouch, however, and said the box looked more harmful and stronger because of this association with marijuana.

> Maybe that one as well because it kind of looks like a drug.
> Just because it looks like leaves.
> Because it's like all green grass, it just reminds you of like...
> **Does that remind you of the same thing, the pouch?**
> No not really because it's not in the background it's just plain green. (Girls, ABC1)

6.7 Value packaging

Four examples of value packaging were used as stimuli within the focus group discussions. The pink Pall Mall pack and the Golden Virginia box both featured bright yellow price-marking strips and two packs offered 14 cigarettes: Mayfair King Size and

Benson & Hedges Silver. Overall the value aspects of these packs (price-marking and number of cigarettes) appeared to have little impact on participants' perceptions. For these packs, strong impressions resulted from other pack features such as colour or other graphical design. Design features of the pink Pall Mall pack and Golden Virginia box have been discussed in sections 6.6.1 and 6.6.3.

6.7.1 Price-marking

There were mixed feelings about the price-marked Pall Mall pack among the groups. For those that disliked it - mainly the boys but also one girl group – it was the combination of price-mark and colour which led to the negative response. The price-marking on the Golden Virginia box was largely ignored by participants. It is therefore difficult to draw any conclusions about how price-marking influenced participants' responses. Most of the groups perceived price-marking to indicate a cheaper retail price and that its primary purpose was to draw attention to this. For some participants price-marking cheapened the pack design and this was viewed negatively. Conversely, for one group of girls this communication of a low price was appealing.

It's got the price on it so... it's got to be a good price. (Girl, C2DE)

It would be better if that big yellow stripe wasn't on the top.
It makes it look cheap. (Boys, C2DE).

6.7.2 Size

The two 14 packs sparked much curiosity and discussion among participants. There was little prior awareness of this pack size. Only one participant thought they were becoming popular: 'quite a lot of people have the fourteen's now' (Boy, ABC1). Participants questioned why the packs had a large 14 on the front, and this sparked some interesting responses including weight and product strength.

You want to know why it is 14. (Girl, C2DE)

Is it the weight? 14 grams? (Boy, ABC1)

They might be a rank of how strong they are. (Girl, C2DE)

Of particular concern, the number 14 repeatedly signalled messages of age.

I saw it on that pack as well. I think it means something.

Does it make you think of anything?

Maybe trying to put an age on it.

Anything else?

I don't know if they are deliberately trying to sell to fourteen year olds, but I think it sort of appeals, because they'll look at it... They are sort of saying it without actually saying it, like subliminally saying you know, fourteen year olds. (Boys, ABC1)

People like younger than us probably would probably think if they looked at that, it would be for us because like they are fourteen. (Girl, C2DE)

That the packs contained 14 cigarettes was neither viewed positively or negatively suggesting that different size offerings have little meaning for this age group. One exception came from the same participant who thought this pack size was growing in popularity. This participant perceived the size to be an ideal amount to last a weekend. Those that rated the 14 packs as appealing attributed this to both the concept of being different to a standard pack and the prominence of the 14. The smaller and slimmer shape was also commented upon in several groups. As with the feminine packs highlighted in section 6.5.2, the convenience of the smaller shape was seen as a positive.

It looks different... hearing people saying I'll go and buy ten fags or twenty, but if you go and buy fourteen, it sounds different as well. (Boy, C2DE)

Yes it's like quite a good size because...
They would fit in your pocket quite well. (Boys, ABC1)

The design of the Benson and Hedges 14 had a greater impact on participants than the Mayfair 14 and was noted to be more eye-catching and prominent, with a 3D appearance. Several groups described how this pack conjured up strong imagery and associations to something fun, for example, Lego, sports and game shows.

What is it about those Fourteen Benson and Hedges, you said they look quite young, why do you think that?
They look like a wee children's toy, not that it's a toy but it reminds me of it, like a wee boy would like.
Lego. (Girls, ABC1)

The fourteen looks pretty cool.
Aye the wee dots. (Boys, C2DE)

6.8 Plain pack perceptions

Placing the 'Kerrods' plain pack alongside branded packs for the tobacco packaging activities allowed an insight into how the plain pack was perceived and the messages it communicated relative to branded packs. Despite the made-up brand name and plain design, the groups gave no indication that they suspected the plain pack was anything but a genuine pack, although this may be explained by the low brand and pack awareness of all but the most popular brands. Participants were accepting of the plain pack, worked with it in the same way that they did the branded packs and assumed the pack was available for purchase:

They shouldn't even have brought that out. (Boy, C2DE)

There was little interaction with, or interest in, the plain pack and it was often quickly tossed aside during the grouping and sorting activities. When participants were asked to group packs together however they wished, the plain pack was usually placed with the branded packs viewed negatively by participants. Two groups categorised the set of packs containing the plain pack as looking old: 'the ones that older people smoke' (Girl, C2DE). Four groups described the plain pack set as containing packs which were boring, bland and plain, with 'dull colours' (Girl, C2DE). Further descriptions of these sets included that the packs looked 'common' (Girl, ABC1) and that they were packs which 'put you off (smoking)' (Boy, C2DE). In these instances the plain pack was commonly placed with darker coloured packs. These groupings were in contrast to other pack sets containing more novel packs and which were categorised as being for smokers 'our age' (Girl, C2DE), 'nicely packaged' (Boy, ABC1), having 'good designs' (Boy, C2DE) and 'cool openings' (Girl, C2DE) and looking 'girly' (Girl, ABC1) or different to how they perceived a regular tobacco pack to look. In contrast, all of these descriptions were meant positively.

When rating packs according to items on show cards, the plain pack was rated overwhelmingly negatively. Across the groups it was consistently viewed as 'unappealing', 'not for someone like me', 'unattractive', 'a pack I would not like to be seen with', 'not eye-catching', 'uncool', 'not stylish', 'unappealing for someone thinking of starting smoking', and 'my friends would not like this pack'. Exceptions to negative ratings were rare. While the plain pack was always rated as looking 'strongest', there were mixed reactions to the level of harm of the plain pack, however participants' reasons for this were difficult to interpret and the plain pack produced powerful harm connotations for participants in further discussions (see section 6.9.2).

6.8.1 Plain pack image

In addition to the above, participants described the plain pack as old fashioned, cheap, stupid and a strange colour. Several groups commented on the lack of effort put into its design.

> Looks dead cheap.
>
> No one would buy it.
>
> **Why does it look cheap?**
>
> Just the colour.
>
> The name doesn't stand out either.
>
> They've not made an effort to make it look nice. (Girls, ABC1)

These negative perceptions were clearly transferred to the perceived user of the pack. Across all the groups the plain pack evoked a very distinct user image, which was unappealing and negative in the eyes of participants. They described the image of an old man in ill-health, with old-fashioned dull clothes and few interests, and a heavy smoker.

6.8.2 Plain packs differing in shape and size

Of all the activities within the focus group discussions, grouping and rating the eight plain packs which differed in structure proved the most difficult task for participants. Participants consistently struggled to group the packs together and distinguish between them. The initial response was that they all looked the same and participants couldn't see beyond the brown colour.

They are all the same looking.

You wouldn't know what was cheap and what was... (Boys, ABC1)

On further consideration, all groups noted the packs were different shapes and while they could group them in this way – slimmer packs were usually grouped separately from more standard shaped packs – this was perceived a meaningless activity as shape in the context of the plain packs drew few associations. The only exception came from two groups who drew gender associations.

You couldn't really tell anything about them apart from you can tell the womanly ones because they are pure thin. (Boy, ABC1)

They're more feminine [plain superslims packs]. (Girl, ABC1)

Appeal

In terms of attractiveness, these packs were mostly rated unattractive due to their plainness and 'disgusting' (Girl, C2DE) colour. However, the narrower and slimmer shaped superslims packs were sometimes rated less negatively due to their more unusual shape.

If any of them are attractive it's that one just because it's kind of perfume shaped. (Girl, ABC1)

They are all unattractive really.
Because they are all brown.
I think that one is more attractive because it's kind of cute, it's like a baby.
But it's just less unattractive. (Girls, C2DE)

When asked to describe the user imagery of these packs, accounts were very negative, in line with the standard plain pack user outlined above. Those that were asked to choose

their preferred plain pack from the selection most commonly chose the slimmer packs (the plain Silk Cut Superslims or Vogue packs), and this choice occurred across gender. Reasons given by the boys were that they were the packs easiest to carry around. The girls said they would be the least noticeable.

Strength and harm perceptions

When rating packs in terms of strength and harm, some groups couldn't distinguish between packs due to lack of information, some said they all looked strong and most harmful, while others singled out the slimmer packs as looking weaker and less harmful. As these packs are smaller, participants perceived them to contain less tobacco, indicative of reduced strength and harm.

> There is no information on the packets except for the warnings.
> So you've got nothing to go on.
> You can't distinguish one from the other, except from shape. (Boys, ABC1)

> Smaller ones are the weakest only because there is less in it. (Girl, ABC1)

In one instance, the brown pack which was the same shape as the Pall Mall 19 pack was placed alongside the slimmer packs as looking weaker. Here the pack shape was viewed as feminine: it is slightly smaller than a standard 20 pack with bevelled edges. Neither the edges nor size of this pack were mentioned when the branded version of this pack was used in previous activities, despite being a pack which evoked a strong reaction. One possible explanation may be that these design elements were only noticeable when the pack's overriding feature – its bright pink colour – was eliminated. This would imply that a plain pack enhances structural features otherwise diminished by the presence of branding.

Ok so why are those ones weaker?

More feminine.

Yea, because they are a wee bit smaller.

It's curvy.

It is kind of round. (Boys, ABC1)

6.9 Affective pack responses: Emotions and feelings

One key finding to emerge from the discussions was that messages within packaging triggered emotional responses in participants. To understand this important role of packaging and the extent of packaging's influence on adolescents, it is pertinent to first outline participants general smoking attitudes.

6.9.1 Smoking attitudes

Participant attitudes towards smoking and smokers were very much negative across gender and socio-economic grouping. Smoking was seen as something to be ashamed of and associated with 'neds', a derogatory Scottish term applied to people from less affluent backgrounds. It is difficult to know whether this is a reflection of young people's smoking attitudes generally, or simply the attitudes of a largely non-smoking sample, which may have strong anti-smoking feelings. Similarly negative attitudes were, however, presented in the two groups where the majority of participants reported being regular smokers.

Well you look at people who smoke and you think they smell and are dirty and horrible. (Girl, C2DE)

Further discussion around smoking suggested that these prevailing negative attitudes would transfer to the pack and that the cigarettes contained within the pack and the pack designs would be perceived negatively by association. However, when exposed to more

novel tobacco packaging, especially holding packs to get a true sense of dimensions and colours, participants found some packs particularly appealing. So despite negative attitudes towards smoking, this did not always transfer over to the packs or pack users.

> It [smoking] might make other people feel good but it's not nice for people who don't smoke, you just look at them and think, I don't know, maybe they are a bad person or something.
>
> Like they've had a hard life.
>
> **Ok, if you saw someone with this purple pack [Silk Cut Superslims] would you think they'd had a hard life?**
>
> No, you'd think they were just like trying to look cool or something. (Girls. ABC1)

The previous quote illustrates how a pack can soften a negative attitude, in this case, towards the smoker of the pack. Furthermore, when participants were asked to hold their favourite pack and to imagine and describe how they would feel if that was their pack, rather than describing negative responses, which would be in line with their smoking attitudes, participants within all groups described how the packs had aroused positive feelings, overriding negative thoughts about smoking.

6.9.2 Emotional responses to packaging

There were some gender differences both in the favourite pack chosen by participants and their responses to these packs. Within the girl groups, the female-oriented Silk Cut and Vogue superslims packs were most frequently chosen, with the occasional participant choosing the pink Pall Mall, Marlboro Bight Leaf and Lambert and Butler gold packs. For the girls, the slimmer and lighter coloured female-oriented packs in particular evoked feelings of cleanliness, niceness and femininity. They frequently associated this type of packaging with things that gave them pleasure, such as perfume, make-up and chocolate.

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[I'd feel] like more classy and not so dirty. (Girl, C2DE)

[It feels] clean.

It feels feminine. (Girls, ABC1)

Among the boys, the Marlboro Bright Leaf pack was the most commonly chosen pack, followed by the Lambert and Butler, B&H Slide, B&H 14, Vogue and Silk Cut Superslims packs. The Marlboro, Lambert and Butler and B&H Slide packs, were associated with feelings of maturity, popularity and confidence.

It looks as if you're like more mature. Better and more popular. (Boy, C2DE)

It would make me feel more confident. (Boy, C2DE)

While the boys who chose the B&H 14 and superslims packs had opted for these packs due to their functional value – they were thought easy to carry and fitted better in a pocket – they also evoked positive emotional responses.

It [Silk Cut Superslims] makes me feel quite cool. I just like the design on it. It makes you feel like stylish and that, kind of upper class. (Boy, C2DE)

For both genders, these packs were seen as something to be proud of, and would likely show them off to other people. In particular, they were thought to make people feel better about smoking and less embarrassed in contrast to the plain pack.

Because they don't really don't look like cigarettes so it's not like I am really smoking if that makes sense. (Girl, C2DE)

If I had these [Marlboro] then I'd be like more inclined to take it out to like show people that you had something that was more expensive.

And then you get your brown one [plain pack] out to get a cigarette out of it, how do you feel about that?

You just feel like cheap and nasty. (Boys, ABC1)

You'd feel better about it than carrying that brown thing [plain pack].

You wouldn't think about it as much.

So would it make you feel it was ok to smoke or not ok to smoke?

Ok.

You wouldn't think about it. To see that [plain pack] you'd think, what am I doing, carrying this about?

Aye, in front of all your pals if you brought it out you wouldn't feel embarrassed, but if you brought that [plain pack] out you'd be pure embarrassed. People who don't smoke would look at you like they were ashamed of you.

Like 'what are you doing'? (Boys, C2DE)

Here the responses to the plain pack link are in line with negative smoking attitudes. The plain pack evoked feelings of embarrassment, shame, cheapness and being unclean, eliminating any of the benefit which had been associated with the more appealing packs. Consistently, participants described negative feelings in relation to the plain pack. They reported feeling 'disgusting', like 'a junkie', 'boring and smelly' (Girls, C2DE) and 'old' (Girls, ABC1). Participants' facial expressions also conveyed these negative emotions such as frowning at the pack or turning their noses up. Additionally, the plain pack reinforced the ill health aspects of smoking.

It would make you feel depressed smoking. (Boy, C2DE)

If I brought that out [Silk Cut Superslims] it wouldn't remind me as much but if I brought that out [plain pack] it would just...

It's kind of like smoking is bad for you, like all the messages about it.

Like it [Lambert & Butler] looks pretty and you think of, you associate it with better things. (Girls, ABC1)

I think that one [plain pack] looks like you'd be more ill if you kept smoking them but they ones [Silk Cut Superslims] look like you wouldn't be so unwell if you smoked them for ages. (Girls, C2DE)

In comparison, these dialogues illustrate how some of the branded packs, particularly the lighter coloured, more feminine, slimmer packs, softened the health effects of smoking.

They [Silk Cut Superslims limited edition] look too colourful to be harmful.

Just cos of the wee designs and all that, looks more friendly, more approachable.

 (Girls, C2DE)

Some packets disguise what is actually in them.

It's the shape of the boxes cause they ones are smaller, it's got less in it, it's as if it's doing less damage**.**

I think they would be harmful but they don't look it because of the packet.

I think they make you think you are not doing yourself as much damage. (Girls, ABC1)

6.10 Perceived impact of packaging and plain packaging on behaviour

6.10.1 Importance of packaging for tobacco products

There were mixed reactions to the perceived importance of tobacco packaging. Some participants thought packaging may be important for people starting to smoke and

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choosing their first brand. However, this was thought likely only for the experimental stage and packaging was generally agreed to be unimportant for established smokers.

> But it is still important because some people starting off smoking would not pick a packet that looks horrible. (Girl, ABC1)

> Folk will always end up buying the one they started off with. You probably first try it, not cos of the brand, but because of how it looked. You'll probably end up buying the one that you tried cos it's the one you like, rather than how it looks. So it's unimportant after a while the packaging. (Boys, ABC1)

> Beginners, cos they won't know the differences between certain different kinds of cigarettes, so they might just buy it for the look of it, and think that must be good because it looks good. (Boys, ABC1)

However, other participants outlined that packaging was unlikely to play a role in the decision to smoke.

> I don't think it is very important because everybody has their idea of like what smoking is and what people are like when they smoke so if you are going to smoke then it doesn't really matter which pack you pick if that makes sense, but it's not like the package that decides whether you are going to smoke or not like, you know what it is before you actually buy it. (Girl, C2DE)

> I don't think non-smokers would be, like think I'm going to smoke, just cos that packet is nice. (Girl, ABC1)

Additionally, price was outlined as being more important than packaging for young people by the two girl ABC1 groups.

Quite important, but I think it is more the price. If it's young people, then they are more interested in not spending as much money and getting more for their money. (Girl, ABC1)

6.10.2 Perceived impact of plain packaging

There was a mixed reaction to the perceived potential impact of plain packaging, with contrasting opinions expressed within groups.

I don't think they'll sell very many.

It wouldn't matter.

Cos smoking is an addiction and they have got to keep on them.

I think it will put people off it. (Girls, C2DE)

Generally, participants expected a greater impact on young people contemplating smoking than established smokers, although there were exceptions to this as detailed below.

Young starters

Across the groups, including the two groups where the majority of participants reported as smokers, the plain pack was thought to make smoking less appealing to young starters.

Cos it looks horrible. (Girl, ABC1)

If they get hit with the pink or the green or the Mayfair, they'd think that looks better and would want to try it, instead of the brown things. (Boy, C2DE)

You won't be attracted by them anymore because it's the packaging that does it and you can't see like the cigarettes through having the box. (Girl, ABC1)

Cause like they would just go in thinking that looks dead boring.

And they wouldn't want to waste their money on it. (Boys, C2DE)

It was perceived as taking away any 'coolness' associated with smoking. The pack's lack of discretion was also thought important.

It looks like just old people smoke it, like what your maw and dad always smoked, so why would you start. (Boy, C2DE)

But you don't want to be seen carrying about a brown box with you everywhere. (Girl, C2DE)

I think it will be like more self-conscious people who don't want people to know they smoke, it would like affect them more because they wouldn't want to walk around with a brown box. (Girl, ABC1)

If it was the same colour your mum would like notice it. (Girl, C2DE)

However, several participants perceived plain packaging would have little impact on young people who chose to start smoking primarily as a way of fitting in with their friends.

I don't think it would make that much difference really. If some people want to smoke just to fit in... they'll just be buying what they're friends are buying, so the packaging won't really matter. (Boy, ABC1)

Established smokers

As previously mentioned, the majority of participants thought plain packaging would have little impact on established smokers.

> Nothing because they already smoke and they already know what they like, it's not like they would try anything new so they still would buy it. (Girl, C2DE)

In the event of plain packaging a brand's reputation and smoker brand loyalty was expected to supersede any negative perceptions that may occur due to a change in packaging.

> Everyone will always go for a packet of Mayfair.
> The name, it is the reputation. (Boys, ABC1)

> I don't think it is going to stop smoking, it might stop someone maybe who was starting it but people who've already started because like the name is still going to be on it so they are going to know that they like that brand, so the box isn't really going to make a difference. (Girl, ABC1)

However some participants, particularly in the group of boys with a regular smoker majority, thought the plain pack colour would be enough to make smokers either want to stop or put them off smoking.

> It would make you feel depressed smoking.
> Sick, but you would still smoke.
> Every time you take them out of your pocket you'd see that and be like 'what am I doing?'
> It might make you come to your senses and stop. (Boys, C2DE)

One girl group also perceived plain packaging as having a potential impact on social smokers. Here a social smoker was described as someone not addicted to nicotine; only when a person is addicted does smoking become more important than appearances.

Because they are not addicted and the ones that smoke all the time wouldn't care so much about the packaging. (Girls, ABC1)

6.11 Cigarette appearance

6.11.1 Awareness of cigarette design

When initially asked about cigarette appearance, the 'standard' identified was a white king size cigarette with imitation cork filter. As the discussion progressed participants recalled cigarettes that differed from the norm, suggesting that details of cigarette appearance are noticed by adolescents. Most groups were able to recall cigarettes with white tips, assumed to indicate menthol flavouring, and mention was also made of a pink-tipped cigarette. One group commented that cigarettes could be different lengths. There was also some awareness of cigarettes displaying branding, such as brand symbols and brand names, and other decorative features such as gold bands.

6.11.2 Cigarettes as a promotional and communication tool

When shown the eight cigarettes, a small number of participants, who had previously referred to cigarettes as disgusting, ugly and smelly, were disinterested in them, turned their noses up or visibly recoiled. However, for most the cigarettes generated interest and curiosity. Participants were surprised with the amount of variation in cigarette appearance and, in general, studied the cigarettes intently, with particular attention paid to diameter and decorative elements including the font style of brand names. Some participants took the time to smell them and were sometimes reluctant to pass them on. It was highlighted in one group that a different looking product is enough to spark their interest and one boy wanted to try the superslims size.

You'd be interested. You'd be like 'what's that? Does it taste the same?' (Boy, C2DE)

I'd smoke it (superslims). I'd only have one but. (Boy, C2DE)

There was little evidence that the smokers' responses were any different to those identifying as non-smokers. Irrespective of smoking status, there was surprise at being shown cigarettes which differed from the 'standard', suggesting that the more unusual slim, brown, and filter-less cigarettes were as unfamiliar to smokers as they were to non-smokers. There were also few group differences in terms of gender and no apparent differences by socio-economic grouping. Participants had no difficulty differentiating and assigning categories and meanings to the cigarettes. The two cigarettes with imitation cork filters were usually placed together as 'standard' ones and sometimes with cigarettes of similar diameter. The three slimmer cigarettes were grouped together because of their size and decorative patterns or brand name font on the filter, often described as the 'cool' ones which looked 'fancy' and 'expensive' (Girls, C2DE). They were repeatedly called 'skinny' (Boy, C2DE), 'cute' (Girl, C2DE) and 'feminine' (Boy, ABC1) and likened to 'sweeties' (Girl, C2DE). The slims and superslims had the most favourable reaction, leading some participants to laugh and smile. These positive responses overshadowed the general negative attitude to smoking among most participants - even among the two groups with participants who identified as smokers, there was a feeling of stigma and shame attached to smoking. Within one group of non-smoking girls there was a particular tension where they found it difficult to associate the slimmer cigarettes with something they had previously held firm negative views on. In contrast, the brown cigarette enhanced the negative associations most participants held with regards to smoking. It was repeatedly likened to a 'cigar' (Boy, ABC1) and 'twig' (Girl, C2DE), and described as 'disgusting' (Girl, ABC1) and 'old fashioned' (Boy, ABC1).

6.11.3 Product appeal

The slims and superslims cigarettes were consistently rated as most attractive. The exception was one boy group who rated them as unattractive as they perceived them to

be feminine. Overall, however, both genders found the slimness and purple-coloured design features - flowers, band and brand name font – appealing. For some, the novelty of these cigarettes, that they didn't resemble a 'standard' cigarette, enhanced their appeal.

The patterns, they just look nicer. (Girl, ABC1)

There were mixed feelings about the two more 'standard' looking cigarettes: the king size and superking size with imitation cork filters. Half the groups rated the king size attractive, while three rated the superking size attractive. Others felt they were boring. This mixed response was due to the perception that this style of cigarette was common, which for some participants was a positive and for others a negative.

Just boring.
You always see they cigarettes. (Girls, C2DE)

These ones are attractive because everyone smokes them. (Girls, ABC1)

People are familiar with them, people are comfortable with that. (Boys, ABC1)

The white-tipped king size cigarette was generally viewed as unattractive and described as 'boring', 'cheap' (Girls, ABC1) and 'plain' (Boy, C2DE). Often, appeal was based on the perceived smoking experience offered by the different cigarettes, even though the sample was largely non-smoking. In this regard, the brown and unfiltered cigarettes were perceived as particularly unattractive, an unpleasant smoke and smelly, while the slimmer cigarettes were described as 'nicer' (Girl, ABC1).

There's no bud [filter] on it. It doesn't look like it would be comfortable to smoke. (Boy, ABC1)

They [superslims] look nice to smoke. (Boy, C2DE)

Like they [superslims] don't look like they would taste horrible. (Girl, ABC1)

Appeal was also closely linked with strength and harm perceptions. Young people appeared to be attracted to weaker and less harmful looking cigarettes.

If someone hands you a stronger one or a weaker one you'd probably take the weaker one, depending on how long you'd been smoking for.... So they're not doing themselves the biggest amount of damage straight away. So they are just jumping into the shallow end instead of the deep end kind of thing. (Boy, C2DE)

6.11.4   Strength and harm perceptions

From the outset, and unprompted, participants associated the cigarettes with different levels of strength and harm. Judgements about strength and harm appeared to result primarily from diameter and to a lesser extent, colour, decoration and length. Overall, the three slimmer cigarettes were rated weakest and least harmful due to their small diameter. The general view was that as they contain less tobacco they must, therefore, be less harmful. The white tips and longer length also helped to portray a cleaner female image, described as 'glamorous' (Girls, ABC1) and 'classy' (Girl, C2DE), and reminded some participants of females smoking in old movies. These images helped to soften harm perceptions.

Because it's skinny you feel that you're not doing so much damage. (Girl, ABC1)

They don't look like cigarettes so you wouldn't think like harmful.

When you think about who smokes them you don't think of someone who is really ill.

 (Girls, C2DE)

They look cleaner.

Just cos of the colour.

All white, plain white. (Boys ABC1)

Conversely, larger diameters and imitation cork filters gave the impression of a stronger and more harmful product, as did the longer length of the brown and cork tipped superking size cigarette. The fully brown cigarette was seen as particularly strong and harmful.

It [brown cigarette] looks really, really strong.

Cos it's very dark.

Overpowering, the colour. (Boys C2DE)

There were mixed responses to the white-tipped king size cigarette. This cigarette's white tip was associated with menthol and perceived as weaker and less harmful. However, its diameter sometimes produced a conundrum, as the thicker size was considered to indicate a stronger product. This suggests adolescents view cigarette design holistically when forming value judgements.

It looks weak but it's quite thick. (Boy, C2DE)

6.12 Conclusion

6.12.1 Summary of key findings

The findings from the qualitative stage of research can be summarised as follows:

i)   **Design acumen**

Participants gave sophisticated accounts of how design features impact on their product perceptions and user imagery. For example, they could identify which elements of the pack, for example, colours, fonts, or shapes, conveyed messages such as harm, style and quality.

ii)   **Novel design**

Novelty, having something 'new' or different, appeared important to this sample group. Novelty packs were the most highly appraised packs across gender and socio-economic group. These featured unusual and innovative pack shapes or method of opening, and distinctive graphic designs, with bright or unusual colours. In comparison to a more standard pack such as Mayfair, a common blue pack without any notable design features, novelty packaging was consistently rated as more appealing and generated with more positive user imagery.

iii)   **Brand imagery**

Participants were always able to articulate the brand imagery evoked by the packs, whether positive or negative. Lighter and brighter coloured packs were associated with the strongest positive user imagery and were linked with young, attractive and happy people. This imagery was able to override the generally negative attitudes held towards smoking and smokers.

iv)   Behavioural responses

The focus group observations highlighted that both approach and avoidance behaviours were evident for the packs used as stimuli. Participants spent time interacting with, examining and holding the novelty packs, particularly the ones with innovative shapes or methods of opening. Packs with bright colours often generated excitement and participants would draw others attention to them. These packs were often met with smiles and facial expressions of enjoyment. Participants also spoke of how they would keep and reuse for a different purpose, packaging that they liked, such as shoe or perfume boxes. Conversely, there was little interaction with the packs perceived to be unattractive. In these instances avoidance behaviours were evident such as discarding and tossing them aside quickly during activities, with relatively little amount of time spent examining them.

v)   Affective responses

The focus group participants provided evidence of affective responses to packaging. Positively appraised novelty packs generated positive feelings among participants, both about themselves, such as feelings of maturity and popularity for the boys, and femininity and cleanliness for the girls, and also about smoking. A plain pack evoked negative feelings, such as embarrassment, shame and disgust.

vi)   Plain packaging

A 'regular' shaped plain pack reduced the benefits presented to participants through branded packaging design. Branded packs offered: functionality through convenience and discretion of smaller packs; emotional benefits through positive affective responses; and information on reduced harm and strength. Plain packaging eliminated these benefits, diminished positive associations and exposed tobacco as harmful, dirty, for older and heavy smokers. The plain pack was consistently rated most negatively, out of all

the packs, during the sorting activities. Differently shaped plain packs, however, could still communicate harm, strength, convenience and discretion.

vii)   Cigarette appearance

The focus groups highlighted that design cues within cigarette appearance work in a similar way to packaging with regards to promotion, appeal, strength and harm. Slim and superslim cigarettes with white filter tips and decorative features were viewed most favourably and rated most attractive across gender and socio-economic groups. Slimmer diameters communicated weaker tasting and less harmful looking cigarettes. This was closely linked to appeal as thinness implied a more pleasant and palatable smoke for young smokers. A long brown cigarette was viewed as particularly unattractive and communicated a stronger and more harmful product

Participant responses were therefore observed on cognitive, affective and behavioural levels. It was easy for participants to form judgements and evaluate different pack and product designs. Affective responses were evident in feelings generated by packs and approach/avoidance behaviours were readily apparent for both packs and product. These qualitative findings will be returned to in Chapter 7, where the implications for plain packaging policy will be discussed.

6.12.2 Development of the hypotheses

From the key findings of the focus groups, four research hypotheses can be generated. Firstly, as the focus groups found that novelty packs were the most highly appraised packs, it can be reasonably expected that when asked to rate novelty packs on survey items, adolescents will rate them more positively than a regular pack. The first hypothesis is therefore:

H1: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack ratings items.

Conversely, as the plain pack eliminated any positive perceptions associated with branded packaging and was consistently the most negatively rated pack in the sorting activities, it can be expected that the plain pack would be the least positively rated pack on survey items, with novelty and regular branded packaging rated higher. The second hypothesis is therefore:

H2: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack ratings items.

Thirdly, the focus group showed that novelty packs generated positive feelings among participants. As novelty packaging was found to be more appealing generally than regular packaging, it is reasonably expected that novelty packs will be rated more positively than a regular pack on survey items relating to pack feelings. Hypothesis three is therefore:

H3: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.

As the plain pack evoked very negative feelings in participants, it is likely that it will be rated most negatively on pack feelings survey items, compared to novelty and regular packaging. Hypothesis four is therefore:

H4: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack feelings items.

The final three research hypotheses are derived both from the focus group findings and what is already known about the impact of marketing communications on adolescents. Approach behaviours, such as spending time examining packs and showing them to others, were readily evident in the focus groups. This clearly demonstrates that packaging can elicit behavioural responses in adolescents. The ultimate adolescent approach behaviour for tobacco products, from an industry perspective, would be future smoking. This can be predicted by measuring adolescents' susceptibility to smoke in the future. Previous research on tobacco advertising, promotions, and point of sale displays, has found a robust link between exposure to, appreciation for, and receptivity to these marketing channels and smoking susceptibility (see section 4.4.1). As chapters 2 and 3 have highlighted that packaging is also a powerful marketing communications tool, it can therefore be reasonably expected that adolescents who are aware of tobacco packaging, and who rate packs positively, will be susceptible to smoke in the future. Hypotheses five, six and seven are therefore:

H5: Adolescents who are aware of tobacco packaging will be more likely to be susceptible never-smokers.

H6: Adolescents who rate tobacco packaging positively will be more likely to be susceptible never-smokers.

H7: Adolescents who are receptive to tobacco packaging will be more likely to be susceptible never-smokers.

Chapter 7 will test these hypotheses. By exploring pack ratings, feelings and behavioural intent to smoke in the future, it will provide further evidence of whether cognitive, affective and behavioural responses to packaging can be observed. It will also seek to establish, for the first time, whether tobacco packaging can be linked to adolescent smoking.

Chapter 7: Quantitative findings

7.1 Introduction

This chapter presents the findings from the quantitative stage of research. It builds on the qualitative findings of the previous chapter and attempts to address gaps in the public health tobacco packaging literature. Public health research, while acknowledging that packaging is a sophisticated marketing tool, has failed to fully understand the extent, power and influence of packaging strategies such as 'novelty', commonly used to target adolescents (see section 4.3). Furthermore, there is little evidence linking packaging to affective responses (see section 4.4.2) or adolescent smoking behaviour (see section 4.4.1), despite evidence that packaging influences three types of consumer responses (Figure 7.1).

Figure 7.1: The three dimensions of consumer responses to packaging
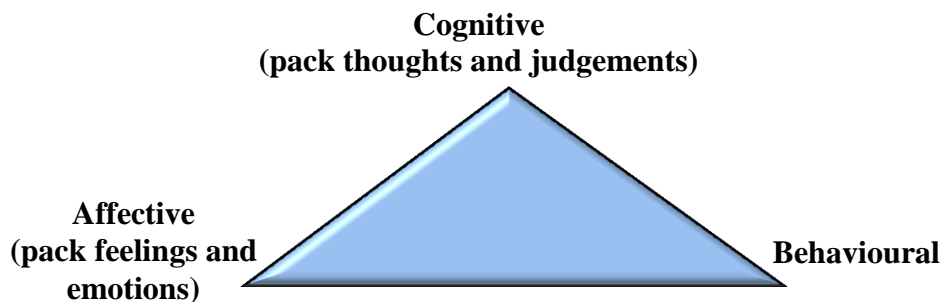
The qualitative findings in Chapter 6 showed 'novelty' packaging had a stronger positive influence on the participants than 'regular' packaging, both in terms of their cognitive (thoughts and judgements) and affective (feelings and emotions) responses. In contrast, plain packaging elicited only negative responses. This chapter builds on these findings by examining, quantitatively, how three different styles of packaging impact on adolescents' pack ratings and also their pack feelings: 'novelty' (branded packs with either an innovative shape, style of opening or distinctive colour), 'regular' (branded blue pack with a standard shape and opening) and 'plain' (a brown pack with a standard

shape and opening and all branding removed, aside from brand name). It further examines these responses by gender and smoking status: while some gender differences on pack appeal emerged in Chapter 6, it was difficult to determine differences by smoking status due to the uncertainty around the smoking behaviour of the focus groups sample. Finally, the chapter explores any link between ratings of tobacco packaging and adolescents' susceptibility to smoke – a well validated predictor of future smoking behaviour.

Specifically, this quantitative phase of research tested the hypotheses in Figure 7.2 which were developed from the qualitative findings (see section 6.12.2). Firstly it describes the sample profile (7.2), before examining adolescent pack ratings to test hypotheses one and two (7.3) and adolescents' pack feelings to test hypotheses three and four (7.4). It then presents the results of twelve logistic regression models to test hypotheses five, six and seven (7.5). It examines the impact of packaging awareness, and two composite measures measuring pack appraisal and receptivity, on adolescents' susceptibility to smoke. Finally, the chapter concludes with a summary of the main findings (7.6). Impacts are evident on all three dimensions of consumer responses (cognitive, affective, and behavioural intent). The research demonstrates a link for the first time between future smoking intent and tobacco pack awareness, positive appraisal and receptivity.

Figure 7.2: Hypotheses

Alternative hypotheses	*Null hypotheses*
Pack ratings *H1: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack ratings items.* *H2: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack ratings items.*	*$H1_0$: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack ratings items.* *$H2_0$: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack ratings items.*
Pack feelings *H3: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.* *H4: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack feelings items.*	*$H3_0$: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack feelings items.* *$H4_0$: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack feelings items.*
Behavioural intent *H5: Adolescents who are aware of tobacco packaging will be more likely to be susceptible never-smokers.* *H6: Adolescents who rate tobacco packaging positively will be more likely to be susceptible never-smokers.* *H7: Adolescents who are receptive to tobacco packaging will be more likely to be susceptible never-smokers.*	*$H5_0$: Adolescents who are aware of tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.* *$H6_0$: Adolescents who rate tobacco packaging positively will be <u>less or equally</u> likely to be susceptible never-smokers.* *$H7_0$ Adolescents who are receptive to tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.*

Figure 7.3: **Dissemination of the quantitative findings**

The findings of this chapter are published in *BMJ Open* (Ford et al., 2013a).

This paper was included in the Chantler review on standardised packaging (Chantler, 2014) and the findings, which show a link for the first time between attractive tobacco packaging and future smoking behaviour among adolescents, were cited in the House of Commons by MP Luciana Berger, the Shadow Minister for Public Health (HC Deb, November 7 2013, col. 470) and in the Scottish Parliament (SP BB 164, 2013, November13, Section F).

7.2 Sample profile

A total of 1373 interviews were completed. A profile of the sample is shown in Table 7.1 (all accompanying tables are presented at the end of the chapter). Comparative census data for England and Wales in 2011 indicates the achieved sample was in line with national figures for gender and age (Office for National Statistics, 2012). In the 2011 census, 51% of 11-16 year olds were male and 49% were female. Thirty-two percent of 11-16 year olds were aged 11-12, 33% were 13-14, and 34% were 15-16. This compares with the achieved sample which was 50% male and 50% female, and comprised 33% 11-12 year olds, 35% 13-14, and 32% 15-16. Fifty-seven percent (n=776) of the sample were from social class C2DE (working class), compared to 43% (n=579) from social class ABC1 (middle class).

Excluding cases that were missing for smoking status (n=3), never-smokers - those who had 'never tried smoking, not even a puff or two' - comprised the majority of the sample (75%, n=1025). Among these 1025 never-smokers, 99% (n=1019) provided information on smoking intentions, with 72% (n=733) classified as non-susceptible and 28% (n=286) susceptible to smoke. Nine percent of the sample (n=116) stated they were regular smokers ('smoke one or more cigarettes per week'). A further 15% (n=211) had tried smoking in the past and 1% (n=18) were occasional smokers - those who 'sometimes smoke cigarettes but not as many as one a week'. Comparative national figures for 11-15 year olds in England indicate that smoking prevalence is in line with national data. In the 'Smoking, Drinking and Drug Use among Young People in England in 2011' survey, 75% of 11-15 year olds were never-smokers, and 25% were ever-smokers (Fuller, 2012). This compares with 79% never-smokers, and 21% ever-smokers among 11 to 15 year olds in this sample.

7.3 Pack ratings

Adolescents' responses to packaging, elicited within the focus groups, were used to develop 11 items for measuring pack ratings of five different cigarette packs (Figure 7.4). Pack A, a blue Mayfair pack with a standard pack structure, provided an example of 'regular' packaging. Three packs provided examples of 'novelty' packaging: Pack B was an innovative smaller and slimmer than usual white Silk Cut Superslims pack, Pack C was a dark Marlboro Bright Leaf pack with an innovative 'lighter'-style method of opening, and Pack D was a bright pink Pall Mall pack. Pack E, a dark brown pack, provided an example of 'plain' packaging (see section 5.7 for an overview of the study design and analysis).

Figure 7.4: Visual stimuli shown to participants

Pack A = 'regular' pack (Mayfair)
Pack B = innovative slim shape and size (Silk Cut Superslims)
Pack C = innovative method of opening (Marlboro Bright Leaf),
Pack D = distinctive and unique colour (Pall Mall)
Pack E = plain pack

Presentation of results

The following sections presenting the findings of pack ratings and pack feelings are structured in the following way. Initially, for the total sample, a descriptive overview of comparisons between the different packs is provided. This is followed by the findings from the significance tests used to test the hypotheses. This format is then repeated to investigate whether the findings are supported within subgroups, first for smoking status and then for gender. To illustrate the differences in the mean pack ratings for each of the pack styles, figures have been placed within the text. The tables which detail the mean rating, standard deviation, standard error, paired mean and p-value from the significant tests can be found at the end of the chapter.

7.3.1 Total sample

Ratings on each of the 11 items could range from '1' to '5', with a score of '1' indicating a negative assessment (e.g. unattractive) and a score of '5' indicating a positive assessment (e.g. attractive). Overall, the mean ratings of the five cigarette packs were negative with mean scores ranging from 1.33 to 2.91, with lower scores indicating more negative views of packs (Table 7.2). While none of the mean scores were on the positive end of the scale (>3) an initial exploratory plot of the data suggests a possible pattern in terms of how adolescents responded to the different packs (Figure 7.5).

From plots of the descriptive data it appears that, for all 11 items, adolescents responded most negatively to the plain brown pack (Pack E), with mean scores ranging from 1.33 to 2.00. Ratings of the three 'novelty' packs (Packs B-D), with either an innovative pack shape, opening style, or distinctive colour, appear higher than both the blue 'regular' Mayfair (Pack A) and plain packs for all items apart from harm, where the dark Marlboro Bright Leaf pack (Pack C) appears to be rated most harmful (1.68) of the four branded packs. For most items, the bright pink Pall Mall pack (Pack D) appears to be the least negatively rated pack with mean scores ranging from 1.63 to 2.91. In particular, this pack appears to be the most eye-catching (2.91), and least grown-up (2.44) and least

boring pack (2.20). The slim white Silk Cut Superslims pack (Pack B) appears to be rated least harmful (1.85). The three 'novelty' packs (Packs B-D) appear to be rated consistently higher than the 'regular' Mayfair pack (Pack A), and particularly for the items measuring coolness, fun and likability.

Figure 7.5: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – total sample
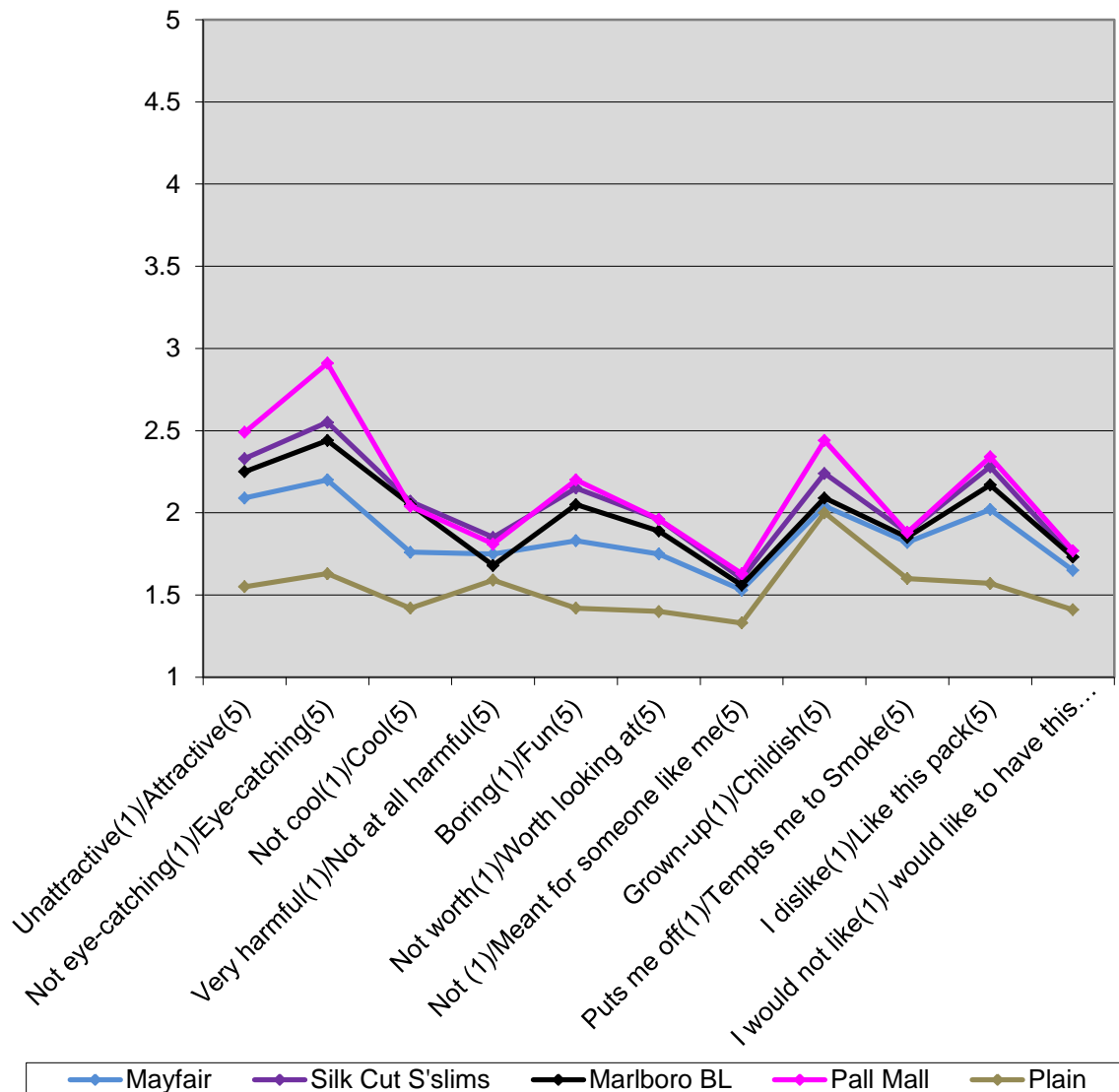
Testing hypotheses one and two

Figure 7.6: Hypotheses one and two

Alternative hypotheses	Null hypotheses
Pack ratings *H1: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack ratings items.* *H2: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack ratings items.*	*H1$_0$: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack ratings items.* *H2$_0$: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack ratings items.*

Following an initial exploration of the descriptive data, paired t-tests were used to produce mean scores of the 11 items for a) each of the three 'novelty' packs (Silk Cut Superslims, Marlboro Bright Leaf and Pall Mall) relative to the mean scores for the 'regular' pack (Mayfair); and b) each of the three 'novelty' packs and the 'regular' pack relative to the mean scores of the plain pack. These mean scores are presented as a way of illustrating the extent of any difference between pack ratings. As the data resulting from the five point scales is ordinal, the Wilcoxon signed rank test was used to test for significant differences between the ratings.

While all the mean scores for each of the five packs were on the negative end of the scale (<3), mean scores for the three 'novelty' packs were significantly higher compared with the 'regular' Mayfair pack (Table 7.3). Mean scores for the Silk Cut Superslims, with its innovative slim shape, and the bright pink Pall Mall pack, were significantly higher for all 11 pack ratings items ($p \leq 0.001$). Mean scores for the Marlboro Bright Leaf pack, with its innovative 'lighter'-style opening were significantly higher for eight of the 11 items. By contrast, this pack was rated more harmful ($p<0.001$) than the 'regular' Mayfair pack. The Marlboro Bright Leaf pack did not differ significantly from the 'regular' Mayfair pack in terms of the ratings for two items: 'meant for someone like me' and 'tempts me to smoke'.

Null hypothesis one can therefore be fully rejected in favour of the alternative hypothesis for the Silk Cut Superslims and Pall Mall packs. Adolescents rated these 'novelty' packs significantly higher and therefore more positively, than the 'regular' Mayfair pack on all items. Null hypothesis one can be partially rejected in favour of the alternative hypothesis for the 'novelty' Marlboro Bright Leaf pack.

Mean ratings for each of the three 'novelty' packs were significantly higher than for the plain pack for all 11 items ($p \leq 0.001$) (Table 7.4). Plain pack scores ranged from 1.33 to 2.00. Mean ratings for the 'regular' Mayfair pack were significantly higher than the plain pack for 10 of the 11 items ($p < 0.001$). There was no significant difference between ratings for the item 'grown-up' ($p = 0.149$).

Null hypothesis two can therefore be rejected for each of the three 'novelty' packs. In line with the alternative hypothesis, adolescents rated the Silk Cut Superslims, Marlboro Bright Leaf, and Pall Mall packs significantly higher, and therefore more positively, than the plain pack. The null hypothesis can be partially rejected for the 'regular' Mayfair pack.

7.3.2 Pack ratings within smoking status and gender subgroups

Pack ratings were examined separately by three different levels of smoking status (never-smoker, tried smoking and current smoker) and gender, to investigate whether null hypotheses one and two can be rejected within each of these groups.

Smoking status

The descriptive plotted data suggests that adolescents who have been, or are currently engaged in smoking behaviour may respond differently to packs compared with adolescent never-smokers (Figures 7.7-7.9). For example, while never-smokers' mean ratings of the five packs were on the negative end of the scale, ranging from 1.24 to 2.72 (Table 7.5), the range of mean scores for those who had tried smoking (1.40 to 3.20,

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Table 7.6) and current smokers (1.80 to 3.80, Table 7.7) meant that some mean scores were on the positive end of the scale (>3) for these groups.

Never-smokers

Mean responses to all five cigarette packs were on the negative end of the scale for all 11 items (<3). However, most of the mean scores for the three 'novelty' packs were significantly higher than for the 'regular' Mayfair pack (see Table 7.8). Compared with the 'regular' Mayfair pack, mean scores for the innovative slim Silk Cut Superslims pack and the bright pink Pall Mall pack, were significantly higher for all 11 items (p≤0.002). Compared with the 'regular' Mayfair pack, mean scores for the Marlboro Bright Leaf pack, with its innovative 'lighter'-style opening, were significantly higher for seven of the 11 items, with the exceptions being 'meant for someone like me', 'childish', 'tempts me to smoke' and 'not at all harmful'. Indeed, this pack was rated more harmful (p=0.045) than the 'regular' Mayfair pack. Therefore, for never-smokers, null hypothesis one can be fully rejected for the 'novelty' Silk Cut Superslims and Pall Mall packs in favour of the alternative hypothesis. The null hypothesis can be partially rejected for the Marlboro Bright Leaf pack.

Figure 7.7: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – never-smokers
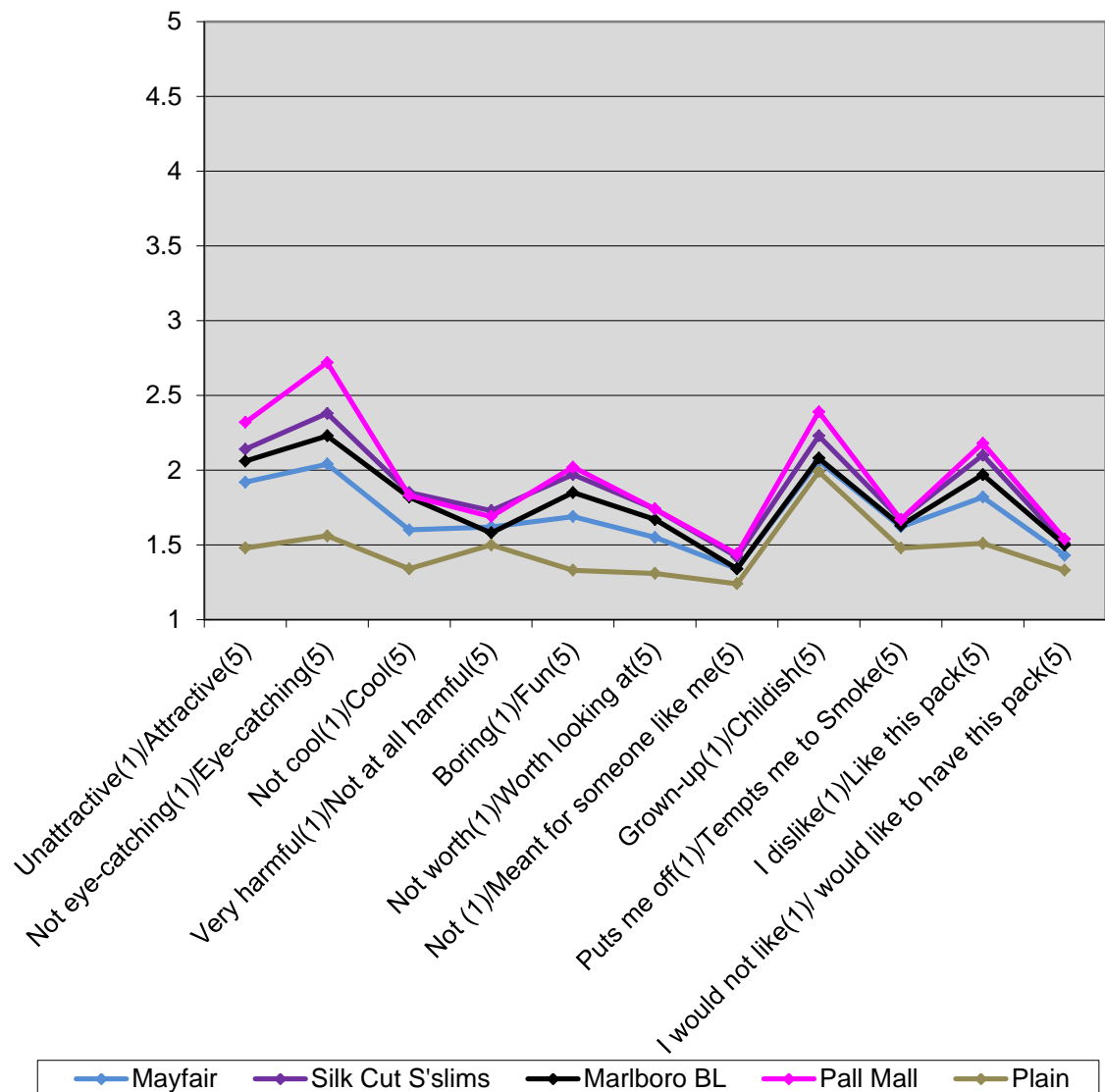
Mean ratings for each of the three 'novelty' packs and the 'regular' Mayfair pack were significantly more positive than for the plain pack for all 11 items (p≤0.006) (Table 7.9). Mean scores for the plain pack ranged from 1.24 to 1.99. Null hypothesis two can be fully rejected in favour of the alternative hypothesis for all 'novelty' and 'regular' packs.

Figure 7.8: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – tried smoking
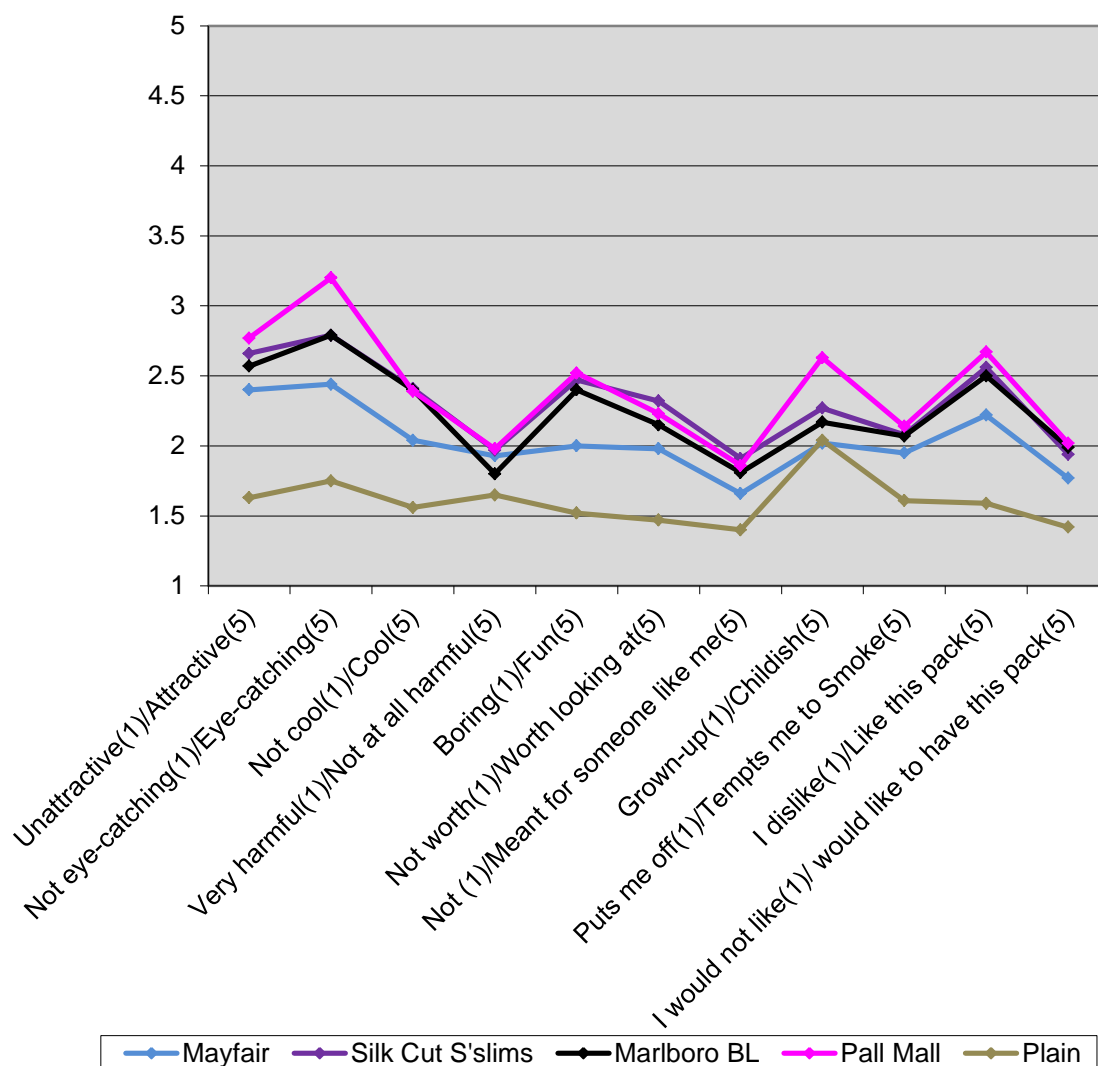
<u>Tried smoking</u>

Among those who had tried smoking, mean responses to all five cigarette packs were on the negative end of the scale except for the item 'eye-catching' for the bright pink Pall Mall pack (3.20). Mean scores for the 'novelty' slim Silk Cut Superslims and pink Pall Mall packs, were significantly higher for 10 of the 11 items compared with the 'regular' Mayfair pack (p≤0.013) (Table 7.10). There was no significant difference between the ratings of these packs for harm. Mean scores for the 'novelty' Marlboro Bright Leaf pack, with its innovative 'lighter'-style opening, were significantly higher than the mean scores for Mayfair for eight items. There was no difference for the items 'attractive' (p=0.069), and 'childish' (p=0.055). Marlboro Bright Leaf was also rated more harmful

(p=0.009) than the 'regular' Mayfair pack. For participants who had tried smoking, alternative hypothesis one can be partially supported for each of the three 'novelty' packs. Adolescents rated each of the three 'novelty' packs significantly higher and therefore more positively, than the 'regular' Mayfair pack on most items.

Mean ratings for the 'novelty' Silk Cut Superslims and Pall Mall packs were significantly more positive than for the plain pack on all 11 items ($p \leq 0.007$) (Table 7.11). Mean scores for the 'novelty' Marlboro Bright Leaf and 'regular' Mayfair packs were significantly more positive than the plain pack on 10 items. No significant difference was found for the item 'childish' for Marlboro Bright Leaf (p=0.085) and Mayfair (p=0.730) compared with the plain pack. Null hypothesis two can therefore be fully rejected in favour of the alternative hypothesis for the 'novelty' Silk Cut Superslims and Pall Mall pack, and partially rejected for the 'novelty' Marlboro Bright Leaf and 'regular' Mayfair pack.

Current smokers

Unlike the never-smokers and tried smokers, who, on average, gave negative responses for the pack ratings items for all five packs, current smokers, on average, rated the three 'novelty' packs on the positive end of the scale (>3). Current smokers rated each of the three 'novelty' packs significantly higher than the 'regular' Mayfair pack on four items: 'eye-catching', 'cool', 'fun', and 'childish' ($p \leq 0.020$). Additionally, the innovative slim Silk Cut Superslims and bright pink Pall Mall packs were rated more positively than the 'regular' Mayfair pack for 'attractiveness' ($p \leq 0.031$). Only the slim white Silk Cut Superslims pack was rated significantly less harmful than the 'regular' Mayfair pack (p=0.013). However, there were no significant differences between the mean ratings of each of the three 'novelty' packs and the 'regular' Mayfair pack for five items: 'worth looking at', 'meant for someone like me', 'tempts me to smoke', 'I like this pack', and 'I would like to have this pack' (Table 7.12). The innovative dark Marlboro Bright Leaf pack was rated significantly more harmful than the 'regular' Mayfair pack (p=0.005). For current smokers, null hypothesis one can only be partially rejected in favour of the

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alternative hypothesis for each of the three 'novelty' packs. Adolescents rated these packs significantly higher and therefore more positively, than the 'regular' Mayfair pack on some items.

Figure 7.9: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – current smokers
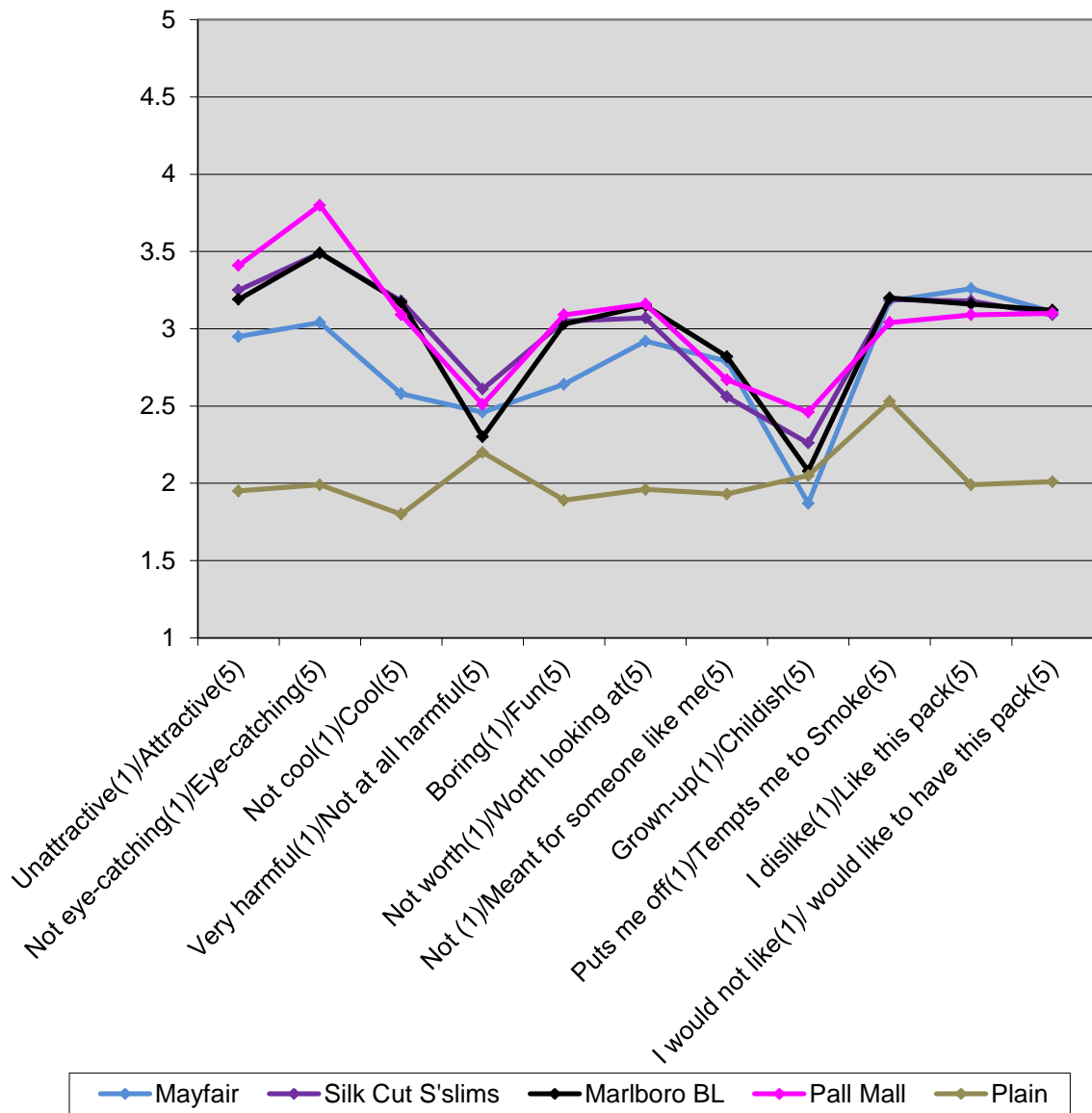
Mean ratings for the 'novelty' pink Pall Mall pack were significantly more positive than for the plain pack on all 11 items (p≤0.001) (Table 7.13). Mean scores for the 'novelty' slim Silk Cut Superslims pack were significantly higher than the plain pack on 10 items (p<0.001). There was no difference for the item 'childish' (p=0.080). Mean scores for

the 'novelty' Marlboro Bright Leaf pack, with its 'lighter'-style opening were significantly higher than the plain pack on nine items, with no differences for 'childish' (p=0.799) and 'harm' (p=0.307). The 'regular' Mayfair pack was rated significantly more positive than the plain pack on 10 items. The Mayfair pack was rated significantly lower than the plain pack for the item 'childish' (p=0.027). Null hypothesis two can be fully rejected in favour of the alternative hypothesis for the 'novelty' Pall Mall pack, and partially rejected for each of the other two 'novelty' packs and the 'regular' pack.

Gender

Mean ratings for both genders were on the negative end of the scale (<3) (Figures 7.10, 7.11). The descriptive plotted data suggests that there may be a gender difference in some of the ratings of the different pack styles. For example, male mean ratings for the more masculine, dark, Marlboro Bright Leaf pack ranged from 1.60 to 2.60 (Table 7.14), while the female ratings appear slightly lower for this pack, ranging from 1.51 to 2.28 (Table 7.15). Conversely, the male mean ratings for the bright pink Pall Mall pack ranged from 1.54 to 2.84 compared with what appear to be slightly higher mean ratings, ranging from 1.71 to 2.97, for females.

Males

Each of the three 'novelty' packs were rated significantly higher than the 'regular' Mayfair pack on six items: 'attractive', 'eye-catching', 'cool', 'fun', 'worth looking at' and 'I like this pack' (p≤0.005) (Table 7.16). Additionally, the innovative Silk Cut Superslims and Marlboro Bright Leaf packs were rated higher than the 'regular' Mayfair pack for 'I would like to have this pack'. There was no significant difference between the pink Pall Mall pack and the 'regular' Mayfair pack for this item (p=0.204). For the item 'meant for someone like me' there was no significant difference between any of the three 'novelty' packs and the 'regular' Mayfair pack (p≥0.254). Null hypothesis one can be partially rejected in favour of the alternative hypothesis for males, for each of the three 'novelty' packs.

Figure 7.10: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – males
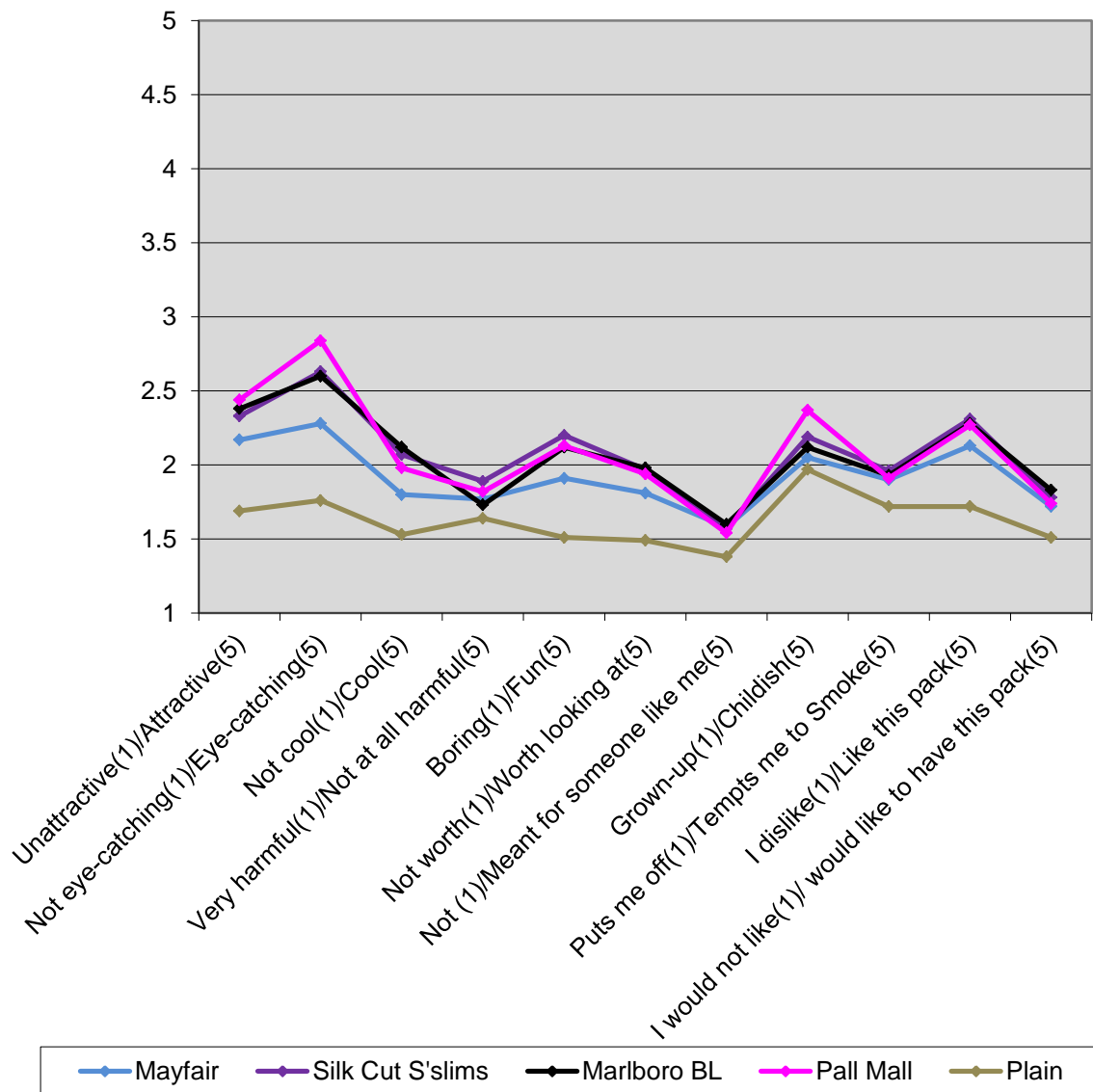
Mean ratings for each of the three 'novelty' packs were significantly more positive than for the plain pack for all 11 items (p≤0.001) (Table 7.17). Compared with the plain pack, mean ratings for the 'regular' Mayfair pack were significantly higher on 10 items. There was no difference for the item 'childish' (p=0.053). Null hypothesis two can be fully rejected in favour of the alternative hypothesis for all 'novelty' packs and partially rejected for the 'regular' pack.

Figure 7.11: Mean pack ratings scores for 'novelty', 'regular' and 'plain' pack styles – females
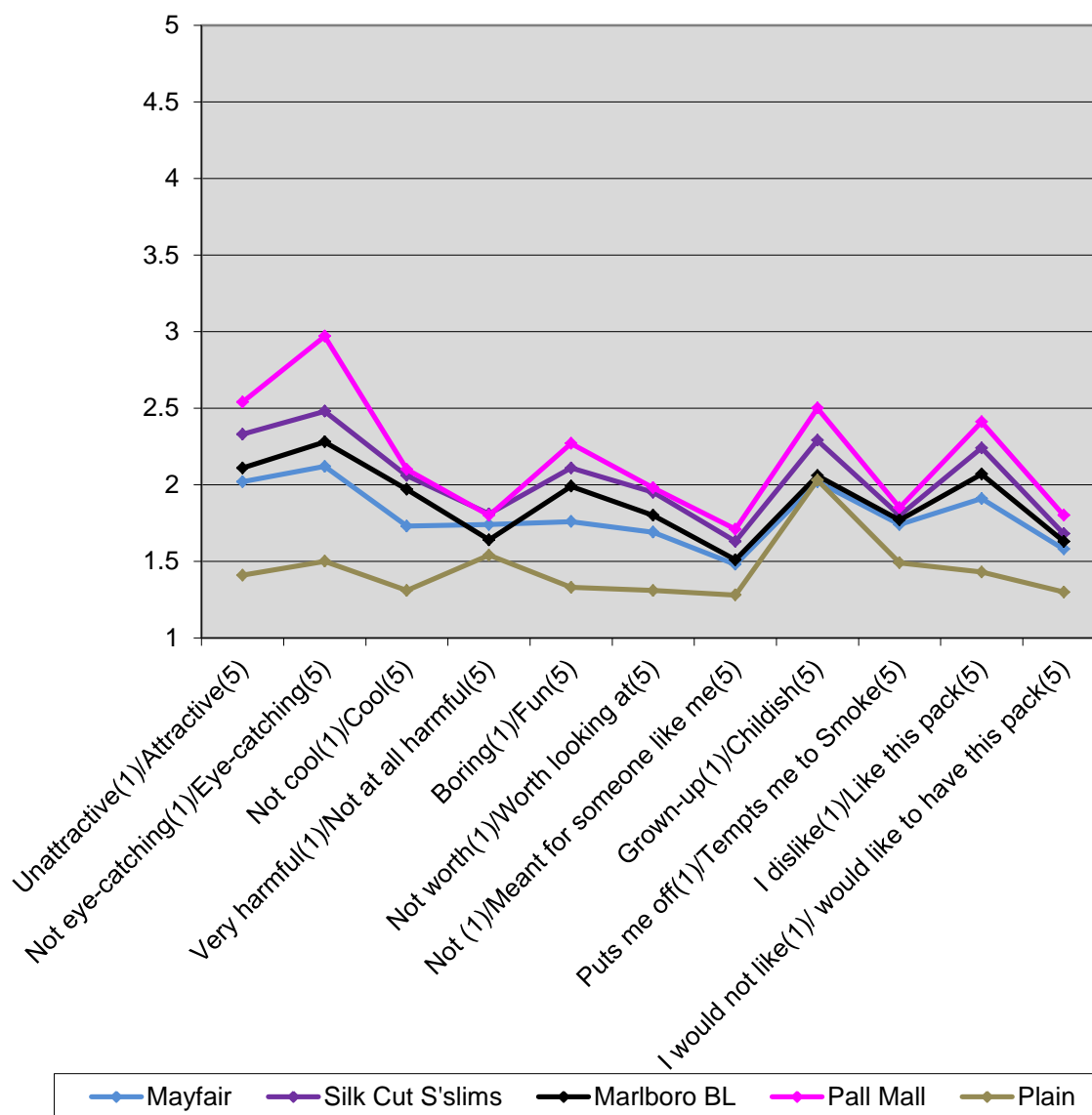
Females

The 'novelty' slim Silk Cut Superslims pack and the pink Pall mall pack were rated significantly higher than the 'regular' Mayfair pack on all 11 items (p≤0.008) (Table 7.18). The more masculine, dark, Marlboro Bright Leaf pack was rated significantly higher than the 'regular' Mayfair pack on six of the 11 items (p≤0.043). There was no significant difference between Marlboro Bright Leaf and the 'regular' Mayfair pack for the items 'meant for someone like me', 'childish', 'tempts me to smoke' and 'I would like to have this pack' (p≥0.063). Null hypothesis one can be fully rejected in favour of

the alternative hypothesis for the more feminine-oriented Silk Cut Superslims and Pall Mall packs and partially rejected for the Marlboro Bright Leaf pack.

Mean ratings for the 'novelty' slim Silk Cut Superslims and pink Pall Mall packs were significantly more positive than the plain pack for all 11 items ($p<0.001$) (Table 7.19). The 'novelty' Marlboro Bright Leaf with its 'lighter'-style opening, and 'regular' Mayfair packs were rated significantly higher than the plain pack on 10 of the 11 items: for the item 'childish', there was no difference. Null hypothesis two can be fully rejected in favour of the alternative hypothesis for the 'novelty' Silk Cut Superslims and Pall Mall packs and partially rejected for the 'novelty' Marlboro Bright Leaf and 'regular' packs.

7.4 Pack feelings

Adolescents' responses to packaging, elicited in the focus groups, were also used to develop four items to assess pack feelings to the five cigarette packs.

7.4.1 Total sample

Similar to the mean pack ratings scores, the mean pack feelings scores of each of the five cigarette packs were negative with mean scores ranging from 1.41 to 2.47 (Table 7.20). Again, none of the mean scores were on the positive end of the scale (>3). Exploratory plots of the descriptive data suggest that the most negative mean ratings were assigned to the plain pack, with mean scores ranging from 1.41 to 2.14. However, from an initial look at the data, there appears to be little difference in the mean ratings of the 'regular' Mayfair pack and three 'novelty' packs (Figure 7.13).

Testing hypotheses three and four

Figure 7.12: Hypotheses three and four

Alternative hypotheses	Null hypotheses
Pack feelings *H3: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.* *H4: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack feelings items.*	*H3₀: Adolescents will rate 'novelty' packaging <u>less or equally</u> positively than 'regular' packaging across pack feelings items.* *H4₀: Adolescents will rate 'novelty' and 'regular' packaging <u>less or equally</u> positively than a 'plain' pack across pack feelings items.*

There was no significant difference in the mean ratings for each of the three 'novelty' packs compared with the 'regular' Mayfair pack for the items 'feel embarrassed' and 'feel proud' (Table 7.21). Only the innovative, slim, Silk Cut Superslims pack was rated significantly higher than the 'regular' Mayfair pack for the item 'feel good' (p=0.002). All three 'novelty' packs were, however, rated significantly higher than the 'regular' Mayfair pack on the item 'feel disgusting', with a higher rating indicative of less disgust (p≤0.030). Null hypothesis three can therefore be partially rejected in favour of the alternative hypothesis. Adolescents rated 'novelty' packaging higher and therefore more positively, than 'regular' packaging across some pack feelings items.

For all four pack feelings items, mean ratings for each of the 'novelty' packs and the 'regular' pack were significantly more positive than for the plain pack (p<0.001) (Table 7.22). Null hypothesis four can therefore be fully rejected in favour of the alternative hypothesis. Adolescents rated 'novelty' and 'regular' packaging more positively than a 'plain' pack across all pack feelings items.

Figure 7.13: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles – total sample
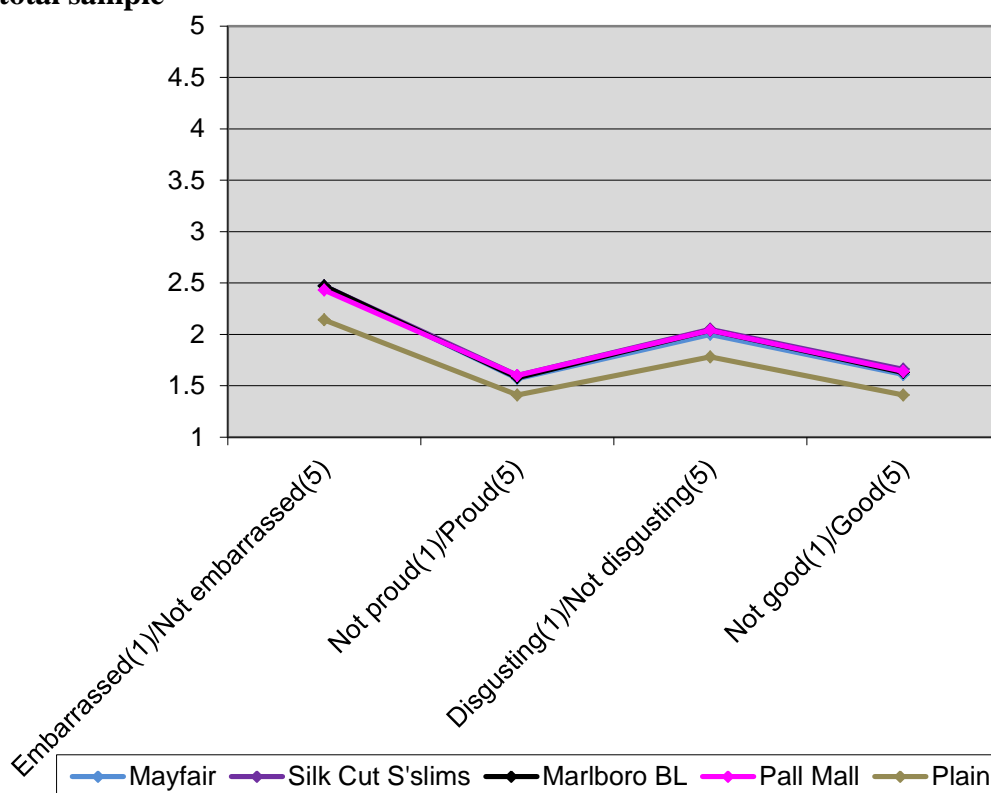
7.4.2 Pack feelings scores within smoking status and gender subgroups

To investigate whether null hypotheses three and four can be rejected within the subgroups, pack feelings scores were examined separately by the three levels of smoking status and gender.

Smoking status

The descriptive plotted data for the pack feelings items suggests that adolescents currently engaged in smoking behaviour may respond differently to packs compared with non-smokers (Figures 7.14-7.16). Never-smokers' mean ratings for the five packs were on the negative end of the scale, ranging from 1.26 to 2.22 (Table 7.23), as were those who had tried smoking in the past (1.46 to 2.87, Table 7.24). However, the range of mean scores for current smokers (2.25 to 3.98, Table 7.25), meant that some mean scores were on the positive end of the scale (>3).

Figure 7.14: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles –never-smokers
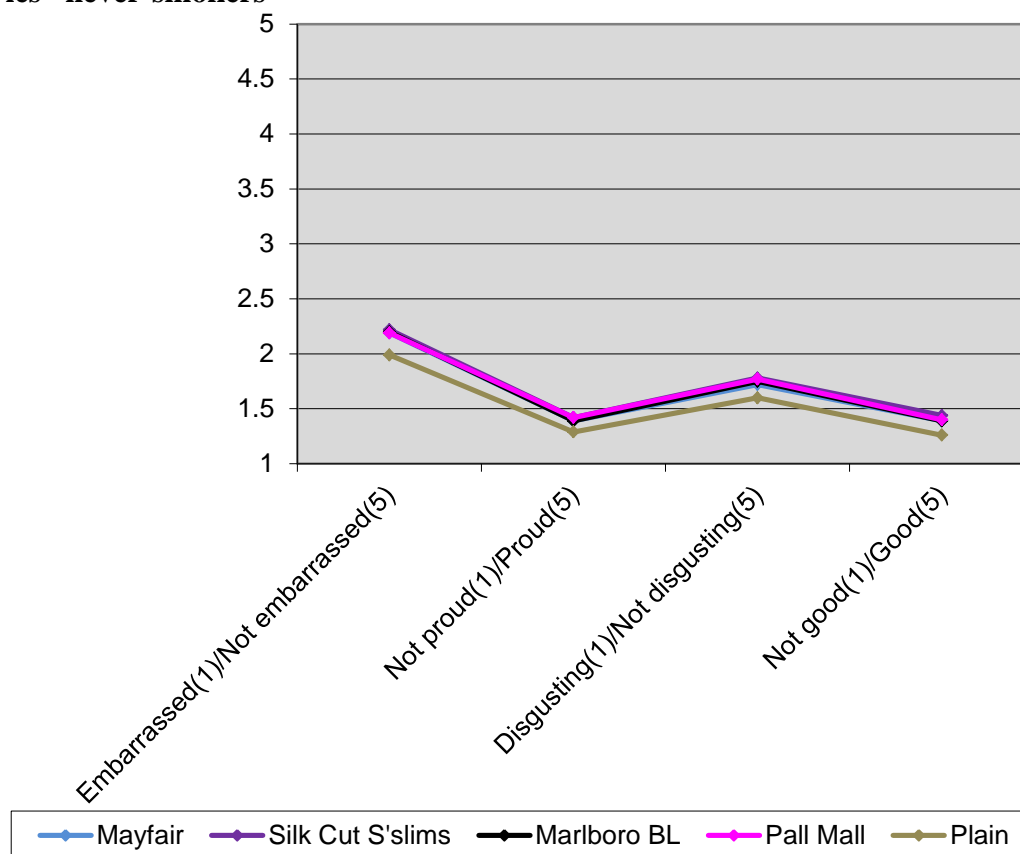
Never-smokers

For the small 'novelty' Silk Cut Superslims pack, mean responses were significantly higher compared with the 'regular' Mayfair pack on three of the four items: there was no difference for the item 'feel embarrassed' (p=0.248) (Table 7.26). For the pink Pall Mall 'novelty' pack, mean responses were significantly higher than the 'regular' Mayfair pack on two items, 'feel proud' (p=0.033) and 'feel disgusting' (p=0.001), with a higher rating indicative of less disgust. For the 'novelty' Marlboro Bright Leaf pack with its 'lighter'-style opening, mean responses were higher than the 'regular' Mayfair pack on one item, 'feel disgusting' (p=0.048). For never-smokers, null hypothesis three can be partially rejected in favour of the alternative hypothesis for each 'novelty' pack.

Ratings for each of the three 'novelty' packs and the 'regular' Mayfair pack were significantly more positive than for the plain pack (p<0.001) (Table 7.27). Null

hypothesis four can be fully rejected in favour of the alternative hypothesis for never-smokers.

Figure 7.15: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles – tried smoking
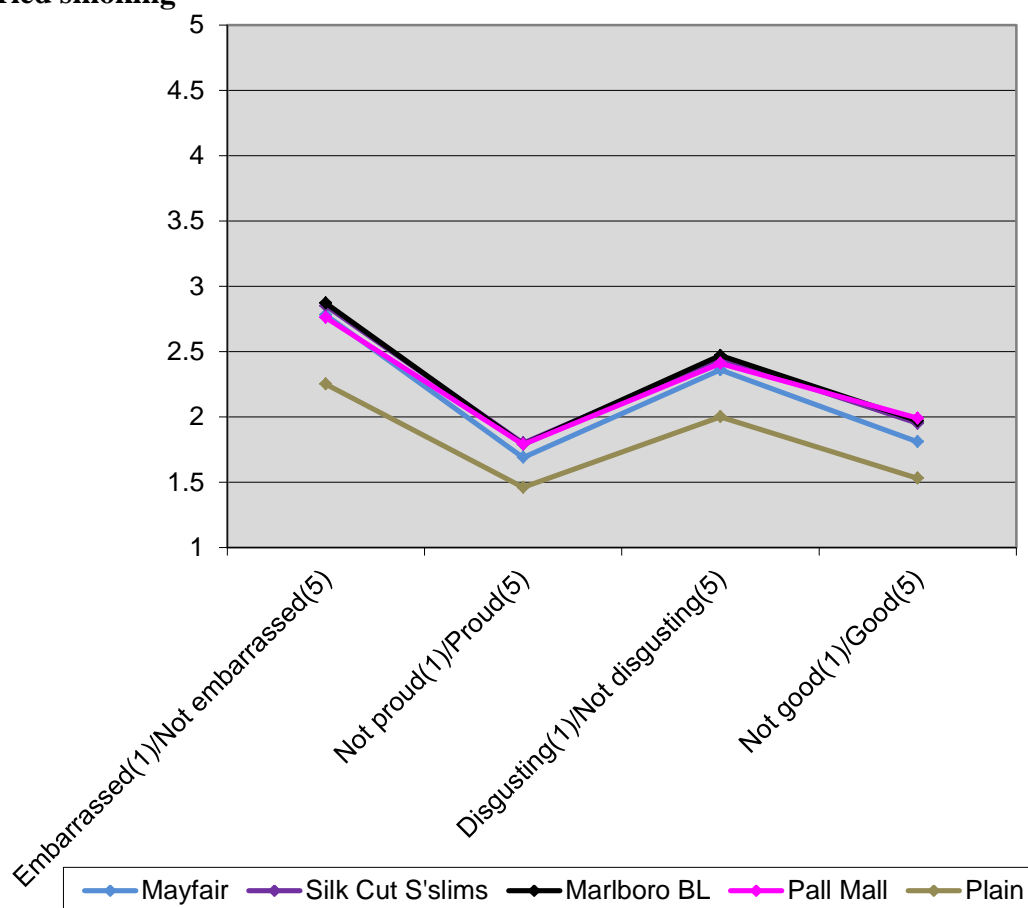
Tried smoking

For the slim 'novelty' Silk Cut Superslims pack, mean responses were significantly higher than for the 'regular' Mayfair pack on three of the four items, except for the item 'feel embarrassed' (p=0.313) (Table 7.28). For the pink 'novelty' Pall Mall pack, mean responses were significantly higher than the 'regular' Mayfair pack on one item, 'feel good' (p=0.003). For the 'novelty' Marlboro Bright Leaf pack, mean responses were significantly higher for two items, 'feel disgusting' (p=0.032), with a higher rating indicative of less disgust, and 'feel good' (p=0.006). Null hypothesis three can be partially rejected in favour of the alternative hypothesis for each 'novelty' pack for those who have tried smoking.

Again, ratings for each of the three 'novelty' packs and the 'regular' Mayfair pack were significantly more positive than for the plain pack (p<0.001) (Table 7.29). Hypothesis four can be fully rejected in favour of the alternative hypothesis for those who have tried smoking.

Figure 7.16: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles – current smokers
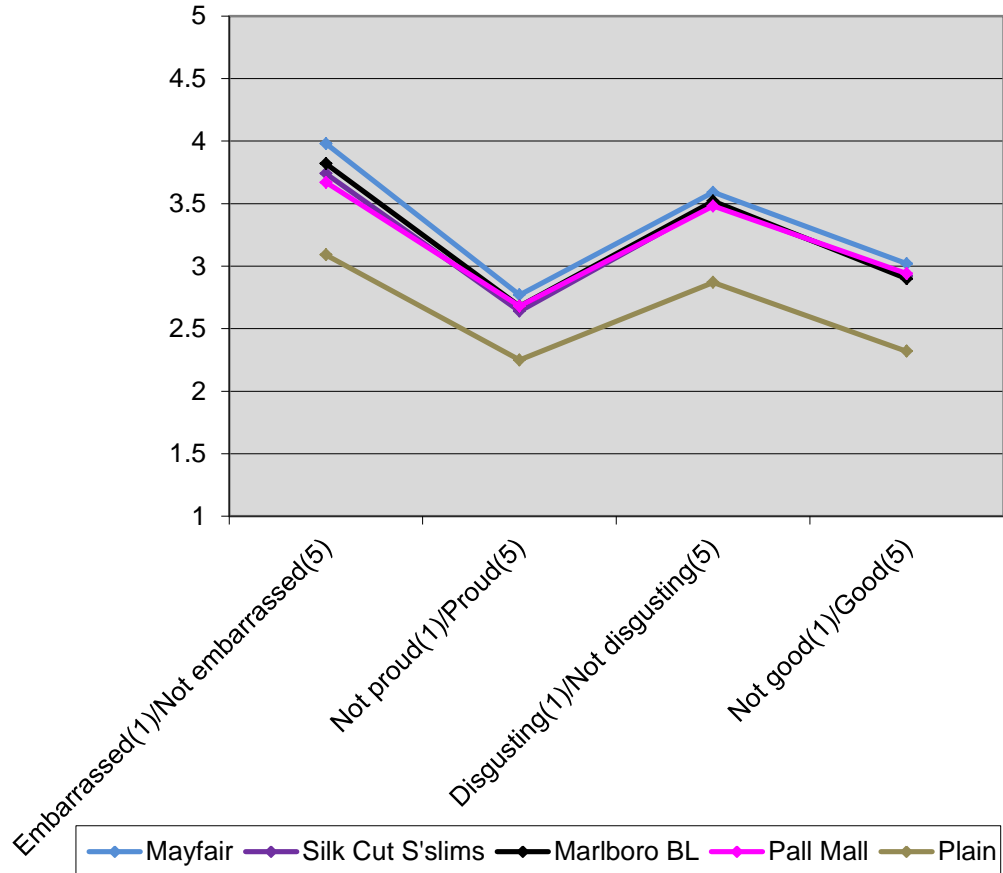
Current smokers

For current smokers, there were no instances where the 'novelty' packs were rated significantly higher than the 'regular' Mayfair pack (Table 7.30). There were no significant differences between the mean ratings of each of the three 'novelty' packs compared with the 'regular' Mayfair pack for three of the four pack feelings items: 'feel proud', 'feel disgusting', and 'feel good' (p≥0.059). For the item 'feel embarrassed', the 'regular' Mayfair pack was rated significantly higher than Silk Cut Superslims (p=0.024), and Pall Mall (p=0.006), with a higher rating indicative of less embarrassment. Null hypothesis three cannot therefore be rejected in favour of the

alternative hypothesis for current smokers. Adolescent current smokers did not rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.

Pack feelings scores for each of the three 'novelty' packs and the 'regular' Mayfair pack, however, were still significantly more positive than for the plain pack ($p<0.001$) (Table 7.31). Null hypothesis four can be fully rejected in favour of the alternative hypothesis for current smokers.

Gender

Both male and female mean pack feelings scores were on the negative end of the scale (>3) (Figures 7.17-7.18). The descriptive plotted data suggests that females appeared to rate the plain pack most negatively, with mean scores ranging from 1.32 to 2.00 (Table 7.32), compared with mean scores from 1.47 to 2.28 for males (Table 7.33).

Males

There were two instances where males rated 'novelty' packs significantly higher than the 'regular' Mayfair pack on pack feelings items. The Silk Cut Superslims pack was rated significantly higher than the 'regular' Mayfair pack for the item 'feel good' ($p=0.027$) (Table 7.34). The Marlboro Bright Leaf pack was rated significantly higher than the 'regular' Mayfair pack for the item 'feel disgusting' ($p=0.008$), with a higher rating indicative of less disgust. For the item 'feel embarrassed', Mayfair was rated significantly higher than both the more feminine-oriented pink Pall Mall ($p<0.001$) and slim Silk Cut Superslims packs ($p=0.040$), indicative of less embarrassment. Null hypothesis three can be partially rejected in favour of the alternative hypothesis for the Silk Cut Superslims and Marlboro Bright Leaf packs. Males rated these two 'novelty' packs higher and therefore more positively, than 'regular' packaging on some pack feelings items. Null hypothesis three cannot be rejected for the pink Pall Mall pack.

Figure 7.17: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles – males
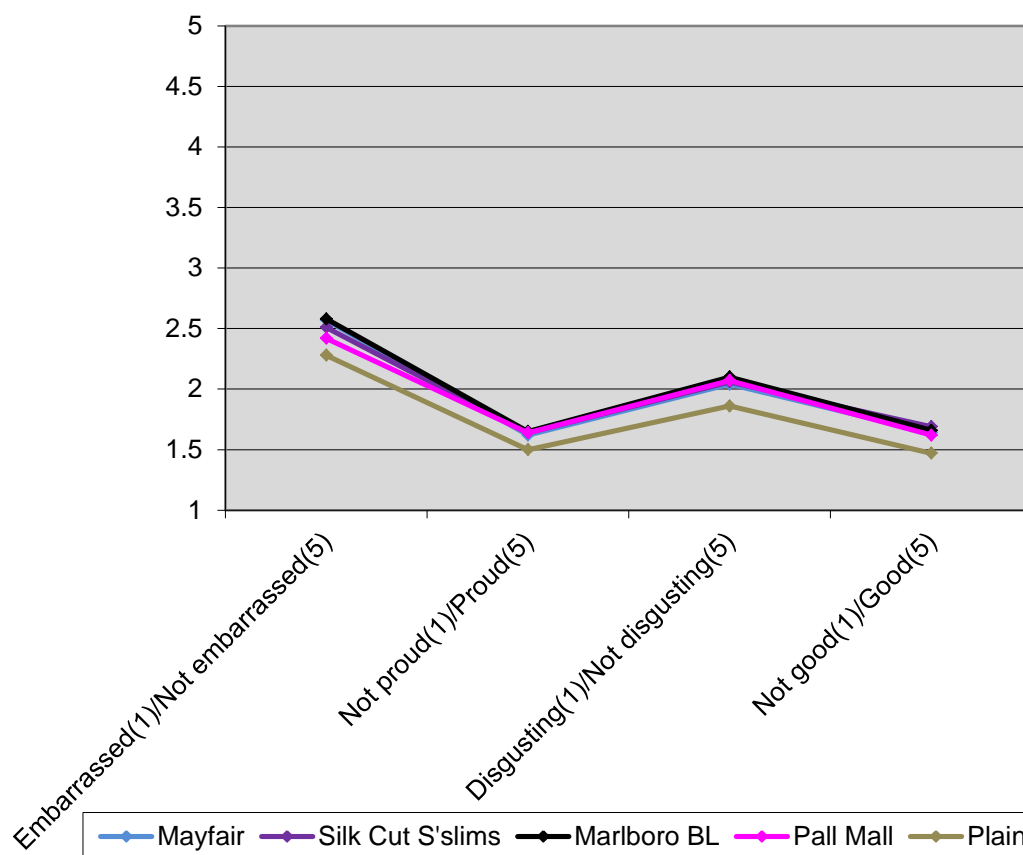
For all four pack feelings items, mean ratings for each of the three 'novelty' packs and the 'regular' Mayfair pack were significantly more positive than the plain pack (p<0.001) (Table 7.35). Null hypothesis four can therefore be fully rejected in favour of the alternative hypothesis. Adolescent males rated 'novelty' and 'regular' packaging more positively than a 'plain' pack across all pack feelings items.

Figure 7.18: Mean pack feelings scores for 'novelty', 'regular' and 'plain' pack styles – females

Legend: Mayfair — Silk Cut S'slims — Marlboro BL — Pall Mall — Plain

X-axis categories: Embarrassed(1)/Not embarrassed(5), Not proud(1)/Proud(5), Disgusting(1)/Not disgusting(5), Not good(1)/Good(5)
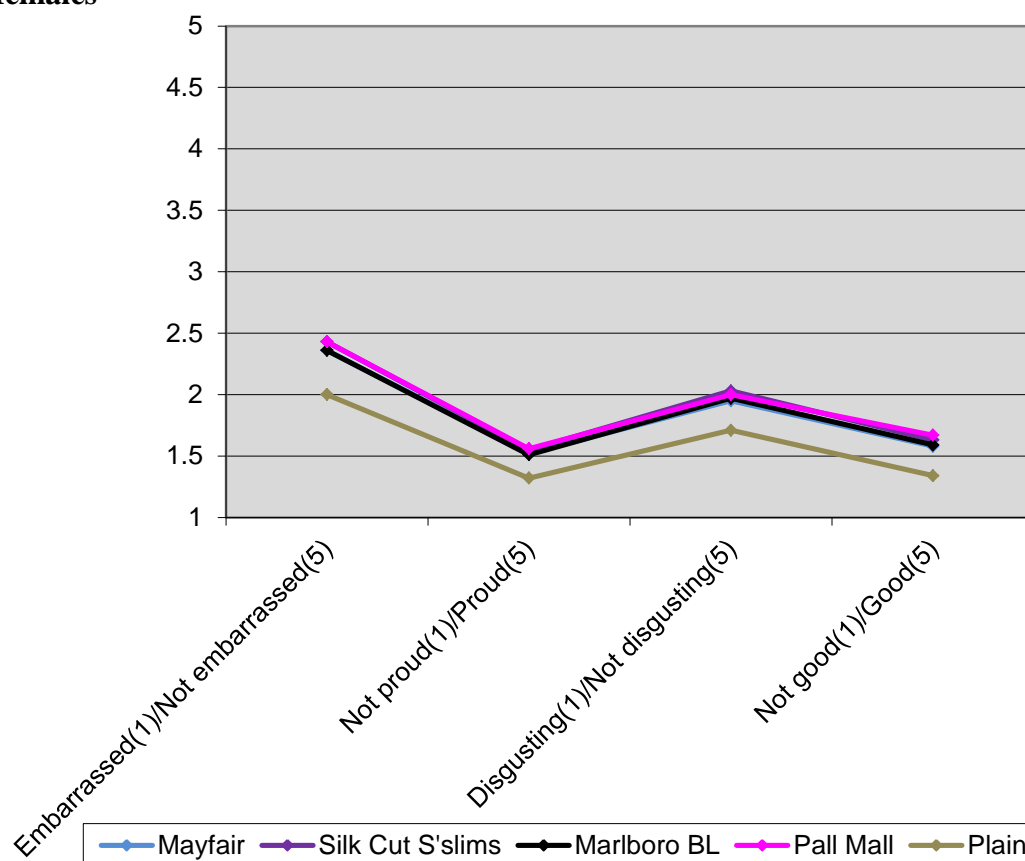
<u>Females</u>

Females rated the 'novelty' slim Silk Cut Superslims and pink Pall Mall packs significantly higher than the 'regular' Mayfair pack on three pack feelings items: 'feel good', 'feel embarrassed' and 'feel disgusting' ($p \leq 0.047$), with higher ratings indicative of less embarrassment and disgust (Table 7.36). There was no significant difference in the ratings of the 'regular' Mayfair pack and these two packs for the item 'feel proud'. There was also no significant difference between the 'regular' Mayfair pack and the more masculine, darkly-coloured, 'novelty' Marlboro Bright Leaf pack on any of the four items. Null hypothesis three can be partially rejected in favour of the alternative hypothesis for the two more feminine-oriented 'novelty' packs – Silk Cut Superslims and Pall Mall. The null hypothesis cannot be rejected for the Marlboro Bright Leaf pack.

Mean ratings for each of the three 'novelty' packs and the 'regular' Mayfair pack were significantly more positive than for the plain pack across all pack feelings items

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(p<0.001) (Table 7.37). Null hypothesis four can be fully rejected in favour of the alternative hypothesis for females.

7.5   Association between packaging and smoking susceptibility

This section tests hypotheses five, six and seven to examine any link between tobacco packaging awareness and positive pack ratings, and susceptibility to smoke. While susceptibility is not a behavioural response, it does indicate behavioural intent, and is a well validated measure of future smoking intentions and predictor of future tobacco use (DiFranza et al., 2006; Lovato et al., 2011; National Cancer Institute, 2008; Pierce et al., 1996; Moodie et al., 2008). This section focuses exclusively on the 1025 never-smokers in the sample. In total, twelve separate hierarchical binary logistic regression models were constructed with susceptibility as the categorical outcome variable. Each model controlled for the potential influence of demographic and smoking-related factors identified in past research as influencing youth smoking.

7.5.1   Association between tobacco packaging awareness and susceptibility to smoke

Two measures of tobacco packaging awareness were examined. The first measure was designed to capture 'novelty' packaging and the second to capture 'value' packaging. Thirteen percent (n=129) of never-smokers indicated they had noticed a new or unusual pack design in the last six months ('novelty') and 16% percent (n=161) had noticed a pack with the price marked on it ('value'). When the sample was examined by susceptibility to smoke, 19% (n=54) susceptible never-smokers had noticed a new or unusual pack design and 21% (n=61) had noticed a price-marked pack.

For each of the two packaging types, a logistic regression model was constructed to examine the association between never-smokers' smoking susceptibility (susceptible

versus non-susceptible) and tobacco packaging awareness (aware of packaging type versus not aware). The findings test hypothesis five:

Figure 7.19: Hypothesis five

Alternative hypotheses	Null hypotheses
Behavioural intent *H5: Adolescents who are aware of tobacco packaging will be more likely to be susceptible never-smokers.*	*H5$_0$: Adolescents who are aware of tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.*

After controlling for the potential influence of demographic and smoking related factors, awareness of each of the types of packaging was significantly associated with susceptibility.

Participants who were aware of 'a pack with the price marked on it' were 1.67 times more likely to be susceptible to smoking, compared with never smokers who had not noticed or who were unsure whether they had noticed this type of packaging (*AOR*=1.67, 95% *CI* 1.16 to 2.42, p=0.006, Table 7.38). Those aware of 'a new or unusual pack design', were twice as likely to be susceptible (*AOR*=2.01, 95% *CI* 1.36 to 2.98, p<0.001, Table 7.39), than those not aware of this type of packaging.

In the first model (Table 7.38) other factors associated with susceptibility to smoke were having sibling(s) who smoke, compared with having no siblings who smoke (*AOR*=2.28, 95% *CI* 1.53 to 3.38, p<0.001), and having a parent who smokes, compared with having non-smoking parents (*AOR*=1.85, 95% *CI* 1.04 to 3.29, p=0.036). In the second model (Table 7.39) having sibling(s) who smoke (*AOR*=2.22, 95% *CI* 1.50 to 3.29, p<0.001) and having a parent who smokes (*AOR*=1.91, 95% *CI* 1.07 to 3.39, p=0.028) also increased the likelihood of susceptibility to smoking. In this model, increased age also increased the odds of susceptibility (*AOR*=1.10, 95% *CI* 1.00 to 1.20, p=0.042).

The results show null hypothesis five can be rejected in favour of the alternative hypothesis for both types of packaging. Adolescents who were aware of a new or unusual tobacco pack design or a pack with the price marked on it were more likely to be susceptible never-smokers.

7.5.2 Association between pack appraisal and susceptibility to smoke

Five pack ratings items combined to form the composite pack appraisal measure: (a) Unattractive/Attractive; (b) Not eye-Catching/Eye-catching; (c) Not cool/Cool; (e) Boring/Fun; (f) Not worth looking at/Worth looking at (see Appendix 10 for an overview of how the composite measures were derived).

Eight percent (n=90) of never-smokers indicated positive appraisal of the 'regular' Mayfair pack. For the 'novelty' packs, 14% (n=141) indicated positive appraisal of Marlboro Bright Leaf, 18% (n=176) of Silk Cut Superslims and 21% (n=209) of Pall Mall. Three percent (n=34) had a positive appraisal score for the plain pack. Examination of the data by susceptibility, suggested that positive appraisal might be higher among susceptible never smokers. Fourteen percent (n=38) of susceptible never smokers indicated positive appraisal for the 'regular' Mayfair pack and approximately a quarter indicated positive appraisal for the 'novelty' Silk Cut Superslims (27%, n=76) and Marlboro Bright Leaf (23%, n=64) packs. One third (33%, n=91) indicated positive appraisal for the Pall Mall pack. For the plain pack, four percent (n=10) indicated positive appraisal.

For each pack a logistic regression model was constructed to examine the association between never-smokers' smoking susceptibility (susceptible versus non-susceptible) and the composite measure of cigarette pack appraisal (positive appraisal versus not positive appraisal). The findings are used to test hypothesis six:

Figure 7.20: Hypothesis six

Alternative hypotheses	*Null hypotheses*
<u>*Behavioural intent*</u> *H6: Adolescents who rate tobacco packaging positively will be more likely to be susceptible never-smokers.*	*H6$_0$: Adolescents who rate tobacco packaging positively will be <u>less or equally</u> likely to be susceptible never-smokers.*

For the 'regular' and each of the 'novelty' packs, positive appraisal was significantly associated with susceptibility. Those with a positive appraisal of the 'regular' Mayfair pack were twice as likely to be susceptible as those giving a non-positive appraisal (*AOR*=2.05, 95% *CI* 1.29 to 3.25, p=0.002, Table 7.40). This was even more pronounced for each of the 'novelty' packs. Participants with a positive appraisal of the smaller Silk Cut Superslims pack were more than twice as likely to be susceptible (*AOR*=2.20, 95% *CI* 1.55 to 3.14, p<0.001, Table 7.41) and participants with a positive appraisal of the brightly coloured Pall Mall pack were almost 2.5 times as likely to be susceptible (*AOR*=2.45, 95% *CI* 1.76 to 3.43, p<0.001, Table 7.42). This association was strongest for the innovative Marlboro Bright Leaf pack, whereby susceptibility was 2.51 times higher for participants expressing a positive appraisal of the pack (*AOR*=2.51, 95% *CI* 1.71 to 3.67, p<0.001, Table 7.43). There was no association between positive appraisal of the plain pack and susceptibility (*AOR*=1.04, 95% *CI* 0.48 to 2.26, p=0.914, Table 7.44).

Within each of these five models, having sibling(s) who smoke, compared with not having siblings who smoke, increased the odds of being susceptible to smoke (Tables 7.40 to 7.44). Having a parent who smokes, compared with having non-smoking parents, increased the odds of susceptibility to smoke in four of the five models: Mayfair (Table 7.40), Pall Mall (Table 7.42), Marlboro Bright Leaf (Table 7.43), and the Plain pack (Table 7.44). There was no association between having a parent who smokes and susceptibility for the Silk Cut Superslims model (Table 7.41).

The results show null hypothesis six can be rejected in favour of the alternative hypothesis for the 'regular' Mayfair pack and each of the three 'novelty' packs. Adolescents who rated the 'regular' Mayfair pack, and the 'novelty' Silk Cut Superslims, Marlboro Bright Leaf, and Pall Mall packs positively were more likely to be susceptible never-smokers. The null hypothesis cannot be rejected for the plain pack. Adolescents who rated the plain pack positively were not more likely to be susceptible never-smokers. There was no relationship between pack appraisal of the plain pack and susceptibility.

7.5.3 Association between pack receptivity and susceptibility to smoke

Four pack ratings response items combined to form the composite pack receptivity measure (a) Not meant for someone like me/Meant for someone like me; (b) Puts me off smoking/Tempts me smoke; (c) I dislike this pack/I like this pack; (d) I would not like to have this pack/I would like to have this pack.

Four percent (n=35) of never-smokers indicated being receptive to the 'regular' Mayfair pack. For the 'novelty' packs, five percent (n=50) were receptive to Marlboro Bright Leaf, six percent (n=61) to Silk Cut Superslims and seven percent (n=71) to Pall Mall. For the plain pack, three percent (n=27) indicated being receptive to this pack. Examination of the data by susceptibility, suggested that pack receptivity may be higher among susceptible never smokers. The descriptive data suggests that slightly greater proportions of susceptible never-smokers indicated being receptive to the 'regular' and 'novelty' packs. Five percent (n=15) indicated receptivity to the 'regular' Mayfair pack, and 13% (n=37) were receptive to Silk Cut Superslims, eight percent (n=23) to Marlboro Bright Leaf, and 14% (n=39) to Pall Mall. Three percent (n=7) indicated receptivity to the plain pack.

For each pack a logistic regression model was constructed to examine the association between never-smokers' smoking susceptibility (susceptible versus non-susceptible) and

the composite measure of receptivity (receptive versus not receptive). The findings are used to test hypothesis seven:

Figure 7.21: Hypothesis seven

Alternative hypotheses	*Null hypotheses*
Behavioural intent *H7: Adolescents who are receptive to tobacco packaging will be more likely to be susceptible never-smokers.*	*H7$_0$ Adolescents who are receptive to tobacco packaging will be <u>less or equally</u> likely to be susceptible never-smokers.*

Receptivity to the three 'novelty' pack styles was positively associated with susceptibility. Participants receptive to the Pall Mall pack were more than 3.5 times as likely to be susceptible (*AOR*=3.69, 95% *CI* 2.21 to 6.19, p<0.001, Table 7.45) and those receptive to the Marlboro Bright Leaf pack almost 2.5 times as likely to be susceptible (*AOR*=2.42, 95% *CI* 1.32 to 4.44, p=0.004, Table 7.46), compared to participants not receptive to these packs. Participants receptive to the Silk Cut Superslims pack were more than four times as likely to be susceptible compared with those who were not receptive (*AOR*=4.42, 95% *CI* 2.50 to 7.81, p<0.001, Table 7.47). No significant association was observed between susceptibility and receptivity to the 'regular' Mayfair pack (*AOR*=1.97, 95% *CI* 0.96 to 4.03, p=0.064, Table 7.48) or the plain pack (*AOR*=0.92, 95% *CI* 0.38 to 2.27, p=0.863, Table 7.49).

Other factors associated with susceptibility to smoke within each of these five models were having sibling(s) who smoke, compared to having no siblings who smoke, and having a parent who smokes, compared to non-smoking parents (Tables 7.45 to 7.49).

The results show null hypothesis seven can be rejected in favour of the alternative hypothesis for the three 'novelty' pack styles. Adolescents who were receptive to the Silk Cut Superslims, Marlboro Bright Leaf, or Pall Mall pack were more likely to be susceptible never-smokers. The null hypothesis cannot be rejected for the 'regular' Mayfair or 'plain' pack. Adolescents who were receptive to Mayfair or the plain pack

were not more likely to be susceptible never-smokers. There was no relationship between pack receptivity of these two pack styles and susceptibility.

Nagelkerke R²

Nagelkerke R² is a psuedo R² used to assess the overall fit of logistic regression models. Psuedo R² has been developed to try and mimic R² for ordinary regression, which is the primary measure of model fit which indicates the percentage of variance in the dependent variable explained by the independent variables in the model (Faraway, 2006). Nagelkerke R² ranged from 0.045 to 0.086 in the twelve logistic regression models constructed here (Tables 7.38 to 7.49). Therefore, the explained variation in the dependent variable based on our models is estimated to range from approimately 4.5% to 8.6%, indicating a weak relationship between the dependent variable and independent variables. It is widely noted however, that while Nagelkerke R² may be interpreted in the same manner as R², it is not directly comparable to it, and should therefore be used with caution (Cohen, Cohen, West & Aitken, 2003; Verma, 2013). Pseudo R² measures tend to be lower than those for traditional ordinary least squares R² measures. R² measures also tend to be low in similar types of research, such as those concerning alcohol marketing measures (Gordon, MacKintosh & Moodie, 2010) and tobacco point-of-sale measures (MacKintosh et al., 2012). Additionally, the purpose of the analysis performed here was not to seek the ideal model but to use logistic regression as a means of controlling for other known influences on susceptibility when testing whether packaging variables are associated with susceptibility.

7.6   Chapter summary

This chapter has presented the findings from the quantitative research phase. It examined adolescents' pack ratings and pack feelings to three different styles of tobacco packs: 'novelty', 'regular', and 'plain'. It also investigated any link between tobacco packaging and likely future smoking behaviour. Impacts are evident on cognitive, affective and behavioural dimensions.

7.6.1 Pack ratings

The pack ratings survey items primarily assessed cognitive pack attitudes and evaluations, but do include one affective response item – liking. Across the total sample, alternative hypothesis one was fully supported for the 'novelty' Silk Cut Superslims and Pall Mall packs, and partially supported for the 'novelty' Marlboro Bright Leaf pack (Figure 7.22). While the mean ratings for the cigarette packs were indicative of negative perceptions, the slim Silk Cut Superslims and pink Pall Mall packs were rated significantly higher than the 'regular' Mayfair pack on all 11 pack ratings items. The Marlboro Bright Leaf pack with its 'lighter'-style opening, was rated significantly higher than Mayfair on most measures.

Figure 7.22: Hypothesis one summary

Alternative hypotheses	Sample	Pack	Result
H1: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack ratings items.	Total sample	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Partially supported
	Never Smokers	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Partially supported
	Tried smoking	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Current smokers	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Males	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Females	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Partially supported

For the total sample, alternative hypothesis two was fully supported for the 'novelty' packs. Adolescents rated each of the three 'novelty' packs significantly higher than the plain pack on every pack ratings item (Figure 7.23). Alternative hypothesis two was partially supported for the 'regular' Mayfair pack.

When analysed by smoking status, current smokers, on average, gave the 'novelty' packs positive ratings, and there were fewer significant differences between the 'novelty' packs and the 'regular' pack. In some instances current smokers rated the 'regular' Mayfair pack significantly higher than the 'novelty' packs. While alternative hypothesis one was fully supported for females for the more feminine-oriented Sill Cut Superslims and Pall Mall packs, it could only be partially supported for the more masculine Marlboro Bright Leaf pack. The 'regular' pack was rated more positively than this pack on some items.

Figure 7.23: Hypothesis two summary

Alternative hypotheses	Sample	Pack	Result
H2: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack ratings items.	Total sample	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Partially supported
	Never Smokers	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Tried smoking	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Partially supported
		Regular Mayfair	Partially supported
	Current smokers	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
		Regular Mayfair	Partially supported
	Males	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Partially supported
	Females	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Partially supported
		Regular Mayfair	Partially supported

7.6.2 Pack feelings

For the pack feelings items, for the total sample, differences between the mean ratings of 'novelty' and 'regular' packs were less marked. However, while mean responses were on the negative end of the scale, adolescents rated the 'novelty' packs less negatively than the 'regular' Mayfair pack in some instances. Therefore, alternative hypothesis three was partially supported for each pack (Figure 7.24). For current smokers there were no instances where the 'novelty' packs were rated significantly higher than the 'regular' pack. In addition, males rated the 'regular' pack higher than the two more feminine-oriented 'novelty' packs (Silk Cut Superslims and Pall Mall) on the item 'feel embarrassed'. Conversely, females did not rate the more masculine 'novelty' Marlboro Bright Leaf pack significantly higher than the 'regular' pack on any pack feelings item.

Figure 7.24: Hypothesis three summary

Alternative hypotheses	Sample	Pack	Result
H3: Adolescents will rate 'novelty' packaging more positively than 'regular' packaging across pack feelings items.	Total sample	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Never Smokers	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Tried smoking	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Current smokers	Novelty Pall Mall	Not supported
		Novelty Silk Cut Superslims	Not supported
		Novelty Marlboro Bright Leaf	Not supported
	Males	Novelty Pall Mall	Not supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Partially supported
	Females	Novelty Pall Mall	Partially supported
		Novelty Silk Cut Superslims	Partially supported
		Novelty Marlboro Bright Leaf	Not supported

Alternative hypothesis four, however, was fully supported for the pack feelings items, both for the total sample, and when examined by smoking status and gender subgroups

(Figure 7.25). Each of the 'novelty' and 'regular 'pack styles were consistently rated more positively than the plain pack.

Figure 7.25: Hypothesis four summary

Alternative hypotheses	Sample	Pack	Result
H4: Adolescents will rate 'novelty' and 'regular' packaging more positively than a 'plain' pack across pack feelings items	Total sample	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Never Smokers	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Tried smoking	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Current smokers	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Males	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported
	Females	Novelty Pall Mall	Fully supported
		Novelty Silk Cut Superslims	Fully supported
		Novelty Marlboro Bright Leaf	Fully supported
		Regular Mayfair	Fully supported

7.6.3 Association between packaging and susceptibility to smoke

Twelve logistic regression models examined the link between tobacco packaging awareness, appraisal and receptivity, and likely future smoking behaviour. Alternative hypothesis five was supported for two types of tobacco packaging: adolescents aware of 'novelty' and 'value' packaging, were more likely to be susceptible never-smokers (Figure 7.26). Alternative hypothesis six was supported for both 'novelty' and 'regular' packaging: adolescents with positive pack appraisal scores for the 'novelty' Silk Cut Superslims, Pall Mall, and Marlboro Bright Leaf, and 'regular' Mayfair' packs were

more likely to be susceptible never-smokers (Figure 7.27). There was no association between positive pack appraisal and susceptibility for the plain pack. Alternative hypothesis seven was supported for the three 'novelty' packs (Figure 7.28). Adolescents receptive to the Silk Cut Superslims, Pall Mall and Marlboro Bright Leaf packs were more likely to be susceptible never-smokers. There was no association between receptivity to the 'regular' Mayfair pack or the plain pack.

Figure 7.26: Hypothesis five summary

Alternative hypothesis	Pack type	Result
H5: Adolescents who are aware of tobacco packaging will be more likely to be susceptible never-smokers.	Novelty	Fully supported
	Value	Fully supported

Figure 7.27: Hypothesis six summary

Alternative hypothesis	Pack type	Result
H6: Adolescents who rate tobacco packaging positively will be more likely to be susceptible never-smokers.	Novelty Pall Mall	Fully supported
	Novelty Silk Cut S'slims	Fully supported
	Novelty Marlboro B'leaf	Fully supported
	Regular Mayfair	Fully supported
	Plain	Not supported

Figure 7.28: Hypothesis seven summary

Alternative hypothesis	Pack type	Result
H7: Adolescents who are receptive to tobacco packaging will be more likely to be susceptible never-smokers.	Novelty Pall Mall	Fully supported
	Novelty Silk Cut S'slims	Fully supported
	Novelty Marlboro B'leaf	Fully supported
	Regular Mayfair	Not supported
	Plain	Not supported

7.6.4 Summary of key findings

The findings within this quantitative phase of research support and build on the qualitative findings presented in Chapter 5. Adolescents hold 'novelty' packaging in higher regard than 'regular' packaging for pack ratings items. The same effects for pack feelings were not so marked. There were fewer differences between 'novelty' and 'regular' packaging within the quantitative phase of research. Across both pack ratings and pack feelings items, however, plain packaging was viewed most negatively by adolescents.

The findings also show that those who thought most highly of 'novelty' cigarette packaging were also the ones who indicated that they were most likely to go on to smoke in the future. Differences among the packaging styles highlight the influence of innovative and unique branding elements on adolescents' future smoking intentions.

The following chapter will summarise the key findings from both stages of research and discuss the findings in relation to other studies. It will also consider the theoretical, research and policy implications from the study. Finally it will highlight the study limitations.

Table 7.1: Sample profile

Base: All respondents (1373)	n	Valid %
Gender		
Male	686	50
Female	687	50
Social Grade		
ABC1	579	43
C2DE	776	57
Age		
11-12	452	33
13-14	485	35
15-16	436	32
Mean age in years	13.46	
(SD)	(1.66)	
Smoking status		
Never-smoker	1025	75
Tried smoking	211	15
Current smoker	134	10
Occasional smoker	*18*	*1*
Regular smoker	*116*	*9*
Never-smokers' susceptibility to smoke		
Non-susceptible	733	72
Susceptible	286	28

Table 7.2: Mean pack scores, pack ratings - total sample

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	2.09	1.19	0.03
Silk Cut Superslims ('novelty' pack)	2.33	1.33	0.04
Marlboro Bright Leaf ('novelty' pack)	2.25	1.31	0.04
Pall Mall ('novelty' pack)	2.49	1.41	0.04
Plain ('plain' pack)	1.55	1.00	0.03
Not eye-catching (1) / Eye-catching (5)			
Mayfair	2.20	1.33	0.04
Silk Cut Superslims	2.55	1.45	0.04
Marlboro Bright Leaf	2.44	1.42	0.04
Pall Mall	2.91	1.52	0.04
Plain	1.63	1.06	0.03
Not cool (1) / Cool (5)			
Mayfair	1.76	1.16	0.03
Silk Cut Superslims	2.07	1.34	0.04
Marlboro Bright Leaf	2.05	1.34	0.04
Pall Mall	2.04	1.31	0.04
Plain	1.42	0.88	0.02
Very harmful (1) / Not at all harmful (5)			
Mayfair	1.75	1.13	0.03
Silk Cut Superslims	1.85	1.20	0.03
Marlboro Bright Leaf	1.68	1.08	0.03
Pall Mall	1.81	1.18	0.03
Plain	1.59	1.04	0.03

Table 7.2 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Boring (1) / Fun (5)			
Mayfair	1.83	1.07	0.03
Silk Cut Superslims	2.15	1.30	0.04
Marlboro Bright Leaf	2.05	1.26	0.03
Pall Mall	2.20	1.32	0.04
Plain	1.42	0.81	0.02
Not worth looking at (1) / Worth looking at (5)			
Mayfair	1.75	1.15	0.03
Silk Cut Superslims	1.96	1.29	0.03
Marlboro Bright Leaf	1.89	1.25	0.03
Pall Mall	1.96	1.29	0.03
Plain	1.40	0.86	0.02
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	1.53	1.01	0.03
Silk Cut Superslims	1.60	1.07	0.03
Marlboro Bright Leaf	1.56	1.05	0.03
Pall Mall	1.63	1.09	0.03
Plain	1.33	0.80	0.02
Grown-up (1) / Childish (5)			
Mayfair	2.04	1.26	0.03
Silk Cut Superslims	2.24	1.34	0.04
Marlboro Bright Leaf	2.09	1.29	0.04
Pall Mall	2.44	1.41	0.04
Plain	2.00	1.30	0.04
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	1.82	1.18	0.03
Silk Cut Superslims	1.88	1.20	0.03
Marlboro Bright Leaf	1.85	1.22	0.03
Pall Mall	1.88	1.21	0.03
Plain	1.60	1.08	0.03
I dislike this pack (1) / I like this pack (5)			
Mayfair	2.02	1.27	0.03
Silk Cut Superslims	2.28	1.36	0.04
Marlboro Bright Leaf	2.17	1.35	0.04
Pall Mall	2.34	1.41	0.04
Plain	1.57	1.03	0.03
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	1.65	1.14	0.03
Silk Cut Slims	1.73	1.19	0.03
Marlboro Bright Leaf	1.73	1.22	0.03
Pall Mall	1.77	1.23	0.03
Plain	1.41	0.95	0.03

Table 7.3: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – total sample

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	2.09	2.32	<0.001	2.09	2.24	<0.001	2.09	2.49	<0.001
	1.19	*1.33*		*1.19*	*1.31*		*1.19*	*1.41*	
Not eye-catching (1) / Eye-catching (5)	2.20	2.55	<0.001	2.20	2.44	<0.001	2.20	2.90	<0.001
	1.33	*1.44*		*1.33*	*1.42*		*1.33*	*1.52*	
Not cool (1) / Cool (5)	1.76	2.06	<0.001	1.76	2.04	<0.001	1.76	2.04	<0.001
	1.16	*1.33*		*1.16*	*1.33*		*1.16*	*1.32*	
Very harmful (1) / Not at all harmful (5)	1.75	1.85	<0.001	1.75	1.68	<0.001	1.75	1.81	<0.001
	1.13	*1.20*		*1.13*	*1.08*		*1.12*	*1.18*	
Boring (1) / Fun (5)	1.83	2.15	<0.001	1.83	2.05	<0.001	1.83	2.20	<0.001
	1.07	*1.30*		*1.07*	*1.26*		*1.07*	*1.32*	
Not worth looking at (1) / Worth looking at (5)	1.75	1.95	<0.001	1.75	1.89	<0.001	1.75	1.96	<0.001
	1.15	*1.29*		*1.15*	*1.25*		*1.15*	*1.28*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.53	1.60	<0.001	1.53	1.56	0.129	1.53	1.62	<0.001
	1.00	*1.07*		*1.00*	*1.05*		*1.00*	*1.09*	
Grown-up (1) / Childish (5)	2.03	2.24	<0.001	2.03	2.09	0.041	2.03	2.43	<0.001
	1.26	*1.34*		*1.26*	*1.29*		*1.26*	*1.41*	
Puts me off (1) / Tempts me to smoke (5)	1.82	1.88	<0.001	1.82	1.85	0.200	1.82	1.88	0.001
	1.18	*1.20*		*1.18*	*1.22*		*1.18*	*1.21*	
I dislike this pack (1) / I like this pack (5)	2.02	2.28	<0.001	2.02	2.17	<0.001	2.02	2.34	<0.001
	1.27	*1.36*		*1.27*	*1.35*		*1.27*	*1.41*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.64	1.73	<0.001	1.64	1.73	<0.001	1.64	1.77	<0.001
	1.14	*1.19*		*1.14*	*1.22*		*1.14*	*1.23*	

*Wilcoxon signed rank test for significant differences

Table 7.4: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – total sample

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean _SD_	Mayfair Mean _SD_	P value*	Plain Mean _SD_	Silk Cut Mean _SD_	P value	Plain Mean _SD_	Marlboro Mean _SD_	P value	Plain Mean _SD_	Pall Mall Mean _SD_	P value
Unattractive (1) / Attractive (5)	1.55	2.09	<0.001	1.55	2.32	<0.001	1.54	2.24	<0.001	1.54	2.49	<0.001
	_1.00_	_1.19_		_1.00_	_1.33_		_0.99_	_1.31_		_0.99_	_1.41_	
Not eye-catching (1) / Eye-catching (5)	1.63	2.20	<0.001	1.63	2.55	<0.001	1.63	2.44	<0.001	1.63	2.90	<0.001
	_1.06_	_1.33_		_1.06_	_1.44_		_1.06_	_1.42_		_1.06_	_1.52_	
Not cool (1) / Cool (5)	1.42	1.76	<0.001	1.42	2.06	<0.001	1.42	2.04	<0.001	1.42	2.04	<0.001
	_0.88_	_1.16_		_0.88_	_1.33_		_0.88_	_1.33_		_0.88_	_1.32_	
Very harmful (1) / Not at all harmful (5)	1.59	1.75	<0.001	1.59	1.85	<0.001	1.59	1.68	<0.001	1.59	1.81	<0.001
	_1.04_	_1.12_		_1.04_	_1.20_		_1.04_	_1.08_		_1.04_	_1.18_	
Boring (1) / Fun (5)	1.42	1.83	<0.001	1.42	2.15	<0.001	1.42	2.05	<0.001	1.42	2.20	<0.001
	_0.81_	_1.07_		_0.81_	_1.30_		_0.81_	_1.26_		_0.81_	_1.32_	
Not worth looking at (1) / Worth looking at (5)	1.40	1.75	<0.001	1.40	1.95	<0.001	1.40	1.89	<0.001	1.40	1.95	<0.001
	_0.86_	_1.15_		_0.86_	_1.28_		_0.86_	_1.25_		_0.85_	_1.28_	
Not meant for someone like me (1) / Meant or someone like me (5)	1.33	1.53	<0.001	1.33	1.60	<0.001	1.33	1.56	<0.001	1.33	1.62	<0.001
	_0.80_	_1.00_		_0.80_	_1.07_		_0.80_	_1.05_		_0.80_	_1.09_	
Grown-up (1) / Childish (5)	2.00	2.03	0.149	2.00	2.24	<0.001	2.00	2.09	0.001	2.00	2.44	<0.001
	_1.30_	_1.26_		_1.30_	_1.34_		_1.30_	_1.29_		_1.30_	_1.41_	
Puts me off (1) / Tempts me to smoke (5)	1.60	1.82	<0.001	1.60	1.88	<0.001	1.60	1.85	<0.001	1.60	1.88	<0.001
	_1.09_	_1.18_		_1.08_	_1.20_		_1.08_	_1.22_		_1.08_	_1.21_	
I dislike this pack (1) / I like this pack (5)	1.57	2.02	<0.001	1.57	2.28	<0.001	1.57	2.17	<0.001	1.57	2.34	<0.001
	_1.03_	_1.27_		_1.03_	_1.36_		_1.03_	_1.35_		_1.03_	_1.41_	
I would not like to have this pack (1) / I would like to have this pack (5)	1.41	1.64	<0.001	1.41	1.73	<0.001	1.41	1.73	<0.001	1.41	1.77	<0.001
	_0.95_	_1.14_		_0.95_	_1.19_		_0.95_	_1.21_		_0.95_	_1.23_	

*Wilcoxon signed rank test for significant differences

Table 7.5: Mean pack scores, pack ratings items - never smokers

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	1.92	1.11	0.03
Silk Cut Superslims ('novelty' pack)	2.14	1.26	0.04
Marlboro Bright Leaf ('novelty' pack)	2.06	1.23	0.04
Pall Mall ('novelty' pack)	2.32	1.38	0.04
Plain ('plain' pack)	1.48	0.94	0.03
Not eye-catching (1) / Eye-catching (5)			
Mayfair	2.04	1.27	0.04
Silk Cut Superslims	2.38	1.41	0.04
Marlboro Bright Leaf	2.23	1.35	0.04
Pall Mall	2.72	1.53	0.05
Plain	1.56	1.01	0.03
Not cool (1) / Cool (5)			
Mayfair	1.60	1.04	0.03
Silk Cut Superslims	1.85	1.22	0.04
Marlboro Bright Leaf	1.82	1.22	0.04
Pall Mall	1.83	1.22	0.04
Plain	1.34	0.80	0.03
Very harmful (1) / Not at all harmful (5)			
Mayfair	1.62	1.04	0.03
Silk Cut Superslims	1.73	1.14	0.04
Marlboro Bright Leaf	1.58	1.02	0.03
Pall Mall	1.69	1.11	0.03
Plain	1.50	0.98	0.03
Boring (1) / Fun (5)			
Mayfair	1.69	0.98	0.03
Silk Cut Superslims	1.97	1.21	0.04
Marlboro Bright Leaf	1.85	1.14	0.04
Pall Mall	2.02	1.26	0.04
Plain	1.34	0.74	0.02
Not worth looking at (1) / Worth looking at (5)			
Mayfair	1.55	0.98	0.03
Silk Cut Superslims	1.74	1.15	0.04
Marlboro Bright Leaf	1.67	1.09	0.03
Pall Mall	1.74	1.13	0.04
Plain	1.31	0.76	0.02
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	1.34	0.77	0.02
Silk Cut Superslims	1.42	0.89	0.03
Marlboro Bright Leaf	1.34	0.82	0.03
Pall Mall	1.44	0.92	0.03
Plain	1.24	0.68	0.02
Grown-up (1) / Childish (5)			
Mayfair	2.06	1.31	0.04
Silk Cut Superslims	2.23	1.37	0.04
Marlboro Bright Leaf	2.08	1.31	0.04
Pall Mall	2.39	1.40	0.04
Plain	1.99	1.31	0.04

Table 7.5 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	1.62	1.06	0.03
Silk Cut Superslims	1.67	1.08	0.03
Marlboro Bright Leaf	1.63	1.08	0.03
Pall Mall	1.67	1.10	0.03
Plain	1.48	1.01	0.03
I dislike this pack (1) / I like this pack (5)			
Mayfair	1.82	1.14	0.04
Silk Cut Superslims	2.10	1.29	0.04
Marlboro Bright Leaf	1.97	1.24	0.04
Pall Mall	2.18	1.36	0.04
Plain	1.51	0.98	0.03
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	1.43	0.92	0.03
Silk Cut Slims	1.51	1.00	0.03
Marlboro Bright Leaf	1.50	1.01	0.03
Pall Mall	1.54	1.05	0.03
Plain	1.33	0.87	0.03

Table 7.6: Mean pack scores, pack ratings items - tried smoking

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	2.40	1.19	0.08
Silk Cut Superslims ('novelty' pack)	2.66	1.32	0.09
Marlboro Bright Leaf ('novelty' pack)	2.57	1.30	0.09
Pall Mall ('novelty' pack)	2.77	1.30	0.09
Plain ('plain' pack)	1.63	1.02	0.07
Not eye-catching (1) / Eye-catching (5)			
Mayfair	2.44	1.32	0.09
Silk Cut Superslims	2.79	1.37	0.09
Marlboro Bright Leaf	2.79	1.38	0.10
Pall Mall	3.20	1.42	0.10
Plain	1.75	1.07	0.07
Not cool (1) / Cool (5)			
Mayfair	2.04	1.23	0.08
Silk Cut Superslims	2.41	1.39	0.10
Marlboro Bright Leaf	2.40	1.40	0.10
Pall Mall	2.39	1.32	0.09
Plain	1.56	0.99	0.07
Very harmful (1) / Not at all harmful (5)			
Mayfair	1.93	1.20	0.08
Silk Cut Superslims	1.97	1.19	0.08
Marlboro Bright Leaf	1.80	1.10	0.08
Pall Mall	1.98	1.24	0.09
Plain	1.65	1.01	0.07
Boring (1) / Fun (5)			
Mayfair	2.00	1.06	0.07
Silk Cut Superslims	2.47	1.38	0.10
Marlboro Bright Leaf	2.40	1.34	0.09
Pall Mall	2.52	1.32	0.09
Plain	1.52	0.87	0.06
Not worth looking at (1) / Worth looking at (5)			
Mayfair	1.98	1.21	0.08
Silk Cut Superslims	2.32	1.41	0.10
Marlboro Bright Leaf	2.15	1.32	0.09
Pall Mall	2.23	1.41	0.10
Plain	1.47	0.91	0.06
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	1.66	1.05	0.07
Silk Cut Superslims	1.91	1.26	0.09
Marlboro Bright Leaf	1.81	1.16	0.08
Pall Mall	1.86	1.27	0.09
Plain	1.40	0.84	0.06
Grown-up (1) / Childish (5)			
Mayfair	2.02	1.11	0.08
Silk Cut Superslims	2.27	1.24	0.09
Marlboro Bright Leaf	2.17	1.28	0.09
Pall Mall	2.63	1.45	0.10
Plain	2.04	1.26	0.09

Table 7.6 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	1.95	1.10	0.08
Silk Cut Superslims	2.08	1.20	0.08
Marlboro Bright Leaf	2.07	1.20	0.08
Pall Mall	2.14	1.24	0.09
Plain	1.61	0.93	0.06
I dislike this pack (1) / I like this pack (5)			
Mayfair	2.22	1.25	0.09
Silk Cut Superslims	2.56	1.39	0.10
Marlboro Bright Leaf	2.50	1.42	0.10
Pall Mall	2.67	1.44	0.10
Plain	1.59	1.00	0.07
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	1.77	1.15	0.08
Silk Cut Slims	1.94	1.24	0.09
Marlboro Bright Leaf	1.99	1.32	0.09
Pall Mall	2.02	1.32	0.09
Plain	1.42	0.92	0.06

Table 7.7: Mean pack scores, pack ratings items - current smokers

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	2.95	1.31	0.11
Silk Cut Superslims ('novelty' pack)	3.25	1.40	0.12
Marlboro Bright Leaf ('novelty' pack)	3.19	1.35	0.12
Pall Mall ('novelty' pack)	3.41	1.39	0.12
Plain ('plain' pack)	1.95	1.25	0.11
Not eye-catching (1) / Eye-catching (5)			
Mayfair	3.04	1.43	0.12
Silk Cut Superslims	3.49	1.41	0.12
Marlboro Bright Leaf	3.49	1.42	0.12
Pall Mall	3.80	1.24	0.11
Plain	1.99	1.28	0.11
Not cool (1) / Cool (5)			
Mayfair	2.58	1.42	0.12
Silk Cut Superslims	3.18	1.42	0.12
Marlboro Bright Leaf	3.17	1.43	0.12
Pall Mall	3.09	1.38	0.12
Plain	1.80	1.12	0.10
Very harmful (1) / Not at all harmful (5)			
Mayfair	2.46	1.32	0.11
Silk Cut Superslims	2.61	1.41	0.12
Marlboro Bright Leaf	2.30	1.29	0.11
Pall Mall	2.51	1.35	0.12
Plain	2.20	1.27	0.11
Boring (1) / Fun (5)			
Mayfair	2.64	1.34	0.12
Silk Cut Superslims	3.05	1.39	0.12
Marlboro Bright Leaf	3.03	1.40	0.12
Pall Mall	3.09	1.34	0.12
Plain	1.89	1.04	0.09
Not worth looking at (1) / Worth looking at (5)			
Mayfair	2.92	1.48	0.13
Silk Cut Superslims	3.07	1.40	0.12
Marlboro Bright Leaf	3.15	1.42	0.12
Pall Mall	3.16	1.41	0.12
Plain	1.96	1.19	0.10
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	2.79	1.50	0.13
Silk Cut Superslims	2.56	1.39	0.12
Marlboro Bright Leaf	2.82	1.42	0.12
Pall Mall	2.67	1.37	0.12
Plain	1.93	1.20	0.10
Grown-up (1) / Childish (5)			
Mayfair	1.87	1.08	0.09
Silk Cut Superslims	2.26	1.25	0.11
Marlboro Bright Leaf	2.08	1.15	0.10
Pall Mall	2.46	1.40	0.12
Plain	2.05	1.24	0.11

Table 7.7 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	3.18	1.27	0.11
Silk Cut Superslims	3.19	1.22	0.11
Marlboro Bright Leaf	3.20	1.35	0.12
Pall Mall	3.04	1.27	0.11
Plain	2.53	1.41	0.12
I dislike this pack (1) / I like this pack (5)			
Mayfair	3.26	1.47	0.13
Silk Cut Superslims	3.18	1.43	0.12
Marlboro Bright Leaf	3.16	1.48	0.13
Pall Mall	3.09	1.42	0.12
Plain	1.99	1.34	0.12
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	3.11	1.52	0.13
Silk Cut Slims	3.09	1.44	0.13
Marlboro Bright Leaf	3.12	1.47	0.13
Pall Mall	3.10	1.43	0.12
Plain	2.01	1.35	0.12

Table 7.8: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – never smokers

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	1.92	2.13	<0.001	1.92	2.06	<0.001	1.92	2.32	<0.001
	1.11	*1.56*		*1.11*	*1.23*		*1.11*	*1.38*	
Not eye-catching (1) / Eye-catching (5)	2.04	2.38	<0.001	2.04	2.23	<0.001	2.04	2.72	<0.001
	1.27	*1.41*		*1.27*	*1.35*		*1.27*	*1.53*	
Not cool (1) / Cool (5)	1.60	1.85	<0.001	1.60	1.82	<0.001	1.60	1.83	<0.001
	1.04	*1.22*		*1.04*	*1.22*		*1.04*	*1.22*	
Very harmful (1) / Not at all harmful (5)	1.62	1.72	<0.001	1.62	1.58	0.045	1.62	1.69	<0.001
	1.04	*1.14*		*1.04*	*1.02*		*1.04*	*1.11*	
Boring (1) / Fun (5)	1.69	1.97	<0.001	1.69	1.85	<0.001	1.69	2.02	<0.001
	0.98	*1.21*		*0.98*	*1.14*		*0.98*	*1.26*	
Not worth looking at (1) / Worth looking at (5)	1.55	1.74	<0.001	1.55	1.67	<0.001	1.54	1.74	<0.001
	0.98	*1.15*		*0.98*	*1.09*		*0.98*	*1.13*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.34	1.42	<0.001	1.34	1.34	0.658	1.34	1.44	<0.001
	0.77	*0.89*		*0.76*	*0.82*		*0.76*	*0.92*	
Grown-up (1) / Childish (5)	2.06	2.23	<0.001	2.06	2.08	0.596	2.06	2.39	<0.001
	1.31	*1.37*		*1.31*	*1.31*		*1.31*	*1.39*	
Puts me off (1) / Tempts me to smoke (5)	1.62	1.67	0.002	1.62	1.63	0.678	1.62	1.67	0.001
	1.06	*1.08*		*1.06*	*1.08*		*1.06*	*1.10*	
I dislike this pack (1) / I like this pack (5)	1.81	2.10	<0.001	1.81	1.97	<0.001	1.81	2.17	<0.001
	1.14	*1.29*		*1.14*	*1.24*		*1.14*	*1.36*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.43	1.51	<0.001	1.43	1.50	<0.001	1.43	1.54	<0.001
	0.92	*1.00*		*0.92*	*1.01*		*0.92*	*1.05*	

*Wilcoxon signed rank test for significant differences

Table 7.9: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – never smokers

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	1.48	1.91	<0.001	1.48	2.13	<0.001	1.48	2.05	<0.001	1.48	2.31	<0.001
	0.94	*1.11*		*0.94*	*1.25*		*0.94*	*1.23*		*0.94*	*1.38*	
Not eye-catching (1) / Eye-catching (5)	1.56	2.03	<0.001	1.56	2.37	<0.001	1.56	2.23	<0.001	1.56	2.72	<0.001
	1.01	*1.26*		*1.01*	*1.41*		*1.01*	*1.35*		*1.01*	*1.53*	
Not cool (1) / Cool (5)	1.34	1.60	<0.001	1.34	1.85	<0.001	1.34	1.82	<0.001	1.34	1.83	<0.001
	0.80	*1.04*		*0.80*	*1.22*		*0.80*	*1.22*		*0.80*	*1.22*	
Very harmful (1) / Not at all harmful (5)	1.50	1.62	<0.001	1.50	1.73	<0.001	1.50	1.58	<0.001	1.50	1.69	<0.001
	0.98	*1.04*		*0.98*	*1.14*		*0.98*	*1.02*		*0.98*	*1.11*	
Boring (1) / Fun (5)	1.34	1.68	<0.001	1.34	1.97	<0.001	1.33	1.85	<0.001	1.34	2.02	<0.001
	0.74	*0.98*		*0.74*	*1.21*		*0.74*	*1.14*		*0.74*	*1.26*	
Not worth looking at (1) / Worth looking at (5)	1.31	1.55	<0.001	1.31	1.74	<0.001	1.31	1.67	<0.001	1.31	1.74	<0.001
	0.76	*0.98*		*0.76*	*1.15*		*0.76*	*1.09*		*0.76*	*1.13*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.24	1.34	<0.001	1.24	1.41	<0.001	1.24	1.34	<0.001	1.24	1.44	<0.001
	0.68	*0.76*		*0.68*	*0.89*		*0.68*	*0.82*		*0.68*	*0.92*	
Grown-up (1) / Childish (5)	1.99	2.06	0.006	1.98	2.23	<0.001	1.98	2.08	0.003	1.99	2.39	<0.001
	1.32	*1.31*		*1.31*	*1.37*		*1.32*	*1.31*		*1.32*	*1.40*	
Puts me off (1) / Tempts me to smoke (5)	1.48	1.62	<0.001	1.48	1.67	<0.001	1.48	1.63	<0.001	1.48	1.67	<0.001
	1.01	*1.06*		*1.01*	*1.08*		*1.01*	*1.08*		*1.01*	*1.10*	
I dislike this pack (1) / I like this pack (5)	1.51	1.82	<0.001	1.51	2.10	<0.001	1.51	1.97	<0.001	1.51	2.18	<0.001
	0.98	*1.14*		*0.98*	*1.29*		*0.98*	*1.24*		*0.98*	*1.36*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.33	1.43	<0.001	1.33	1.51	<0.001	1.32	1.50	<0.001	1.33	1.54	<0.001
	0.87	*0.92*		*0.87*	*1.00*		*0.87*	*1.01*		*0.87*	*1.05*	

*Wilcoxon signed rank test for significant differences

Table 7.10: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – tried smoking

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	2.40	2.66	0.005	2.40	2.57	0.069	2.40	2.77	<0.001
	1.19	*1.32*		*1.19*	*1.30*		*1.19*	*1.30*	
Not eye-catching (1) / Eye-catching (5)	2.44	2.78	0.001	2.44	2.78	0.001	2.44	3.20	<0.001
	1.32	*1.36*		*1.32*	*1.37*		*1.32*	*1.42*	
Not cool (1) / Cool (5)	2.04	2.40	<0.001	2.04	2.39	<0.001	2.03	2.39	<0.001
	1.23	*1.39*		*1.23*	*1.39*		*1.23*	*1.32*	
Very harmful (1) / Not at all harmful (5)	1.93	1.97	0.405	1.93	1.80	0.009	1.93	1.98	0.363
	1.20	*1.19*		*1.20*	*1.10*		*1.20*	*1.24*	
Boring (1) / Fun (5)	2.00	2.47	<0.001	2.00	2.40	<0.001	2.00	2.52	<0.001
	1.06	*1.38*		*1.06*	*1.34*		*1.06*	*1.32*	
Not worth looking at (1) / Worth looking at (5)	1.98	2.32	<0.001	1.98	2.15	0.041	1.98	2.23	0.003
	1.21	*1.41*		*1.21*	*1.32*		*1.21*	*1.41*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.66	1.91	<0.001	1.66	1.81	0.028	1.66	1.86	0.002
	1.05	*1.26*		*1.05*	*1.16*		*1.05*	*1.27*	
Grown-up (1) / Childish (5)	2.02	2.27	0.001	2.02	2.17	0.055	2.01	2.63	<0.001
	1.11	*1.24*		*1.11*	*1.28*		*1.11*	*1.45*	
Puts me off (1) / Tempts me to smoke (5)	1.95	2.08	0.013	1.95	2.07	0.037	1.95	2.14	<0.001
	1.10	*1.20*		*1.10*	*1.20*		*1.10*	*1.24*	
I dislike this pack (1) / I like this pack (5)	2.22	2.55	<0.001	2.22	2.51	0.003	2.22	2.67	<0.001
	1.25	*1.39*		*1.25*	*1.42*		*1.25*	*1.44*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.77	1.94	0.002	1.77	1.99	0.002	1.77	2.02	<0.001
	1.15	*1.24*		*1.15*	*1.32*		*1.15*	*1.32*	

*Wilcoxon signed rank test for significant differences

Table 7.11: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – tried smoking

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	1.63	2.39	<0.001	1.63	2.66	<0.001	1.63	2.56	<0.001	1.63	2.76	<0.001
	1.02	*1.20*		*1.02*	*1.32*		*1.02*	*1.31*		*1.02*	*1.30*	
Not eye-catching (1) / Eye-catching (5)	1.75	2.44	<0.001	1.74	2.78	<0.001	1.74	2.78	<0.001	1.74	3.20	<0.001
	1.07	*1.32*		*1.07*	*1.36*		*1.07*	*1.37*		*1.07*	*1.42*	
Not cool (1) / Cool (5)	1.56	2.04	<0.001	1.56	2.40	<0.001	1.56	2.40	<0.001	1.56	2.39	<0.001
	0.99	*1.23*		*0.99*	*1.39*		*0.99*	*1.39*		*0.99*	*1.32*	
Very harmful (1) / Not at all harmful (5)	1.65	1.93	<0.001	1.65	1.97	<0.001	1.65	1.80	0.002	1.65	1.98	<0.001
	1.02	*1.20*		*1.02*	*1.19*		*1.01*	*1.10*		*1.02*	*1.24*	
Boring (1) / Fun (5)	1.52	2.00	<0.001	1.52	2.47	<0.001	1.52	2.40	<0.001	1.52	2.52	<0.001
	0.87	*1.06*		*0.87*	*1.38*		*0.87*	*1.34*		*0.87*	*1.32*	
Not worth looking at (1) / Worth looking at (5)	1.47	1.98	<0.001	1.47	2.30	<0.001	1.47	2.16	<0.001	1.47	2.23	<0.001
	0.91	*1.21*		*0.91*	*1.40*		*0.91*	*1.32*		*0.91*	*1.41*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.40	1.67	<0.001	1.40	1.91	<0.001	1.40	1.81	<0.001	1.40	1.86	<0.001
	0.84	*1.05*		*0.84*	*1.26*		*0.84*	*1.16*		*0.84*	*1.27*	
Grown-up (1) / Childish (5)	2.04	2.01	0.730	2.04	2.26	0.007	2.04	2.17	0.085	2.04	2.63	<0.001
	1.26	*1.11*		*1.26*	*1.24*		*1.26*	*1.28*		*1.26*	*1.45*	
Puts me off (1) / Tempts me to smoke (5)	1.61	1.95	<0.001	1.61	2.08	<0.001	1.61	2.07	<0.001	1.61	2.14	<0.001
	0.93	*1.10*		*0.93*	*1.20*		*0.93*	*1.20*		*0.93*	*1.24*	
I dislike this pack (1) / I like this pack (5)	1.58	2.21	<0.001	1.59	2.56	<0.001	1.59	2.50	<0.001	1.59	2.67	<0.001
	1.00	*1.25*		*1.01*	*1.39*		*1.00*	*1.42*		*1.01*	*1.44*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.42	1.77	<0.001	1.42	1.94	<0.001	1.42	1.99	<0.001	1.42	2.02	<0.001
	0.92	*1.15*		*0.92*	*1.24*		*0.92*	*1.32*		*0.92*	*1.32*	

*Wilcoxon signed rank test for significant differences

Table 7.12: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – current smokers

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	2.95	3.25	0.031	2.94	3.19	0.080	2.94	3.41	<0.001
	1.31	*1.40*		*1.31*	*1.35*		*1.31*	*1.39*	
Not eye-catching (1) / Eye-catching (5)	3.04	3.49	0.002	3.04	3.49	0.004	3.04	3.80	<0.001
	1.43	*1.41*		*1.43*	*1.42*		*1.43*	*1.24*	
Not cool (1) / Cool (5)	2.58	3.18	<0.001	2.58	3.17	<0.001	2.58	3.09	<0.001
	1.42	*1.42*		*1.42*	*1.43*		*1.42*	*1.38*	
Very harmful (1) / Not at all harmful (5)	2.46	2.61	0.013	2.47	2.30	0.005	2.46	2.51	0.411
	1.32	*1.41*		*1.32*	*1.29*		*1.32*	*1.35*	
Boring (1) / Fun (5)	2.64	3.05	0.001	2.64	3.03	0.006	2.64	3.09	<0.001
	1.34	*1.39*		*1.34*	*1.40*		*1.34*	*1.34*	
Not worth looking at (1) / Worth looking at (5)	2.92	3.05	0.291	2.91	3.15	0.063	2.92	3.15	0.053
	1.48	*1.39*		*1.47*	*1.42*		*1.48*	*1.41*	
Not meant for someone like me (1) / Meant or someone like me (5)	2.79	2.56	0.076	2.79	2.82	0.808	2.79	2.67	0.309
	1.50	*1.40*		*1.50*	*1.42*		*1.50*	*1.38*	
Grown-up (1) / Childish (5)	1.87	2.26	<0.001	1.87	2.06	0.020	1.87	2.46	<0.001
	1.08	*1.25*		*1.08*	*1.15*		*1.08*	*1.40*	
Puts me off (1) / Tempts me to smoke (5)	3.18	3.19	0.925	3.18	3.19	0.992	3.18	3.04	0.147
	1.27	*1.22*		*1.27*	*1.35*		*1.27*	*1.27*	
I dislike this pack (1) / I like this pack (5)	3.26	3.18	0.602	3.26	3.16	0.479	3.26	3.09	0.272
	1.47	*1.43*		*1.47*	*1.48*		*1.47*	*1.42*	
I would not like to have this pack (1) / I would like to have this pack (5)	3.10	3.09	0.889	3.11	3.12	0.934	3.10	3.10	0.984
	1.52	*1.44*		*1.52*	*1.47*		*1.52*	*1.43*	

*Wilcoxon signed rank test for significant differences

Table 7.13: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – current smokers

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	1.95	2.95	<0.001	1.95	3.27	<0.001	1.92	3.20	<0.001	1.92	3.38	<0.001
	1.25	*1.32*		*1.25*	*1.39*		*1.22*	*1.35*		*1.22*	*1.39*	
Not eye-catching (1) / Eye-catching (5)	1.99	3.04	<0.001	1.99	3.49	<0.001	1.99	3.49	<0.001	1.99	3.80	<0.001
	1.28	*1.43*		*1.28*	*1.41*		*1.28*	*1.42*		*1.28*	*1.24*	
Not cool (1) / Cool (5)	1.80	2.58	<0.001	1.80	3.18	<0.001	1.80	3.17	<0.001	1.80	3.09	<0.001
	1.12	*1.42*		*1.12*	*1.42*		*1.12*	*1.43*		*1.12*	*1.38*	
Very harmful (1) / Not at all harmful (5)	2.20	2.46	0.002	2.20	2.61	<0.001	2.20	2.30	0.307	2.20	2.51	<0.001
	1.27	*1.32*		*1.27*	*1.41*		*1.27*	*1.29*		*1.27*	*1.35*	
Boring (1) / Fun (5)	1.89	2.64	<0.001	1.89	3.05	<0.001	1.89	3.03	<0.001	1.89	3.09	<0.001
	1.04	*1.34*		*1.04*	*1.39*		*1.04*	*1.40*		*1.04*	*1.34*	
Not worth looking at (1) / Worth looking at (5)	1.96	2.91	<0.001	1.96	3.04	<0.001	1.96	3.15	<0.001	1.96	3.14	<0.001
	1.19	*1.47*		*1.19*	*1.39*		*1.19*	*1.42*		*1.19*	*1.40*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.92	2.79	<0.001	1.93	2.56	<0.001	1.93	2.82	<0.001	1.93	2.67	<0.001
	1.20	*1.50*		*1.20*	*1.39*		*1.20*	*1.42*		*1.20*	*1.37*	
Grown-up (1) / Childish (5)	2.05	1.87	0.027	2.05	2.26	0.080	2.05	2.08	0.799	2.05	2.46	0.001
	1.24	*1.08*		*1.24*	*1.25*		*1.24*	*1.15*		*1.24*	*1.40*	
Puts me off (1) / Tempts me to smoke (5)	2.53	3.18	<0.001	2.53	3.19	<0.001	2.53	3.19	<0.001	2.53	3.04	<0.001
	1.41	*1.27*		*1.41*	*1.22*		*1.41*	*1.35*		*1.41*	*1.27*	
I dislike this pack (1) / I like this pack (5)	1.99	3.26	<0.001	1.99	3.18	<0.001	1.99	3.16	<0.001	1.99	3.09	<0.001
	1.34	*1.47*		*1.34*	*1.43*		*1.34*	*1.48*		*1.34*	*1.42*	
I would not like to have this pack (1) / I would like to have this pack (5)	2.01	3.10	<0.001	2.01	3.09	<0.001	2.01	3.11	<0.001	2.01	3.10	<0.001
	1.35	*1.52*		*1.35*	*1.44*		*1.35*	*1.47*		*1.35*	*1.43*	

*Wilcoxon signed rank test for significant differences

Table 7.14: Mean pack scores, pack ratings items - males

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	2.17	1.22	0.05
Silk Cut Superslims ('novelty' pack)	2.33	1.32	0.05
Marlboro Bright Leaf ('novelty' pack)	2.38	1.36	0.05
Pall Mall ('novelty' pack)	2.44	1.35	0.05
Plain ('plain' pack)	1.69	1.10	0.04
Not eye-catching (1) / Eye-catching (5)			
Mayfair	2.28	1.34	0.05
Silk Cut Superslims	2.63	1.47	0.06
Marlboro Bright Leaf	2.60	1.46	0.06
Pall Mall	2.84	1.47	0.06
Plain	1.76	1.14	0.04
Not cool (1) / Cool (5)			
Mayfair	1.80	1.15	0.04
Silk Cut Superslims	2.07	1.31	0.05
Marlboro Bright Leaf	2.12	1.36	0.05
Pall Mall	1.98	1.26	0.05
Plain	1.53	0.97	0.04
Very harmful (1) / Not at all harmful (5)			
Mayfair	1.77	1.14	0.04
Silk Cut Superslims	1.89	1.23	0.05
Marlboro Bright Leaf	1.73	1.11	0.04
Pall Mall	1.82	1.18	0.05
Plain	1.64	1.08	0.04
Boring (1) / Fun (5)			
Mayfair	1.91	1.10	0.04
Silk Cut Superslims	2.20	1.30	0.05
Marlboro Bright Leaf	2.12	1.28	0.05
Pall Mall	2.13	1.26	0.05
Plain	1.51	0.88	0.03
Not worth looking at (1) / Worth looking at (5)			
Mayfair	1.81	1.18	0.05
Silk Cut Superslims	1.97	1.30	0.05
Marlboro Bright Leaf	1.98	1.29	0.05
Pall Mall	1.94	1.25	0.05
Plain	1.49	0.94	0.04
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	1.58	1.06	0.04
Silk Cut Superslims	1.57	1.03	0.04
Marlboro Bright Leaf	1.60	1.10	0.04
Pall Mall	1.54	0.98	0.04
Plain	1.38	0.84	0.03
Grown-up (1) / Childish (5)			
Mayfair	2.05	1.25	0.05
Silk Cut Superslims	2.19	1.31	0.05
Marlboro Bright Leaf	2.12	1.28	0.05
Pall Mall	2.37	1.38	0.05
Plain	1.97	1.27	0.05

Table 7.14 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	1.90	1.21	0.05
Silk Cut Superslims	1.96	1.23	0.05
Marlboro Bright Leaf	1.93	1.25	0.05
Pall Mall	1.91	1.22	0.05
Plain	1.72	1.17	0.04
I dislike this pack (1) / I like this pack (5)			
Mayfair	2.13	1.32	0.05
Silk Cut Superslims	2.31	1.38	0.05
Marlboro Bright Leaf	2.28	1.37	0.05
Pall Mall	2.27	1.36	0.05
Plain	1.72	1.13	0.04
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	1.72	1.15	0.04
Silk Cut Slims	1.78	1.19	0.05
Marlboro Bright Leaf	1.83	1.24	0.05
Pall Mall	1.74	1.16	0.04
Plain	1.51	1.02	0.04

Table 7.15: Mean pack scores, pack ratings items - females

Base: All respondents	Mean	Std Deviation	Std Error
Unattractive (1) / Attractive (5)			
Mayfair ('regular' pack)	2.02	1.16	0.04
Silk Cut Superslims ('novelty' pack)	2.33	1.35	0.05
Marlboro Bright Leaf ('novelty' pack)	2.11	1.24	0.05
Pall Mall ('novelty' pack)	2.54	1.47	0.06
Plain ('plain' pack)	1.41	0.86	0.03
Not eye-catching (1) / Eye-catching (5)			
Mayfair	2.12	1.31	0.05
Silk Cut Superslims	2.48	1.42	0.05
Marlboro Bright Leaf	2.28	1.36	0.05
Pall Mall	2.97	1.57	0.06
Plain	1.50	0.95	0.04
Not cool (1) / Cool (5)			
Mayfair	1.73	1.16	0.04
Silk Cut Superslims	2.06	1.36	0.05
Marlboro Bright Leaf	1.97	1.31	0.05
Pall Mall	2.10	1.36	0.05
Plain	1.31	0.76	0.03
Very harmful (1) / Not at all harmful (5)			
Mayfair	1.74	1.11	0.04
Silk Cut Superslims	1.81	1.17	0.05
Marlboro Bright Leaf	1.64	1.05	0.04
Pall Mall	1.80	1.18	0.05
Plain	1.54	0.99	0.04
Boring (1) / Fun (5)			
Mayfair	1.76	1.04	0.04
Silk Cut Superslims	2.11	1.30	0.05
Marlboro Bright Leaf	1.99	1.24	0.05
Pall Mall	2.27	1.38	0.05
Plain	1.33	0.72	0.03
Not worth looking at (1) / Worth looking at (5)			
Mayfair	1.69	1.13	0.04
Silk Cut Superslims	1.95	1.28	0.05
Marlboro Bright Leaf	1.80	1.20	0.05
Pall Mall	1.98	1.33	0.05
Plain	1.31	0.76	0.03
Not meant for someone like me (1) / Meant for someone like me (5)			
Mayfair	1.48	0.95	0.04
Silk Cut Superslims	1.63	1.12	0.04
Marlboro Bright Leaf	1.51	1.00	0.04
Pall Mall	1.71	1.19	0.05
Plain	1.28	0.75	0.03
Grown-up (1) / Childish (5)			
Mayfair	2.02	1.27	0.05
Silk Cut Superslims	2.29	1.36	0.05
Marlboro Bright Leaf	2.06	1.30	0.05
Pall Mall	2.50	1.43	0.06
Plain	2.03	1.33	0.05

Table 7.15 Continued

Base: All respondents	Mean	Std Deviation	Std Error
Puts me off (1) / Tempts me to smoke (5)			
Mayfair	1.74	1.14	0.04
Silk Cut Superslims	1.80	1.16	0.04
Marlboro Bright Leaf	1.77	1.19	0.05
Pall Mall	1.85	1.20	0.05
Plain	1.49	0.98	0.04
I dislike this pack (1) / I like this pack (5)			
Mayfair	1.91	1.21	0.05
Silk Cut Superslims	2.24	1.35	0.05
Marlboro Bright Leaf	2.07	1.32	0.05
Pall Mall	2.41	1.46	0.06
Plain	1.43	0.90	0.03
I would not like to have this pack (1) / I would like to have this pack (5)			
Mayfair	1.58	1.13	0.04
Silk Cut Slims	1.68	1.19	0.05
Marlboro Bright Leaf	1.63	1.18	0.05
Pall Mall	1.80	1.30	0.05
Plain	1.30	0.87	0.03

Table 7.16: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – males

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	2.17	2.32	<0.001	2.17	2.38	<0.001	2.17	2.44	<0.001
	1.22	*1.32*		*1.22*	*1.36*		*1.22*	*1.35*	
Not eye-catching (1) / Eye-catching (5)	2.28	2.63	<0.001	2.28	2.60	<0.001	2.28	2.84	<0.001
	1.34	*1.46*		*1.34*	*1.46*		*1.34*	*1.47*	
Not cool (1) / Cool (5)	1.80	2.07	<0.001	1.80	2.12	<0.001	1.80	1.98	<0.001
	1.16	*1.31*		*1.15*	*1.36*		*1.15*	*1.26*	
Very harmful (1) / Not at all harmful (5)	1.77	1.89	<0.001	1.77	1.73	0.126	1.77	1.82	0.019
	1.14	*1.23*		*1.14*	*1.11*		*1.14*	*1.18*	
Boring (1) / Fun (5)	1.91	2.20	<0.001	1.91	2.12	<0.001	1.90	2.13	<0.001
	1.11	*1.30*		*1.11*	*1.28*		*1.10*	*1.26*	
Not worth looking at (1) / Worth looking at (5)	1.81	1.97	<0.001	1.81	1.98	<0.001	1.81	1.94	<0.001
	1.18	*1.30*		*1.18*	*1.29*		*1.18*	*1.25*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.58	1.57	0.923	1.57	1.60	0.263	1.57	1.55	0.254
	1.05	*1.03*		*1.05*	*1.10*		*1.05*	*0.98*	
Grown-up (1) / Childish (5)	2.05	2.19	<0.001	2.05	2.12	0.098	2.05	2.37	<0.001
	1.25	*1.31*		*1.25*	*1.28*		*1.25*	*1.38*	
Puts me off (1) / Tempts me to smoke (5)	1.90	1.96	0.023	1.90	1.93	0.377	1.90	1.91	0.633
	1.21	*1.23*		*1.21*	*1.25*		*1.21*	*1.22*	
I dislike this pack (1) / I like this pack (5)	2.13	2.32	<0.001	2.12	2.28	0.001	2.13	2.27	0.005
	1.32	*1.38*		*1.32*	*1.37*		*1.32*	*1.36*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.71	1.78	0.029	1.71	1.83	<0.001	1.71	1.74	0.204
	1.15	*1.19*		*1.15*	*1.24*		*1.15*	*1.16*	

*Wilcoxon signed rank test for significant differences

Table 7.17: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – males

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	1.69	2.17	<0.001	1.69	2.32	<0.001	1.68	2.38	<0.001	1.68	2.44	<0.001
	1.10	*1.22*		*1.10*	*1.32*		*1.09*	*1.36*		*1.10*	*1.35*	
Not eye-catching (1) / Eye-catching (5)	1.76	2.28	<0.001	1.76	2.62	<0.001	1.76	2.59	<0.001	1.76	2.83	<0.001
	1.14	*1.34*		*1.14*	*1.46*		*1.14*	*1.45*		*1.14*	*1.47*	
Not cool (1) / Cool (5)	1.53	1.80	<0.001	1.53	2.07	<0.001	1.53	2.12	<0.001	1.53	1.98	<0.001
	0.97	*1.16*		*0.97*	*1.31*		*0.97*	*1.36*		*0.97*	*1.26*	
Very harmful (1) / Not at all harmful (5)	1.64	1.77	<0.001	1.64	1.89	<0.001	1.64	1.73	0.001	1.64	1.82	<0.001
	1.08	*1.14*		*1.08*	*1.23*		*1.08*	*1.11*		*1.08*	*1.18*	
Boring (1) / Fun (5)	1.51	1.90	<0.001	1.51	2.19	<0.001	1.50	2.12	<0.001	1.51	2.13	<0.001
	0.88	*1.10*		*0.89*	*1.30*		*0.88*	*1.28*		*0.88*	*1.26*	
Not worth looking at (1) / Worth looking at (5)	1.49	1.81	<0.001	1.49	1.97	<0.001	1.49	1.98	<0.001	1.49	1.94	<0.001
	0.94	*1.18*		*0.94*	*1.30*		*0.94*	*1.29*		*0.94*	*1.25*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.38	1.57	<0.001	1.38	1.57	<0.001	1.38	1.60	<0.001	1.38	1.54	<0.001
	0.84	*1.05*		*0.84*	*1.03*		*0.84*	*1.10*		*0.84*	*0.98*	
Grown-up (1) / Childish (5)	1.97	2.05	0.053	1.96	2.19	<0.001	1.97	2.12	<0.001	1.97	2.37	<0.001
	1.27	*1.25*		*1.26*	*1.31*		*1.27*	*1.28*		*1.27*	*1.38*	
Puts me off (1) / Tempts me to smoke (5)	1.72	1.90	<0.001	1.72	1.96	<0.001	1.72	1.93	<0.001	1.72	1.91	<0.001
	1.17	*1.21*		*1.17*	*1.23*		*1.17*	*1.25*		*1.17*	*1.22*	
I dislike this pack (1) / I like this pack (5)	1.72	2.13	<0.001	1.72	2.31	<0.001	1.71	2.28	<0.001	1.72	2.27	<0.001
	1.14	*1.32*		*1.13*	*1.38*		*1.13*	*1.37*		*1.14*	*1.36*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.51	1.71	<0.001	1.51	1.78	<0.001	1.51	1.83	<0.001	1.51	1.74	<0.001
	1.02	*1.15*		*1.02*	*1.19*		*1.02*	*1.24*		*1.02*	*1.16*	

*Wilcoxon signed rank test for significant differences

Table 7.18: Paired mean pack ratings of 'regular' pack (Mayfair) versus 'novelty' packs – females

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Unattractive (1) / Attractive (5)	2.02	2.33	<0.001	2.02	2.11	0.043	2.02	2.54	<0.001
	1.15	*1.35*		*1.16*	*1.24*		*1.15*	*1.47*	
Not eye-catching (1) / Eye-catching (5)	2.12	2.48	<0.001	2.12	2.28	0.001	2.12	2.97	<0.001
	1.31	*1.42*		*1.31*	*1.36*		*1.31*	*1.57*	
Not cool (1) / Cool (5)	1.73	2.06	<0.001	1.73	1.97	<0.001	1.73	2.10	<0.001
	1.16	*1.36*		*1.16*	*1.31*		*1.16*	*1.37*	
Very harmful (1) / Not at all harmful (5)	1.74	1.81	0.001	1.74	1.63	<0.001	1.74	1.80	0.004
	1.11	*1.17*		*1.11*	*1.05*		*1.11*	*1.18*	
Boring (1) / Fun (5)	1.76	2.11	<0.001	1.76	1.99	<0.001	1.76	2.27	<0.001
	1.04	*1.30*		*1.04*	*1.24*		*1.04*	*1.38*	
Not worth looking at (1) / Worth looking at (5)	1.69	1.94	<0.001	1.68	1.80	0.004	1.68	1.97	<0.001
	1.13	*1.27*		*1.12*	*1.20*		*1.12*	*1.32*	
Not meant for someone like me (1) / Meant or someone like me (5)	1.48	1.63	<0.001	1.48	1.51	0.302	1.48	1.70	<0.001
	0.95	*1.12*		*0.95*	*1.00*		*0.95*	*1.19*	
Grown-up (1) / Childish (5)	2.02	2.29	<0.001	2.02	2.06	0.219	2.02	2.50	<0.001
	1.27	*1.36*		*1.27*	*1.30*		*1.27*	*1.43*	
Puts me off (1) / Tempts me to smoke (5)	1.74	1.80	0.008	1.74	1.77	0.338	1.74	1.85	<0.001
	1.14	*1.16*		*1.14*	*1.18*		*1.14*	*1.20*	
I dislike this pack (1) / I like this pack (5)	1.91	2.24	<0.001	1.92	2.07	0.001	1.91	2.40	<0.001
	1.21	*1.35*		*1.21*	*1.32*		*1.21*	*1.46*	
I would not like to have this pack (1) / I would like to have this pack (5)	1.58	1.68	0.001	1.57	1.63	0.063	1.57	1.80	<0.001
	1.13	*1.19*		*1.13*	*1.18*		*1.13*	*1.30*	

*Wilcoxon signed rank test for significant differences

Table 7.19: Paired mean pack ratings of 'plain' pack versus 'regular' and 'novelty' packs – females

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean SD	Mayfair Mean SD	P value*	Plain Mean SD	Silk Cut Mean SD	P value	Plain Mean SD	Marlboro Mean SD	P value	Plain Mean SD	Pall Mall Mean SD	P value
Unattractive (1) / Attractive (5)	1.41	2.01	<0.001	1.41	2.32	<0.001	1.41	2.10	<0.001	1.41	2.53	<0.001
	0.86	1.15		0.86	1.34		0.86	1.23		0.86	1.46	
Not eye-catching (1) / Eye-catching (5)	1.50	2.12	<0.001	1.50	2.48	<0.001	1.50	2.28	<0.001	1.50	2.97	<0.001
	0.95	1.31		0.95	1.42		0.95	1.36		0.95	1.57	
Not cool (1) / Cool (5)	1.31	1.73	<0.001	1.31	2.06	<0.001	1.31	1.97	<0.001	1.31	2.10	<0.001
	0.76	1.16		0.76	1.36		0.76	1.31		0.76	1.36	
Very harmful (1) / Not at all harmful (5)	1.54	1.74	<0.001	1.54	1.81	<0.001	1.54	1.64	<0.001	1.54	1.80	<0.001
	0.99	1.11		0.99	1.17		0.99	1.05		0.99	1.18	
Boring (1) / Fun (5)	1.33	1.76	<0.001	1.33	2.11	<0.001	1.33	1.99	<0.001	1.33	2.27	<0.001
	0.72	1.04		0.72	1.30		0.72	1.24		0.72	1.38	
Not worth looking at (1) / Worth looking at (5)	1.31	1.68	<0.001	1.31	1.93	<0.001	1.31	1.80	<0.001	1.30	1.97	<0.001
	0.76	1.12		0.76	1.26		0.76	1.20		0.75	1.32	
Not meant for someone like me (1) / Meant or someone like me (5)	1.28	1.48	<0.001	1.28	1.63	<0.001	1.28	1.51	<0.001	1.28	1.70	<0.001
	0.75	0.95		0.75	1.12		0.75	1.00		0.75	1.19	
Grown-up (1) / Childish (5)	2.03	2.02	0.935	2.03	2.29	<0.001	2.03	2.06	0.316	2.03	2.50	<0.001
	1.33	1.27		1.33	1.36		1.33	1.30		1.33	1.43	
Puts me off (1) / Tempts me to smoke (5)	1.49	1.74	<0.001	1.48	1.80	<0.001	1.49	1.77	<0.001	1.49	1.85	<0.001
	0.98	1.14		0.98	1.16		0.98	1.18		0.98	1.20	
I dislike this pack (1) / I like this pack (5)	1.43	1.91	<0.001	1.42	2.24	<0.001	1.43	2.07	<0.001	1.42	2.41	<0.001
	0.90	1.21		0.90	1.35		0.90	1.32		0.90	1.46	
I would not like to have this pack (1) / I would like to have this pack (5)	1.30	1.58	<0.001	1.30	1.68	<0.001	1.30	1.64	<0.001	1.30	1.80	<0.001
	0.87	1.13		0.87	1.19		0.87	1.18		0.87	1.30	

*Wilcoxon signed rank test for significant differences

Table 7.20: Mean pack scores, pack feelings items - total sample

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	2.47	1.48	0.04
Silk Cut Superslims ('novelty' pack)	2.47	1.47	0.04
Marlboro Bright Leaf ('novelty' pack)	2.47	1.47	0.04
Pall Mall ('novelty' pack)	2.43	1.46	0.04
Plain ('plain' pack)	2.14	1.40	0.04
Not proud (1) / proud (5)			
Mayfair	1.57	0.99	0.03
Silk Cut Superslims	1.60	1.02	0.03
Marlboro Bright Leaf	1.58	1.01	0.03
Pall Mall	1.60	1.04	0.03
Plain	1.41	0.87	0.02
Disgusting (1) / not disgusting (5)			
Mayfair	2.00	1.33	0.04
Silk Cut Superslims	2.05	1.35	0.04
Marlboro Bright Leaf	2.04	1.37	0.04
Pall Mall	2.04	1.35	0.04
Plain	1.78	1.25	0.03
Not good (1) / good (5)			
Mayfair	1.61	1.02	0.03
Silk Cut Superslims	1.66	1.06	0.03
Marlboro Bright Leaf	1.63	1.05	0.03
Pall Mall	1.64	1.05	0.03
Plain	1.41	0.82	0.02

Table 7.21: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – total sample

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.47	2.47	0.866	2.47	2.47	0.924	2.47	2.43	0.070
	1.48	*1.47*		*1.48*	*1.47*		*1.48*	*1.46*	
Not proud (1) / Proud (5)	1.57	1.60	0.094	1.57	1.60	0.648	1.57	1.60	0.077
	0.99	*1.02*		*0.99*	*1.01*		*0.99*	*1.04*	
Disgusting (1) / Not disgusting (5)	2.00	2.04	0.001	2.00	2.04	0.030	2.00	2.04	0.020
	1.33	*1.35*		*1.33*	*1.37*		*1.32*	*1.35*	
Not good (1) / Good (5)	1.61	1.66	0.002	1.61	1.63	0.578	1.61	1.64	0.143
	1.02	*1.06*		*1.02*	*1.05*		*1.02*	*1.05*	

*Wilcoxon signed rank test for significant differences

Table 7.22: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – total sample

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.14	2.47	<0.001	2.14	2.47	<0.001	2.14	2.43	<0.001	2.14	2.47	<0.001
	1.40	*1.47*		*1.40*	*1.47*		*1.40*	*1.46*		*1.40*	*1.48*	
Not proud (1) / Proud (5)	1.41	1.60	<0.001	1.41	1.58	<0.001	1.41	1.60	<0.001	1.41	1.57	<0.001
	0.87	*1.02*		*0.87*	*1.01*		*0.87*	*1.04*		*0.87*	*0.99*	
Disgusting (1) / Not disgusting (5)	1.78	2.05	<0.001	1.78	2.04	<0.001	1.78	2.04	<0.001	1.78	2.00	<0.001
	1.25	*1.35*		*1.25*	*1.37*		*1.26*	*1.35*		*1.26*	*1.33*	
Not good (1) / Good (5)	1.41	1.66	<0.001	1.40	1.63	<0.001	1.41	1.64	<0.001	1.41	1.61	<0.001
	0.82	*1.06*		*0.82*	*1.05*		*0.82*	*1.05*		*0.82*	*1.02*	

*Wilcoxon signed rank test for significant differences

Table 7.23: Mean pack scores, pack feelings items - never smokers

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	2.19	1.38	0.04
Silk Cut Superslims ('novelty' pack)	2.22	1.38	0.04
Marlboro Bright Leaf ('novelty' pack)	2.20	1.37	0.04
Pall Mall ('novelty' pack)	2.19	1.37	0.04
Plain ('plain' pack)	1.99	1.32	0.04
Not proud (1) / proud (5)			
Mayfair	1.39	0.83	0.03
Silk Cut Superslims	1.42	0.88	0.03
Marlboro Bright Leaf	1.39	0.85	0.03
Pall Mall	1.42	0.88	0.03
Plain	1.29	0.77	0.02
Disgusting (1) / not disgusting (5)			
Mayfair	1.72	1.16	0.04
Silk Cut Superslims	1.78	1.20	0.04
Marlboro Bright Leaf	1.75	1.20	0.04
Pall Mall	1.77	1.21	0.04
Plain	1.60	1.13	0.04
Not good (1) / good (5)			
Mayfair	1.39	0.80	0.03
Silk Cut Superslims	1.44	0.88	0.03
Marlboro Bright Leaf	1.39	0.83	0.03
Pall Mall	1.40	0.84	0.03
Plain	1.26	0.66	0.02

Table 7.24: Mean pack scores, pack feelings items - tried smoking

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	2.78	1.44	0.10
Silk Cut Superslims ('novelty' pack)	2.85	1.45	0.10
Marlboro Bright Leaf ('novelty' pack)	2.87	1.45	0.10
Pall Mall ('novelty' pack)	2.76	1.45	0.10
Plain ('plain' pack)	2.25	1.38	0.10
Not proud (1) / proud (5)			
Mayfair	1.69	0.98	0.07
Silk Cut Superslims	1.80	1.09	0.08
Marlboro Bright Leaf	1.79	1.12	0.08
Pall Mall	1.79	1.12	0.08
Plain	1.46	0.86	0.06
Disgusting (1) / not disgusting (5)			
Mayfair	2.36	1.34	0.09
Silk Cut Superslims	2.45	1.38	0.10
Marlboro Bright Leaf	2.47	1.40	0.10
Pall Mall	2.41	1.36	0.09
Plain	2.00	1.26	0.09
Not good (1) / good (5)			
Mayfair	1.81	1.03	0.07
Silk Cut Superslims	1.95	1.16	0.08
Marlboro Bright Leaf	1.97	1.20	0.08
Pall Mall	1.99	1.18	0.08
Plain	1.53	0.86	0.06

Table 7.25: Mean pack scores, pack feelings items - current smokers

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	3.98	1.27	0.11
Silk Cut Superslims ('novelty' pack)	3.74	1.38	0.12
Marlboro Bright Leaf ('novelty' pack)	3.82	1.40	0.12
Pall Mall ('novelty' pack)	3.67	1.42	0.12
Plain ('plain' pack)	3.09	1.64	0.14
Not proud (1) / proud (5)			
Mayfair	2.77	1.23	0.11
Silk Cut Superslims	2.64	1.21	0.10
Marlboro Bright Leaf	2.68	1.21	0.10
Pall Mall	2.68	1.23	0.11
Plain	2.25	1.12	0.10
Disgusting (1) / not disgusting (5)			
Mayfair	3.59	1.27	0.11
Silk Cut Superslims	3.50	1.33	0.12
Marlboro Bright Leaf	3.52	1.38	0.12
Pall Mall	3.48	1.31	0.11
Plain	2.87	1.54	0.13
Not good (1) / good (5)			
Mayfair	3.02	1.26	0.11
Silk Cut Superslims	2.92	1.19	0.10
Marlboro Bright Leaf	2.90	1.25	0.11
Pall Mall	2.94	1.25	0.11
Plain	2.32	1.16	0.10

Table 7.26: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – never smoker

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.19	2.22	0.248	2.19	2.20	0.523	2.19	2.19	0.744
	1.38	*1.38*		*1.38*	*1.37*		*1.38*	*1.37*	
Not proud (1) / Proud (5)	1.39	1.42	0.022	1.39	1.39	0.679	1.39	1.42	0.033
	0.83	*0.88*		*0.83*	*0.85*		*0.83*	*0.88*	
Disgusting (1) / Not disgusting (5)	1.72	1.78	<0.001	1.72	1.75	0.048	1.72	1.77	0.001
	1.58	*1.20*		*1.16*	*1.20*		*1.16*	*1.21*	
Not good (1) / Good (5)	1.39	1.44	0.001	1.39	1.39	0.934	1.39	1.40	0.516
	0.80	*0.88*		*0.80*	*0.83*		*0.80*	*0.84*	

*Wilcoxon signed rank test for significant differences

Table 7.27: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – never smoker

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	1.99	2.20	<0.001	1.99	2.22	<0.001	1.99	2.20	<0.001	1.99	2.19	<0.001
	1.32	*1.38*		*1.32*	*1.38*		*1.32*	*1.37*		*1.32*	*1.37*	
Not proud (1) / Proud (5)	1.29	1.39	<0.001	1.29	1.42	<0.001	1.29	1.39	<0.001	1.29	1.42	<0.001
	0.77	*0.83*		*0.77*	*0.88*		*0.77*	*0.85*		*0.77*	*0.88*	
Disgusting (1) / Not disgusting (5)	1.60	1.72	<0.001	1.60	1.77	<0.001	1.60	1.75	<0.001	1.60	1.77	<0.001
	1.13	*1.16*		*1.13*	*1.20*		*1.13*	*1.20*		*1.13*	*1.21*	
Not good (1) / Good (5)	1.26	1.39	<0.001	1.26	1.44	<0.001	1.26	1.39	<0.001	1.26	1.40	<0.001
	0.66	*0.80*		*0.66*	*0.88*		*0.66*	*0.83*		*0.66*	*0.84*	

*Wilcoxon signed rank test for significant differences

Table 7.28: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – tried smoking

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.79	2.85	0.313	2.79	2.87	0.277	2.79	2.56	0.654
	1.44	*1.45*		*1.44*	*1.45*		*1.44*	*1.45*	
Not proud (1) / Proud (5)	1.69	1.80	0.021	1.69	1.79	0.050	1.69	1.79	0.096
	0.98	*1.09*		*0.98*	*1.12*		*0.98*	*1.12*	
Disgusting (1) / Not disgusting (5)	2.36	2.45	0.018	2.36	2.47	0.032	2.35	2.41	0.199
	1.34	*1.38*		*1.34*	*1.40*		*1.33*	*1.36*	
Not good (1) / Good (5)	1.81	1.95	0.005	1.81	1.98	0.006	1.81	2.00	0.003
	1.03	*1.16*		*1.03*	*1.21*		*1.03*	*1.18*	

*Wilcoxon signed rank test for significant differences

Table 7.29: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – tried smoking

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.25	2.78	<0.001	2.26	2.85	<0.001	2.26	2.87	<0.001	2.26	2.76	<0.001
	1.38	*1.44*		*1.38*	*1.45*		*1.38*	*1.45*		*1.38*	*1.45*	
Not proud (1) / Proud (5)	1.46	1.69	<0.001	1.46	1.80	<0.001	1.46	1.79	<0.001	1.46	1.79	<0.001
	0.86	*0.98*		*0.86*	*1.09*		*0.86*	*1.12*		*0.86*	*1.12*	
Disgusting (1) / Not disgusting (5)	2.00	2.36	<0.001	2.00	2.45	<0.001	2.00	2.47	<0.001	2.00	2.41	<0.001
	1.26	*1.34*		*1.26*	*1.38*		*1.26*	*1.40*		*1.26*	*1.36*	
Not good (1) / Good (5)	1.54	1.81	<0.001	1.54	1.95	<0.001	1.53	1.97	<0.001	1.53	1.99	<0.001
	0.86	*1.03*		*0.86*	*1.16*		*0.86*	*1.20*		*0.86*	*1.18*	

*Wilcoxon signed rank test for significant differences

Table 7.30: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – current smoker

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	3.98	3.74	0.024	3.98	3.81	0.120	3.98	3.67	0.006
	1.27	*1.38*		*1.27*	*1.40*		*1.27*	*1.42*	
Not proud (1) / Proud (5)	2.77	2.64	0.107	2.77	2.68	0.158	2.77	2.68	0.081
	1.23	*1.21*		*1.23*	*1.21*		*1.23*	*1.23*	
Disgusting (1) / Not disgusting (5)	3.59	3.48	0.097	3.59	3.54	0.419	3.59	3.47	0.059
	1.27	*1.33*		*1.27*	*1.37*		*1.27*	*1.31*	
Not good (1) / Good (5)	3.02	2.92	0.217	3.02	2.90	0.143	3.02	2.94	0.324
	1.26	*1.19*		*1.26*	*1.25*		*1.26*	*1.25*	

*Wilcoxon signed rank test for significant differences

Table 7.31: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – current smoker

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	3.09	3.98	<0.001	3.09	3.74	<0.001	3.09	3.82	<0.001	3.09	3.67	<0.001
	1.64	*1.27*		*1.64*	*1.38*		*1.64*	*1.40*		*1.64*	*1.42*	
Not proud (1) / Proud (5)	2.25	2.77	<0.001	2.25	2.64	<0.001	2.25	2.68	<0.001	2.25	2.68	<0.001
	1.12	*1.23*		*1.12*	*1.21*		*1.12*	*1.21*		*1.12*	*1.23*	
Disgusting (1) / Not disgusting (5)	2.88	3.59	<0.001	2.87	3.50	<0.001	2.87	3.52	<0.001	2.87	3.48	<0.001
	1.54	*1.27*		*1.43*	*1.33*		*1.54*	*1.38*		*1.54*	*1.31*	
Not good (1) / Good (5)	2.32	3.02	<0.001	2.32	2.92	<0.001	2.32	2.90	<0.001	2.32	2.94	<0.001
	1.16	*1.26*		*1.16*	*1.19*		*1.16*	*1.25*		*1.16*	*1.25*	

*Wilcoxon signed rank test for significant differences

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Table 7.32: Mean pack scores, pack feelings items - females

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	2.36	1.46	0.06
Silk Cut Superslims ('novelty' pack)	2.43	1.48	0.06
Marlboro Bright Leaf ('novelty' pack)	2.36	1.46	0.06
Pall Mall ('novelty' pack)	2.43	1.48	0.06
Plain ('plain' pack)	2.00	1.36	0.05
Not proud (1) / proud (5)			
Mayfair	1.52	0.96	0.04
Silk Cut Superslims	1.55	1.00	0.04
Marlboro Bright Leaf	1.51	0.97	0.04
Pall Mall	1.56	1.01	0.04
Plain	1.32	0.74	0.03
Disgusting (1) / not disgusting (5)			
Mayfair	1.95	1.33	0.05
Silk Cut Superslims	2.03	1.37	0.05
Marlboro Bright Leaf	1.97	1.36	0.05
Pall Mall	2.00	1.34	0.05
Plain	1.71	1.22	0.05
Not good (1) / good (5)			
Mayfair	1.58	1.01	0.04
Silk Cut Superslims	1.63	1.05	0.04
Marlboro Bright Leaf	1.59	1.02	0.04
Pall Mall	1.67	1.10	0.04
Plain	1.34	0.74	0.03

Table 7.33: Mean pack scores, pack feelings items - males

Base: All respondents	Mean	Std Deviation	Std Error
Embarrassed (1) / Not embarrassed (5)			
Mayfair ('regular' pack)	2.57	1.50	0.06
Silk Cut Superslims ('novelty' pack)	2.51	1.46	0.06
Marlboro Bright Leaf ('novelty' pack)	2.58	1.47	0.06
Pall Mall ('novelty' pack)	2.42	1.45	0.06
Plain ('plain' pack)	2.28	1.44	0.06
Not proud (1) / proud (5)			
Mayfair	1.62	1.02	0.04
Silk Cut Superslims	1.64	1.04	0.04
Marlboro Bright Leaf	1.65	1.05	0.04
Pall Mall	1.64	1.06	0.04
Plain	1.50	0.97	0.04
Disgusting (1) / not disgusting (5)			
Mayfair	2.04	1.32	0.05
Silk Cut Superslims	2.06	1.33	0.05
Marlboro Bright Leaf	2.10	1.38	0.05
Pall Mall	2.07	1.36	0.05
Plain	1.86	1.29	0.05
Not good (1) / good (5)			
Mayfair	1.64	1.03	0.04
Silk Cut Superslims	1.69	1.08	0.04
Marlboro Bright Leaf	1.66	1.07	0.04
Pall Mall	1.62	1.01	0.04
Plain	1.47	0.89	0.03

Table 7.34: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – males

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.58	2.51	0.040	2.58	2.58	0.760	2.58	2.42	<0.001
	1.50	*1.46*		*1.50*	*1.47*		*1.50*	*1.45*	
Not proud (1) / Proud (5)	1.62	1.64	0.290	1.62	1.65	0.236	1.62	1.65	0.263
	1.02	*1.04*		*1.02*	*1.05*		*1.02*	*1.06*	
Disgusting (1) / Not disgusting (5)	2.04	2.06	0.294	2.04	2.10	0.008	2.04	2.07	0.190
	1.32	*1.33*		*1.32*	*1.38*		*1.32*	*1.36*	
Not good (1) / Good (5)	1.64	1.69	0.027	1.64	1.66	0.444	1.64	1.61	0.219
	1.03	*1.08*		*1.03*	*1.07*		*1.03*	*1.01*	

*Wilcoxon signed rank test for significant differences

Table 7.35: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – males

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.28	2.57	<0.001	2.28	2.51	<0.001	2.28	2.58	<0.001	2.28	2.43	<0.001
	1.44	*1.50*		*1.44*	*1.46*		*1.44*	*1.48*		*1.44*	*1.45*	
Not proud (1) / Proud (5)	1.50	1.62	<0.001	1.50	1.64	<0.001	1.50	1.65	<0.001	1.50	1.64	<0.001
	0.97	*1.02*		*0.97*	*1.04*		*0.97*	*1.05*		*0.97*	*1.06*	
Disgusting (1) / Not disgusting (5)	1.86	2.04	<0.001	1.86	2.06	<0.001	1.86	2.10	<0.001	1.86	2.07	<0.001
	1.29	*1.32*		*1.29*	*1.33*		*1.29*	*1.38*		*1.29*	*1.36*	
Not good (1) / Good (5)	1.47	1.65	<0.001	1.47	1.69	<0.001	1.47	1.66	<0.001	1.47	1.62	<0.001
	0.89	*1.03*		*0.89*	*1.08*		*0.89*	*1.07*		*0.89*	*1.01*	

*Wilcoxon signed rank test for significant differences

Table 7.36: Paired mean ratings of pack feelings items to 'regular' pack (Mayfair) versus 'novelty' packs – females

Base: all respondents who have provided a score on each pair of packs	Mayfair Vs Silk Cut Superslims			Mayfair Vs Marlboro Bright Leaf			Mayfair Vs Pall Mall		
	Mayfair Mean *SD*	Silk Cut Mean *SD*	P value*	Mayfair Mean *SD*	Marlboro Mean *SD*	P value	Mayfair Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.36	2.43	0.014	2.36	2.36	0.854	2.36	2.43	0.041
	1.46	*1.48*		*1.46*	*1.46*		*1.46*	*1.48*	
Not proud (1) / Proud (5)	1.52	1.55	0.191	1.52	1.51	0.489	1.52	1.56	0.172
	0.96	*1.00*		*0.96*	*0.97*		*0.96*	*1.01*	
Disgusting (1) / Not disgusting (5)	1.95	2.02	0.001	1.95	1.97	0.652	1.95	2.00	0.047
	1.33	*1.37*		*1.33*	*1.36*		*1.33*	*1.34*	
Not good (1) / Good (5)	1.59	1.63	0.031	1.59	1.59	0.968	1.59	1.67	0.005
	1.01	*1.05*		*1.01*	*1.03*		*1.01*	*1.10*	

*Wilcoxon signed rank test for significant differences

Table 7.37: Paired mean ratings of pack feelings items to 'plain' pack versus 'regular' and 'novelty' packs – females

Base: all respondents who have provided a score on each pair of packs	Plain Vs 'regular' Mayfair pack			Plain Vs 'novelty' Silk Cut Superslims pack			Plain Vs 'novelty' Marlboro Bright Leaf pack			Plain Vs 'novelty' Pall Mall pack		
	Plain Mean *SD*	Mayfair Mean *SD*	P value*	Plain Mean *SD*	Silk Cut Mean *SD*	P value	Plain Mean *SD*	Marlboro Mean *SD*	P value	Plain Mean *SD*	Pall Mall Mean *SD*	P value
Embarrassed (1) / Not embarrassed (5)	2.00	2.36	<0.001	2.00	2.43	<0.001	2.00	2.36	<0.001	2.00	2.43	<0.001
	1.36	*1.46*		*1.36*	*1.48*		*1.36*	*1.46*		*1.36*	*1.48*	
Not proud (1) / Proud (5)	1.71	1.95	<0.001	1.71	2.03	<0.001	1.71	1.97	<0.001	1.71	2.00	<0.001
	1.22	*1.33*		*1.22*	*1.37*		*1.22*	*1.36*		*1.22*	*1.34*	
Disgusting (1) / Not disgusting (5)	1.32	1.52	<0.001	1.32	1.55	<0.001	1.32	1.51	<0.001	1.32	1.56	<0.001
	0.74	*0.96*		*0.74*	*1.00*		*0.74*	*0.97*		*0.74*	*1.01*	
Not good (1) / Good (5)	1.34	1.58	<0.001	1.34	1.63	<0.001	1.33	1.59	<0.001	1.34	1.67	<0.001
	0.74	*1.01*		*0.74*	*1.05*		*0.74*	*1.02*		*0.74*	*1.10*	

*Wilcoxon signed rank test for significant differences

Table 7.38: Logistic regression of association between susceptibility to smoke and awareness of a price-marked pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	n = 998	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	839	1.00			0.591
Majority smoke	47	1.40	0.73	2.65	0.310
Do not know/not stated	112	1.05	0.67	1.64	0.825
Sibling smoking					
No siblings smoke	834	1.00			<0.001
Any siblings smoke	136	2.28	1.53	3.38	<0.001
Do not know/not stated	28	2.16	0.05	0.99	4.701
Parental smoking					
Neither parent smokes	564	1.00			0.053
Either parent smokes	375	1.85	1.04	3.29	0.036
Not sure/not stated/no mum/dad	59	1.31	0.96	1.79	0.093
Block 2					
Gender					
Male	513	1.00			
Female	485	0.84	0.63	1.12	0.230
Socio-economic group					
ABC1	459	1.00			
C2DE	539	0.80	0.60	1.09	0.128
Age	998	1.09	1.00	1.19	0.062
Block 3					
Packaging awareness: price-marked pack					
No or do not know	839	1.00			
Yes	159	1.67	1.16	2.42	0.006

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	27.461	6	<0.001		0.039
Block 2	7.257	3	0.064		0.049
Block 3	7.323	1	0.007		0.059
Final model	42.041	10	<0.001		0.059

AOR = Adjusted odds ratio. Nine hundred and ninety-eight cases analysed, 27 cases with missing values. Cases correctly classified = 72.3%. 97.8% of non-susceptible never-smokers and 7.5% of susceptible never-smokers were correctly classified.

Table 7.39: Logistic regression of association between susceptibility to smoke and awareness of a new or unusual pack design

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	n = 1001	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	842	1.00			0.627
Majority smoke	47	1.36	0.72	2.58	0.344
Do not know/not stated	112	1.06	0.68	1.67	0.784
Sibling smoking					
No siblings smoke	836	1.00			<0.001
Any siblings smoke	137	2.22	1.50	3.29	<0.001
Do not know/not stated	28	2.14	0.98	4.69	0.056
Parental smoking					
Neither parent smokes	567	1.00			0.039
Either parent smokes	375	1.91	1.07	3.39	0.028
Not sure/not stated/no mum/dad	59	1.32	0.97	1.81	0.077
Block 2					
Gender					
Male	515	1.00			
Female	486	0.84	0.63	1.11	0.219
Socio-economic group					
ABC1	461	1.00			
C2DE	540	0.84	0.63	1.13	0.248
Age	1001	1.10	1.00	1.20	0.042
Block 3					
Packaging awareness: new/unusual pack					
No or do not know	874	1.00			
Yes	127	2.01	1.36	2.98	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	26.871	6	<0.001		0.038
Block 2	7.408	3	0.060		0.048
Block 3	11.886	1	0.001		0.065
Final model	46.164	10	<0.001		0.065

AOR = Adjusted odds ratio. One thousand and one cases analysed, 24 cases with missing values. Cases correctly classified = 71.8%. 97.2% of non-susceptible never-smokers and 7.1% of susceptible never-smokers were correctly classified.

Table 7.40: Logistic regression of association between susceptibility to smoke and pack appraisal of the 'regular' Mayfair pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	n = 971	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	818	1.00			0.419
Majority smoke	46	1.49	0.78	2.83	0.227
Do not know/not stated	107	1.16	0.53	0.74	1.815
Sibling smoking					
No siblings smoke	811	1.00			<0.001
Any siblings smoke	133	2.35	1.58	3.51	<0.001
Do not know/not stated	27	2.05	0.92	4.53	0.078
Parental smoking					
Neither parent smokes	547	1.00			0.046
Either parent smokes	367	1.89	1.06	3.38	0.031
Not sure/not stated/no mum/dad	57	1.32	0.96	1.81	0.087
Block 2					
Gender					
Male	499	1.00			
Female	472	0.82	0.61	1.09	0.173
Socio-economic group					
ABC1	448	1.00			
C2DE	523	0.79	0.59	1.06	0.119
Age	971	1.08	0.98	1.18	0.124
Block 3					
Packaging appraisal of Mayfair					
Not positive appraisal	882	1.00			
Positive appraisal	89	2.05	1.29	3.25	0.002

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	25.095	6	<0.001		0.037
Block 2	7.549	3	0.056		0.047
Block 3	8.900	1	0.003		0.060
Final model	41.544	10	<0.001		0.060

AOR = Adjusted odds ratio. Nine hundred and seventy-one cases analysed, 54 cases with missing values. Cases correctly classified = 72.5%. 98.4% of non-susceptible never-smokers and 7.6% of susceptible never-smokers were correctly classified.

Table 7.41: Logistic regression of association between susceptibility to smoke and pack appraisal of the 'novelty' Silk Cut Superslims pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	n = 970	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	817	1.00			0.398
Majority smoke	46	1.52	0.80	2.90	0.204
Do not know/not stated	107	1.14	0.73	1.80	0.562
Sibling smoking					
No siblings smoke	809	1.00			<0.001
Any siblings smoke	134	2.27	1.52	3.40	<0.001
Do not know/not stated	27	2.03	0.91	4.51	0.084
Parental smoking					
Neither parent smokes	547	1.00			0.064
Either parent smokes	366	1.78	0.99	3.19	0.053
Not sure/not stated/no mum/dad	57	1.33	0.97	1.82	0.081
Block 2					
Gender					
Male	500	1.00			
Female	470	0.82	0.61	1.09	0.169
Socio-economic group					
ABC1	448	1.00			
C2DE	522	0.84	0.63	1.14	0.259
Age	970	1.05	0.96	1.16	0.280
Block 3					
Packaging appraisal of Silk Cut Superslims					
Not positive appraisal	795	1.00			
Positive appraisal	175	2.20	1.55	3.14	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	24.582	6	<0.001		0.036
Block 2	7.536	3	0.057		0.047
Block 3	18.603	1	<0.001		0.073
Final model	50.722	10	<0.001		0.073

AOR = Adjusted odds ratio. Nine hundred and seventy cases analysed, 55 cases with missing values. Cases correctly classified = 72.1%. 97.7% of non-susceptible never-smokers and 7.9% of susceptible never-smokers were correctly classified.

Table 7.42: Logistic regression of association between susceptibility to smoke and pack appraisal of the 'novelty' Pall Mall pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	$n = 966$	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	816	1.00			0.434
Majority smoke	45	1.46	0.76	2.81	0.257
Do not know/not stated	105	1.18	0.75	1.86	0.479
Sibling smoking					
No siblings smoke	806	1.00			<0.001
Any siblings smoke	133	2.38	1.58	3.57	<0.001
Do not know/not stated	27	2.04	0.91	4.56	0.084
Parental smoking					
Neither parent smokes	543	1.00			0.038
Either parent smokes	367	1.99	1.10	3.60	0.023
Not sure/not stated/no mum/dad	56	1.31	0.95	1.80	0.095
Block 2					
Gender					
Male	496	1.00			
Female	470	0.79	0.59	1.06	0.116
Socio-economic group					
ABC1	446	1.00			
C2DE	520	0.82	0.60	1.10	0.183
Age	966	1.06	0.97	1.17	0.211
Block 3					
Packaging appraisal of Pall Mall					
Not positive appraisal	763	1.00			
Positive appraisal	203	2.45	1.76	3.43	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	24.780	6	<0.001		0.036
Block 2	7.796	3	0.050		0.048
Block 3	27.152	1	<0.001		0.086
Final model	59.728	10	<0.001		0.086

AOR = Adjusted odds ratio. Nine hundred and sixty-six cases analysed, 59 cases with missing values. Cases correctly classified = 72.4%. 97.1% of non-susceptible never-smokers and 10.2% of susceptible never-smokers were correctly classified.

Table 7.43: Logistic regression of association between susceptibility to smoke and pack appraisal of the 'novelty' Marlboro Bright Leaf pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	$n = 968$	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	815	1.00			0.401
Majority smoke	46	1.48	0.77	2.83	0.240
Do not know/not stated	107	1.19	0.76	1.88	0.444
Sibling smoking					
No siblings smoke	807	1.00			<0.001
Any siblings smoke	134	2.39	1.60	3.57	<0.001
Do not know/not stated	27	1.99	0.89	4.44	0.093
Parental smoking					
Neither parent smokes	544	1.00			0.054
Either parent smokes	367	1.89	1.06	3.40	0.032
Not sure/not stated/no mum/dad	57	1.29	0.94	1.78	0.113
Block 2					
Gender					
Male	497	1.00			
Female	471	0.86	0.64	1.15	0.301
Socio-economic group					
ABC1	448	1.00			
C2DE	520	0.79	0.59	1.06	0.120
Age	968	1.06	0.97	1.16	0.223
Block 3					
Packaging appraisal of Marlboro Bright Leaf					
Not positive appraisal	828	1.00			
Positive appraisal	140	2.51	1.71	3.67	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	24.761	6	<0.001		0.036
Block 2	7.819	3	0.050		0.047
Block 3	21.700	1	<0.001		0.078
Final model	54.279	10	<0.001		0.078

AOR = Adjusted odds ratio. Nine hundred and sixty-eight cases analysed, 57 cases with missing values. Cases correctly classified = 72.3%. 97.1% of non-susceptible never-smokers and 10.1% of susceptible never-smokers were correctly classified.

Table 7.44: Logistic regression of association between susceptibility to smoke and pack appraisal of the 'plain' pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	*n* = 967	*AOR*	95% *CI* Lower	95% *CI* Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	815	1.00			0.457
Majority smoke	46	1.44	0.76	2.74	0.264
Do not know/not stated	106	1.16	0.74	1.82	0.515
Sibling smoking					
No siblings smoke	807	1.00			<0.001
Any siblings smoke	133	2.21	1.49	3.30	<0.001
Do not know/not stated	27	1.89	0.85	4.17	0.118
Parental smoking					
Neither parent smokes	543	1.00			0.053
Either parent smokes	367	1.88	1.06	3.35	0.032
Not sure/not stated/no mum/dad	57	1.29	0.95	1.77	0.108
Block 2					
Gender					
Male	498	1.00			
Female	469	0.83	0.62	1.11	0.212
Socio-economic group					
ABC1	446	1.00			
C2DE	521	0.82	0.61	1.10	0.189
Age	967	1.09	1.00	1.20	0.060
Block 3					
Packaging appraisal of plain pack					
Not positive appraisal	933	1.00			
Positive appraisal	34	1.04	0.48	2.26	0.914

Model summary at each block	Test of model coefficients			Nagelkerke *R²*	
	χ^2	*df*	*p*		
Block 1	23.665	6	0.001		0.035
Block 2	7.061	3	0.070		0.045
Block 3	0.012	1	0.914		0.045
Final model	30.738	10	0.001		0.045

AOR = Adjusted odds ratio. Nine hundred and sixty-seven cases analysed, 58 cases with missing values. Cases correctly classified = 71.5%. 98.7% of non-susceptible never-smokers and 3.3% of susceptible never-smokers were correctly classified.

Table 7.45: Logistic regression of association between susceptibility to smoke and pack receptivity to the 'novelty' Pall Mall pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	n = 969	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	814	1.00			0.735
Majority smoke	47	1.30	0.67	2.50	0.434
Do not know/not stated	108	1.03	0.65	1.63	0.899
Sibling smoking					
No siblings smoke	809	1.00			<0.001
Any siblings smoke	132	2.40	1.61	3.59	<0.001
Do not know/not stated	28	2.42	1.11	5.25	0.026
Parental smoking					
Neither parent smokes	550	1.00			0.029
Either parent smokes	361	1.90	1.06	3.41	0.031
Not sure/not stated/no mum/dad	58	1.39	1.01	1.91	0.043
Block 2					
Gender					
Male	497	1.00			
Female	472	0.84	0.63	1.13	0.243
Socio-economic group					
ABC1	447	1.00			
C2DE	522	0.79	0.59	1.07	0.127
Age	969	1.04	0.95	1.15	0.375
Block 3					
Packaging receptivity to Pall Mall					
Not receptive	900	1.00			
Receptive	69	3.69	2.21	6.19	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	28.055	6	<0.001		0.041
Block 2	5.274	3	0.153		0.049
Block 3	24.444	1	<0.001		0.083
Final model	57.773	10	<0.001		0.083

AOR = Adjusted odds ratio. Nine hundred and sixty-nine cases analysed, 56 cases with missing values. Cases correctly classified = 72.9%. 96.4% of non-susceptible never-smokers and 13.1% of susceptible never-smokers were correctly classified.

Table 7.46: Logistic regression of association between susceptibility to smoke and pack receptivity to the 'novelty' Marlboro Bright Leaf pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	*n* = 969	*AOR*	95% *CI* Lower	95% *CI* Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	813	1.00			0.734
Majority smoke	47	1.25	0.65	2.40	0.501
Do not know/not stated	109	1.11	0.71	1.74	0.646
Sibling smoking					
No siblings smoke	809	1.00			<0.001
Any siblings smoke	132	2.32	1.56	3.45	<0.001
Do not know/not stated	28	2.23	1.03	4.84	0.043
Parental smoking					
Neither parent smokes	549	1.00			0.053
Either parent smokes	362	1.89	1.06	3.36	0.031
Not sure/not stated/no mum/dad	58	1.36	0.99	1.86	0.058
Block 2					
Gender					
Male	598	1.00			
Female	471	0.90	0.67	1.19	0.450
Socio-economic group					
ABC1	446	1.00			
C2DE	523	0.83	0.61	1.11	0.211
Age	969	1.06	0.97	1.17	0.186
Block 3					
Packaging receptivity to Marlboro Brightleaf					
Not receptive	920	1.00			
Receptive	49	2.42	1.32	4.44	0.004

Model summary at each block	Test of model coefficients			Nagelkerke *R*²	
	χ^2	*df*	*p*		
Block 1	27.448	6	<0.001		0.040
Block 2	4.570	3	0.206		0.047
Block 3	7.952	1	0.005		0.058
Final model	39.970	10	<0.001		0.058

Note, AOR = Adjusted odds ratio. Nine hundred and sixty-nine cases analysed, 56 cases with missing values. Cases correctly classified = 71.9%. 98% of non-susceptible never-smokers and 6.2% of susceptible never-smokers were correctly classified.

Table 7.47: Logistic regression of association between susceptibility to smoke and pack   receptivity to the 'novelty' Silk Cut Superslims pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	$n = 970$	AOR	95% CI Lower	95% CI Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	814	1.00			0.948
Majority smoke	47	1.12	0.57	2.20	0.744
Do not know/not stated	109	1.00	0.64	1.59	0.985
Sibling smoking					
No siblings smoke	810	1.00			<0.001
Any siblings smoke	132	2.22	1.48	3.32	<0.001
Do not know/not stated	28	2.23	1.02	4.88	0.044
Parental smoking					
Neither parent smokes	550	1.00			0.010
Either parent smokes	362	2.05	1.15	3.67	0.015
Not sure/not stated/no mum/dad	58	1.46	1.06	2.01	0.019
Block 2					
Gender					
Male	501	1.00			
Female	469	0.88	0.66	1.18	0.384
Socio-economic group					
ABC1	447	1.00			
C2DE	523	0.85	0.63	1.14	0.270
Age	970	1.05	0.96	1.15	0.305
Block 3					
Packaging receptivity to Silk Cut Superslims					
Not receptive	912	1.00			
Receptive	58	4.42	2.50	7.81	<0.001

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	df	p		
Block 1	27.947	6	<0.001		0.041
Block 2	4.824	3	0.185		0.048
Block 3	26.640	1	<0.001		0.085
Final model	59.411	10	<0.001		0.085

AOR = Adjusted odds ratio. Nine hundred and seventy cases analysed, 55 cases with missing values. Cases correctly classified = 72.7%. 96.3% of non-susceptible never-smokers and 13.1% of susceptible never-smokers were correctly classified.

Table 7.48: Logistic regression of association between susceptibility to smoke and pack receptivity to the 'regular' Mayfair pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	*n* = 970	*AOR*	95% *CI* Lower	95% *CI* Upper	P Value
Block 1					
Close friends smoking					
Most do not smoke	815	1.00			0.583
Majority smoke	47	1.36	0.72	2.58	0.349
Do not know/not stated	108	1.13	0.72	1.76	0.602
Sibling smoking					
No siblings smoke	810	1.00			<0.001
Any siblings smoke	132	2.30	1.55	3.42	<0.001
Do not know/not stated	28	2.16	0.99	4.68	0.052
Parental smoking					
Neither parent smokes	549	1.00			0.040
Either parent smokes	363	1.87	1.05	3.32	0.033
Not sure/not stated/no mum/dad	58	1.34	0.98	1.83	0.065
Block 2					
Gender					
Male	498	1.00			
Female	472	0.87	0.65	1.15	0.308
Socio-economic group					
ABC1	444	1.00			
C2DE	526	0.84	0.63	1.13	0.257
Age	970	1.07	0.97	1.17	0.177
Block 3					
Packaging receptivity to Mayfair					
Not receptive	936	1.00			
Receptive	34	1.97	0.96	4.03	0.064

Model summary at each block	Test of model coefficients			Nagelkerke R^2	
	χ^2	*df*	*p*		
Block 1	27.396	6	<0.001		0.040
Block 2	5.136	3	0.162		0.047
Block 3	3.312	1	0.069		0.052
Final model	35.844	10	0.001		0.052

AOR = Adjusted odds ratio. Nine hundred and seventy cases analysed, 55 cases with missing values. Cases correctly classified = 71.2%. 97.8% of non-susceptible never-smokers and 4.3% of susceptible never-smokers were correctly classified.

Table 7.49: Logistic Regression of association between susceptibility to smoke and pack receptivity to the plain pack

Dependent variable: Susceptibility, 1 = Susceptible, 0=Non-susceptible	*n* = 971	*AOR*	95% *CI* Lower	95% *CI* Upper	P value
Block 1					
Close friends smoking					
Most do not smoke	815	1.00			0.527
Majority smoke	47	1.42	0.75	2.68	0.282
Do not know/not stated	109	1.11	0.71	1.73	0.660
Sibling smoking					
No siblings smoke	812	1.00			<0.001
Any siblings smoke	131	2.26	1.52	3.36	<0.001
Do not know/not stated	28	2.11	0.97	4.58	0.059
Parental smoking					
Neither parent smokes	551	1.00			0.038
Either parent smokes	362	1.88	1.06	3.34	0.031
Not sure/not stated/no mum/dad	58	1.34	0.98	1.84	0.063
Block 2					
Gender					
Male	598	1.00			
Female	471	0.86	0.64	1.14	0.291
Socio-economic group					
ABC1	446	1.00			
C2DE	523	0.83	0.62	1.12	0.228
Age	971	1.08	0.98	1.18	0.107
Block 3					
Packaging receptivity to plain pack					
Not receptive	920	1.00			
Receptive	49	0.92	0.38	2.27	0.863

Model summary at each block	Test of model coefficients			Nagelkerke *R*²	
	χ²	*df*	*p*		
Block 1	26.765	6	<0.001		0.040
Block 2	5.267	3	0.153		0.047
Block 3	0.030	1	0.862		0.047
Final model	32.062	10	<0.001		0.047

AOR = Adjusted odds ratio. Nine hundred and seventy-one cases analysed, 54 cases with missing values. Cases correctly classified = 71.7%. 98.3% of non-susceptible never-smokers and 4.4% of susceptible never-smokers were correctly classified.

Chapter 8: Conclusions and discussion

8.1 Introduction

This concluding chapter draws together the key findings from both the qualitative and quantitative stages of research. The findings are discussed in relation to previous studies (8.2) and the study limitations are highlighted (8.3). Finally, the chapter considers implications for theory (8.4), future research (8.5) and public health policy and practice (8.6).

8.2 Conclusions

With plain packaging now firmly on the tobacco control agenda in the UK, this thesis was intended to fill gaps in the public health evidence base used to inform the plain packaging policy decision. The study was stimulated by the Department of Health's 2008 'Consultation on the Future of Tobacco Control' and the recommendation of plain packaging by the FCTC. Plain packaging is typically framed by the possible benefit of reducing smoking uptake by young people. This study was conducted to examine if, and how, tobacco packaging influences adolescents.

At the start of the thesis, an examination of the marketing literature for the packaging of consumer products established that packaging is a powerful and sophisticated marketing tool. It is one which, through careful use of the minutiae of design features, such as colour, graphics and structure, can influence consumer responses. The analysis of internal UK tobacco documents highlighted the packs' strength in communicating aspirational brand imagery to young people and that strategies, such as novelty, and cigarette appearance, are used to target this group. Public health research, while recognising the promotional role of packaging, has missed the importance of strategic

pack and product design, and that packaging is so powerful it can influence consumers' feelings and emotions, as well as behavioural responses.

That there are so many ways in which packaging can communicate with consumers, allied to the enormous health toll that accompanies the use of tobacco, helps explain the move towards plain tobacco packaging. Plain packaging limits the opportunity for tobacco companies to communicate with, mislead and influence consumers. Based upon the role of packaging for consumer goods in general, and tobacco in particular, plain packaging would effectively reduce the promotional role of packaging which uses strategies such as novelty to target young people.

8.2.1 Summary of findings

i) Packaging design communicates messages to adolescents

Regardless of a tobacco company's stated intended target, both the qualitative and quantitative research demonstrate a 'spill-over' effect to adolescents. Adolescents can easily read messages inherent within pack design. The survey findings show statistical differences in how different styles of packs were rated on items such as 'coolness', 'eye-catching', 'fun', 'harm' and 'childishness'. Within the focus groups, participants gave eloquent accounts of the imagery conjured up by packs. Furthermore, the positive imagery generated by brightly coloured packs, and their association with young and happy people, was able to soften participants' negative smoking attitudes. Pack shapes and structures implied functionality, such as convenience and discretion, offered through smaller shapes. Smaller shapes and lighter colours also implied a weaker tasting and less harmful product.

It is usual within plain pack studies to compare a branded pack with a plain pack. While this is useful in demonstrating, for example, the reduced perceptions of attractiveness and quality of a plain pack, it does not show the different messages that branded packs communicate (see for example, Germain et al., 2010; Hammond et al., 2011; Wakefield et al., 2008). The figures in Chapter 7, which plot the profiles of the five cigarette packs used in the survey, clearly show the strengths of different pack designs. For example, the bright pink Pall Mall pack communicates a stronger message of childishness than the darkly coloured Marlboro Bright Leaf pack (see Figure 7.5). The mixed method design enables interpretation of this finding. Within the focus groups the pink Pall Mall pack was associated with very young females and considered fun, while the Marlboro Bright Leaf pack was considered a classy and expensive pack, and associated with a more mature male. The qualitative work is therefore crucial in providing insight and interpretation of pack differences.

Both stages of research also suggest that pack design communicates messages and appeals to different genders. Within the focus groups, the greatest gender difference was among participants' favourite pack, with girls most frequently choosing feminine-oriented superslims packs, while boys most frequently chose the dark, masculine Marlboro Bright Leaf pack. That these packs elicited very different feelings and emotions, suggests that psycho-social needs are different between genders. For example, girls reported feelings of cleanliness, niceness, and femininity, while boys spoke of maturity, popularity and confidence. This suggests the pack may in some way act as a marker of gender and identity, in line with previous research which has shown gendered meanings in smoking for young people (Amos & Bostock, 2007). Within the survey, females also consistently rated the two 'novelty' feminine-packs, Silk Cut Superslims and Pall Mall higher on all pack ratings items than the 'regular' Mayfair pack. This was not the case for males, who rated these two packs higher on some items, but not for the item concerning identity - 'meant for someone like me'.

The focus groups also provide evidence of how packaging can perform multiple roles simultaneously. The responses to the B&H 14 pack, for example, illustrate that while this pack can be seen primarily as value-based packaging - its reduced pack size is intended to offer and communicate value-for-money - participants saw functionality in the slimmer shape in that it would be easier to carry around in a trouser pocket, and also a promotional signal, to attract underage smokers in the striking red 14 on the front of the pack.

ii) Adolescents are drawn to 'novelty' packaging

The findings of the qualitative and quantitative research demonstrate the added value for tobacco companies in being able to offer distinctive, brightly coloured or unusually structured packaging. The focus groups findings show limited edition packs can target a different type of person than the usual branded pack. Both the Sovereign and Golden Virginia limited edition packs were often rated more positively than the equivalent standard pack, suggesting that limited edition packs can increase appeal for adolescents, as has been found for adults (Gallopel-Morvan et al., 2012). The limited edition packs also generated different user imagery, illustrating how brand impressions can easily be changed by pack re-design.

This survey directly compared 'novelty' packaging with 'regular' packaging. For the total sample, innovative and more distinctive packaging designs increased pack ratings among respondents. The patterns in the survey pack ratings were also consistent with the focus group findings. The packs most highly appraised in the focus groups featured innovative, unusual or distinctive designs. This included a small, 'perfume' type Silk Cut Superslims pack, a Marlboro pack with an innovative opening, a Lambert & Butler holographic pack and a bright pink Pall Mall pack. This suggests that adolescents are

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most vulnerable to innovation and image-based designs. This is reflected in the higher ratings given to the novelty packs used as visual stimuli in the survey and is consistent with findings from industry documents which show young people place importance on having something 'new', and portraying the right 'image' (Cummings et al., 2002; Wakefield et al., 2002; Wen et al., 2005).

However, the survey findings also indicate the importance of the key youth brand to adolescent smokers. While differences by smoking status were difficult to observe in the focus groups, within the survey there were fewer differences between 'novelty' and 'regular' packaging for current smokers. That there were no differences for the items 'meant for someone like me', 'tempts me to smoke', 'I like this pack', and 'I would like to have this pack' suggests brand loyalty to, or identity with, a 'regular' style pack commonly associated with a youth brand. The 'regular' Mayfair pack was not viewed particularly positively in the focus groups for its design, however, that it was perceived as the most common brand, heightened its appeal for some.

iii) Plain packaging makes cigarette packs less appealing

Consistently within both the qualitative and quantitative stages of research, the plain pack was viewed most negatively by adolescents. This finding is in line with the growing body of evidence that removing on-pack branding makes cigarette packs less appealing (see section 4.2.1). That the plain pack was consistently rated most negatively out of the five packs used in survey, suggests that plain packaging reduces the ability for tobacco companies to use packaging to communicate the product positively with adolescents. Furthermore, the qualitative research highlighted that plain packaging reduces positive symbolic meanings and the attractiveness of the pack and product, and increases the perceived level of harm. It exposed tobacco as simply being harmful and dirty, and not a product for young people. This finding is in line with other qualitative

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studies which have found the removal of branding to eliminate the connection with desired identity for adults (CNCT, 2008b; Hoek et al., 2012).

The plain pack generated a very distinct negative user image among the focus groups participants. This contrasts with the finding of an earlier imagery study with adolescents by Beede et al. (1990). In their study, a plain pack produced a lack of distinct user imagery. However, the use of a plain white pack is likely to have influenced this finding. Within consumer psychology, and tobacco industry documents, white is associated with health and purity which is incongruent with the message a plain pack is intended to portray. Dark brown or grey is typically considered the most appropriate base colour for plain packaging and this study supports this notion.

Within the survey data, it also appears that females may rate plain packaging more negatively than males, for pack ratings and pack feelings items. While only a handful of plain packaging studies have examined responses by gender, this finding is consistent in that plain packaging may have a greater impact on the responses of females than males (Gallopel-Morvan, 2012; Moodie et al., 2011).

iv) Packaging awareness, appraisal and receptivity are independently associated with future smoking intent

A significant gap identified in the public health literature was that no previous research has attempted to demonstrate a link between tobacco packaging and youth smoking. This is the first study to examine whether or not exposure to, and attraction of, cigarette packaging is associated with smoking susceptibility – a key predictor of future tobacco use among adolescents. Logistic regression models were constructed to examine the link between tobacco packaging awareness, appraisal and receptivity. These models

controlled for the potential influence of demographic and smoking related factors known to influence youth smoking.

The analyses showed that awareness of both novelty and value packaging was associated with susceptibility to smoke. Susceptibility was also associated with positive appraisal of, and receptivity to, each of three novelty packs, with a distinctive shape, opening style or bright colour. For example, those receptive to the innovative Silk Cut Superslims pack were more than four times as likely to be susceptible to smoking, compared with participants who were not receptive to this pack. For the regular pack, an association was found between positive appraisal and susceptibility but not with receptivity and susceptibility. For the plain pack, no association was found between positive pack appraisal, or receptivity, and susceptibility.

This shows that those who thought most highly of novelty cigarette packaging were also the ones who indicated that they were most likely to go on to smoke in the future. Differences among the packaging styles highlight the influence of innovative and unique branding elements on adolescents' future smoking intentions. By demonstrating a significant association between pack awareness and novel and distinctive pack designs, and susceptibility to smoking in the future, the study adds to the existing literature which has already demonstrated a robust association between advertising, promotions and POS displays and youth smoking (DiFranza et al., 2006; Lovato et al., 2011; MacKintosh et al., 2012; National Cancer Institute, 2008). It provides further evidence of the range of tobacco marketing communications which likely influence smoking behaviour.

v) Cigarette appearance influences adolescent perceptions of appeal and harm

Within the focus groups cigarette appearance generated significant interest among adolescents. Intrinsic cues, such as colour, length, diameter and decorative features,

easily communicated messages and imagery related to gender suitability, price, glamour and coolness. Appeal was based on these characteristics. The slims and superslims cigarettes with smaller diameters, white tips and decorative elements, were consistently perceived as most attractive.

This contrasts with previous findings with young adult ever-smokers, who rated an image of a cigarette with a standard length and diameter, and cork tip, as most attractive (Borland & Savvas, 2013). Within the focus groups, smaller diameters in particular communicated weaker and less harmful looking cigarettes. This was closely linked to level of appeal as they implied a more pleasant and palatable smoke for 'starter' smokers. These differences may suggest that adults and adolescents prefer, and place importance on, different features of cigarette design. Alternatively, differences in study design and the presentation of cigarettes may account for this incongruence, with previous research showing images of cigarettes to participants whereas the focus group participants were allowed to handle cigarettes.

The positive imagery conjured up by slimmer cigarettes was at odds with participants' negative attitudes towards smoking and smokers. These cigarettes appeared 'cleaner' and did not resemble a 'standard' cigarette, thereby losing some of the negative associations of smoking. Similarly, the attractiveness of slim cigarettes has been found to resolve the dissonance between the self-image and identity young adult females wish to create and the negative connotations of smoking (Hoek et al., 2012b). Cigarette characteristics which reduce negative perceptions and indicate smoothness and mildness have been identified as important for young smokers in industry documents (Bero, 2003). Slim cigarettes help the tobacco industry create the image of a safer cigarette by implying 'ease of draw' and less sidestream smoke and tar (Bero, 2003; Carpenter et al., 2005). Importantly however, recent research suggests that while superslims may contain less tobacco than regular sized cigarettes, some superslims brands have higher levels of

tobacco specific nitrosamines and aromatic amines than regular cigarettes (Maertens, Mladjenovic, Soo, & White, 2013).

Participants found a longer length, brown cigarette least attractive. This design enhanced participants' negative associations with smoking. This is similar to the dissuasive cigarettes in Hoek et al.'s study (2012), which were found to reduce to the appeal of cigarettes and smoking for young adult females.

8.3   Study limitations

Within the qualitative work, given the small sample size the findings cannot be generalisable to a wider adolescent population, although given the exploratory nature of this stage of study, this was not the aim. As real tobacco packs and cigarettes were used as focus group stimuli, brand names were visible on all of the packs and some of the cigarettes. It is possible therefore, that prior brand knowledge may have played a role in influencing participants' perceptions, especially for the Mayfair pack and cigarettes, a popular youth brand.

For the nine participants reporting as regular smokers, it is possible that the stigma they attached to smoking meant their true responses may have been suppressed. This may account for the lack of differences between those reporting as smokers and non-smokers. Another possible explanation is that among the participants reporting as non-smokers, a proportion of these were smokers, which therefore makes it difficult to observe and draw smoker/non-smoker comparisons from the data.

The small number of exploratory focus groups (eight groups, N=48) also had implications for recruiting enough smokers to make smoker/non-smoker comparisons given that the recruitment of young smokers was more problematic than was expected.

Increasing the number of groups, recruiting from more than one area or using a different recruiter are all possible solutions to achieving a greater proportion of smokers within the sample. With only nine participants reporting as regular smokers the sample is limited in being able to draw comparisons between smoking status. Furthermore the recruitment questionnaire only assessed regular or non-smoking. This means that participant characteristics in relation to smoking status were not captured fully. A larger sample size and a recruitment questionnaire which also screened for occasional smoking, and experimentation with smoking, could have enabled packaging responses to be explored among a greater variety of different levels of youth smoking. While it was apparent within the groups that there were varying degrees of participant involvement in smoking, this was not explored further. The design of the groups was to explore responses to packaging rather than engage in discussions about participants' smoking behaviour. In part this was to avoid the risk of participants feeling vulnerable or uncomfortable when talking about what could be considered a sensitive issue. However, a more robust approach to splitting the groups by smoking status could have minimised this risk and provided an opportunity to explore the packs' role in smoking behaviour.

Recruiting from within a single area (greater Glasgow) for both the exploratory focus groups and survey development stage of research could also have had potential implications for the subsequent UK-wide survey design. The focus groups for example, identified Mayfair as a 'regular' pack and this was subsequently utilised as the benchmark pack within the survey. Should the exploratory groups have taken place in a different area, a different perception of 'regular' style packaging may have been identified. Furthermore in different geographical locations, cultural norms could have implications for the values attached to different brands and therefore the selection of packs to be included as survey stimuli and the survey measures.

Within the observational component of the focus groups, it is possible that participants reacted in atypical ways from being observed by the second moderator. Within the focus groups participants may have felt pressure to conform to the group norm and give similar responses to others. That these methods took place in an artificial environment may have affected responses. Also, it would not be possible to know from the focus groups alone whether the attractiveness of pack and cigarette design translates into smoking behaviour or brand choice.

Within the survey, the interviews were conducted in-home, where a family member may have been present. In this instance, and despite the use of show cards to try and limit the effect, participants may still have been worried about showing positive perceptions surrounding tobacco and socially desirable responses may have provided lower ratings. Despite concealing brand names and identifiers in the visual stimuli, prior brand knowledge may also have influenced pack ratings, especially for the Mayfair pack.

One particular strength of the study was the care taken to ensure that the marketing measures used within the survey were meaningful to the sample age group and applicable in the context of tobacco packaging. The development stage of the survey measures and questionnaire, which included six focus groups and 12 cognitive interviews, was used to reduce and refine a large selection of measures, so that the best measures in terms of quality were used. That nine of the 11 pack ratings measures were able to combine to form two new constructs of packaging appraisal (Cronbach's alpha >.8) and receptivity (Cronbach's alpha >.7) is testament to the value of the questionnaire development stage. Two of the eleven measures however, proved problematic at the analysis stage. Firstly, the measure Grown-up/Childish was a neutral measure. While it is appropriate and useful for tobacco packaging to be rated grown-up or childish, this measure, unlike the other 10 measures used, did not have an obvious positive/negative order which becomes problematic when presenting the results on a positive/negative

scale. Furthermore Grown-up/Childish did not fit into either of the two main components in the Principal Components Analysis (Appendix 11), also suggesting that this measure was different to the others in some way, and was excluded from the final PCA. Secondly, the measure Very harmful/Not at all harmful was also excluded from the final PCA. While this item loaded on component two, which was interpreted as receptivity, it was excluded from the final analysis as it did not fit with the receptivity construct which connected the other items loaded on this component.

Using photographs of packs as stimuli for the questionnaire rather than actual packs had implications for the pack feelings measures. The stark differences in affective responses to the different pack styles found in the focus groups did not transfer over to the measures used in the survey. The survey findings suggested that there were few differences between the packs for the pack feelings measures. This highlights that some constructs are better suited to a qualitative methodology where participants are able to spend more time with stimuli and engage in more depth discussion around their thoughts and feelings.

Finally, the cross-sectional nature of the survey does not enable causal relationships to be drawn about packaging and youth smoking. It cannot be demonstrated that packaging has, over time, directly encouraged non-smokers to start smoking. Only a longitudinal study could determine if packaging has an impact on adolescent smoking. However, the association of pack awareness, positive pack appraisal, and receptivity to packaging with smoking susceptibility is still of great value, as the measure of smoking susceptibility is a well-validated predictor of future smoking (Pierce et al., 2006).

8.4 Theoretical implications

One of the main objectives of the study was the methodological consideration:

Is it possible to observe and measure adolescent cognitive, affective and behavioural responses?

Chapter 4 highlighted that previous research on responses to tobacco packaging has focused on cognitive thoughts and judgements, rather than the feelings and emotions generated by packaging, or direct behavioural responses (see section 4.4). This research has tried to contribute to the research of consumer goods packaging by using a mixed design to investigate the three types of responses. Informed by academic marketing literature, it assumed that packaging does impact on cognitive, affective and behavioural levels (Bloch, 1995; Ghoshal et al., 2011; Reiman et al., 2010). Based on these assumptions the study was designed to explore whether it is possible to observe these responses in adolescents.

Firstly, the findings confirm that it is possible to observe how packaging impacts on cognitive responses. This was evident in the quick judgements and decisions made on packaging within the focus group activities and the ease in which packaging generated imagery in the minds of respondents. The pack ratings items in the survey primarily assessed cognitive evaluations and judgements and there were many differences between the ratings of the different pack styles. Both stages of research, therefore, show how packaging impacts on pack and product related beliefs and categorisation.

Secondly, the methods utilised showed evidence of the impact of packaging on affect. The focus groups provided unique insight into how holding different types of packaging made participants feel. Novelty packs were able to elicit positive feelings while a plain pack elicited very negative feelings. While few differences were observed between the branded packs within the survey findings (the alternative hypothesis which expected more positive feelings for novelty over regular packs could not be fully supported), the

marked difference between feelings generated by the branded packs compared with the plain pack was still evident.

Thirdly, it was possible to observe behavioural impacts through the observational methodology used within the focus groups. For example, interest for branded packs and disgust for plain packs could be observed through facial expressions and body language. Participants smiling at novel colours and shapes while turning noses up and tossing the plan pack aside demonstrate approach/avoidance behaviours (Bloch, 1995). Within the quantitative research, linking pack awareness, positive appraisal and receptivity with smoking susceptibility, also associated packaging with a behavioural response. While an association with susceptibility is not the same as observing actual smoking behaviour, it is a reasonable predictor of future tobacco use (DiFranza et al., 2006; Lovato et al., 2011; National Cancer Institute, 2008; Pierce et al., 1996).

That is was possible to observe all three types of responses through the variety of methods chosen for the study design also has theoretical implications, particularly for the study of emotions in consumer behaviour. While marketing academics have explored emotions in relation to marketing stimuli such as advertising, and the mediating role of emotions on consumer satisfaction (Laros & Steenkamp, 2005), there has been relatively little study on the emotions evoked by packaging. Packaging has a unique place within the study of consumer emotions as the same responses have the potential to be present both at initial exposure, and because of packaging's presence, also during consumption. For example, Richins (1997) is critical of using the same emotional responses gleaned from advertising exposure in studies which explore emotions arising during consumption. However, it is possible that emotions arising from exposure to packaging would also be present during the consumption experience.

Lists of emotions which could be present during consumer behaviour have been identified by both Richins (1997) and Laros and Steenkamp (2005). Laros and Steenkamp identified positive and negative emotion words from key studies in the psychological emotion literature. Whether the same words are relevant for consumer behaviour is debated. Richins' set of emotions, termed the Consumption Emotion Set, relates only to those potentially arising during consumption (Richins, 1997). However, there is a lot of disagreement about which emotion words are applicable to consumer behaviour. Taking into account the hierarchical structure of emotions as described by Laros and Steenkamp, shame and pride are basic consumer emotions which were also identified by the focus group participants in this study in response to packaging. These are basic emotions, believed to be innate and universal, as identified in the psychological literature. However, a further basic psychological emotion excluded from investigation as a consumer emotion, and without explanation by Laros and Steenkamp (2005) and Richins (1997) is disgust. That disgust featured strongly in participants' accounts of their negative feelings towards plain packaging suggests this basic emotion could potentially be included as a consumer emotion.

In their hierarchy of emotions Laros and Steenkamp also describe a lower subordinate level of specific individual emotions. Through participants' descriptions of their feelings, this research can offer new emotion words not previously identified in respect to consumer emotions. Feminine, clean, mature, popular, confident, stylish and cool are examples of positive emotion words, while dirty, cheap, nasty, boring, smelly and old are examples of negative emotion words expressed by participants. This research also supports subordinate level consumer emotion words previously identified such as depressed and embarrassed (Laros & Steenkamp, 2005).

The positive emotions expressed by participants are also closely linked with desired youth identity and image. It is therefore likely that interaction with branded packaging

has a role to play in generating symbolic meaning and creating an identity which young smokers wish to project to others (Belk, 1988; Underwood, 2003). Furthermore, it is positive emotion which helps create a consumer-brand relationship (Fournier, 1998; Reimann et al., 2012). Positive emotional responses to branded tobacco packaging may in part help to explain the strong brand loyalty which often characterises smoking.

The focus group findings also provide support for Olney, Holbrook and Batra's (1991) suggestion of a relationship between pleasure and arousal, and the time spent viewing marketing stimuli. In this regard, affect could account for the approach/avoidance behaviours observed in the focus groups. Packs which generated positive feelings were held on to for longer periods of time and methods of openings were played it, while the plain pack, which generated negative feelings, was often quickly discarded by participants. Furthermore the packs which generated the strongest positive emotional responses were also the ones most highly regarded in the ratings exercises, providing support for the notion that there is a relationship between positive arousal and marketing stimuli evaluation (Steenkamp Baumgartner, & Van der Wulp, 1996).

The proposition that the primacy of affective responses is an important factor in influencing behaviour (Hoek et al., 2013), combined with the finding that a plain pack generates very negative feelings, may shed light on *how* plain packaging *may* influence tobacco consumption. Previous research using plain packs in a naturalistic setting has shown changes in smoking behaviour from participants using a plain pack. The same participants also reported negative feelings from using a plain pack (Moodie et al., 2011). While the two findings were not linked in the study, it is possible that the negative feelings influenced the behavioural changes. Just as feelings have been identified as important in determining advertising effectiveness (Edell & Burke, 1987), negative feelings could be the key to plain packaging effectiveness.

This study also provides support that packaging is an intrinsic product cue which infers product attributes such as quality and price. Previously packaging was considered an extrinsic cue and not part of the product itself (Olson & Jacoby, 1972; Zeithaml, 1988). However, plain packaging studies consistently show that through the use of a standardised colour, font and shape, pack design has the ability to change the nature and essence of the product, thereby becoming an intrinsic cue. Standardising colour in particular highlights the importance of colour in attaching meanings and emotional responses to products (Adams & Osgood, 1973; Gallopel-Morvan, Gabriel, Le Gall-Ely, Rieunier, & Urien, 2013). The meanings attached to the dark brown plain pack used in this study were shared among participants in the focus groups. It produced a consistent negative user image and implied greater strength and harm. It has been highlighted that brown is associated with 'sad' and 'stale' across countries (Madden et al., 2000) and is particularly suited for plain packaging due to its congruency with the product inside (Jacobs, Keown, Worthley, & Kyung, cited in Gallopel-Morvan et al., 2013). The psychological meanings associated with the colour chosen for plain packaging could therefore be crucial for plain packaging effectiveness in reducing smoking uptake and prevalence. In different cultures, this colour could change depending on cultural colour associations and meanings (Gallopel-Morvan et al., 2013).

One further finding from the research was that responses to branded packaging in the focus groups were generally positive, while in the survey pack ratings and feelings items were negative. It is likely that the quantitative design, which used visual stimuli instead of actual packs, did not allow the branded packaging designs to arouse the same level of responses in participants. It is possible that the interaction with the packs in the groups, that participants were encouraged to hold and open them, heightened responses. It has been suggested that engaging in touch can produce stronger responses and create more positive attitudes in consumers (Ghoshal et al., 2011; Peck & Wiggins, 2006). This suggests that touch has important marketing implications and may account for the recent

developments in tactile tobacco packaging, such as 'touch' packs which have special pack coatings, tactile inks and embossments (see section 3.7).

Finally, it is important to note that it was beyond the scope of the study to explore order of effects, i.e. that behavioural responses were influenced by affective and/or cognitive responses, or the interaction between, or hierarchy of, cognition and affect (Bloch, 1995; Cohen, 1990). However, that all three responses were evident provides a basis for further research with other consumer goods packaging.

8.5   Implications for future research

The study has implications for future research. While measures for exposure, appreciation and receptivity to marketing communications such as advertising, promotions and POS exist (see for example, Lovato et al., 2011; MacKintosh et al., 2012), this is the first study to provide a measure of awareness, appraisal and receptivity for packaging. It would be desirable to use these measures in a longitudinal design to determine whether a direction of effect can be observed with packaging and youth smoking, i.e. whether pack awareness, exposure or appreciation precedes smoking uptake. The cross-sectional nature of this study, although using well validated measures of future smoking intentions, prohibits such analyses. A study following young people over time could be employed to test these findings. Such a design could assess responses to packaging at baseline along with individuals' smoking status or susceptibility, and then follow-up measures of smoking behaviour at a later date. This would detect any change in the smoking status of respondents and link it with packaging.

In line with Gestalt theory, the qualitative work suggested that adolescents viewed the pack holistically, taking into account the full complement of design features when

forming judgements. The study was designed to primarily examine the impact of design, i.e. colour, graphics and pack structure, rather than health warnings. This has raised a potential gap in the research. That the health warnings on branded packs appeared to be mostly ignored by participants, and were only commented on occasionally, may suggest that distinctive and bright pack designs, which were viewed as fun and playful by participants, with positive imagery, may reduce the seriousness or impact of health warnings. On very slim superslims packs, health warning font sizes are often very small, with words frequently divided by hyphens. This prevents the warning from being displayed properly. There is a need therefore to investigate the impact of packaging design on health warning salience.

One exploratory component of the research explored the impact of cigarette appearance on adolescents. It found cigarette stick design to be an important communications tool, particularly in the positive imagery and reduced perceptions of harm generated by slim sizes. An additional study could explore this issue further by using a similar design to this study. This study highlights the importance of qualitative work in understanding how consumers engage with and interpret messages in design. It provides a consumer driven approach and allows participants to inform the design of measurement instruments used in quantitative work, ensuring meaning for future respondents and helping to interpret findings. Further focus group work and cognitive interviews could help generate and test statements to use in a survey. This could assess the impact of 'novelty' cigarettes, such as slimmer sizes or unusually coloured cigarettes such as the Sobranie brand which features pastel coloured sticks, 'regular' cigarettes, such as a king-size with imitation cork filter, and 'dissuasive' cigarettes, such as the fully brown cigarette which was found unappealing by adolescents in the focus groups. Such a design could therefore explore quantitatively the themes identified in this study, such as appeal and harm, and generate image profiles for the different styles.

A further implication for future research lies in the finding that smoking attitudes were very negative among the focus group participants, but were easily diminished by exposure to the novelty packs. This highlights the powerful effect that marketing communications have on adolescents and provides support for tobacco control policy which controls tobacco marketing and denormalises smoking. There is some concern in the public health community that increased marketing exposure to e-cigarette products may undo the progress tobacco control has made in denormalising tobacco use (de Andrade, Hastings, & Angus, 2013). With increasing investment in e-cigarettes (the US spent $100million on e-cigarette advertising in 2013, an increase of 20% on 2012 [Booth, 2014]), it is important to monitor e-cigarette marketing, which uses almost identical techniques to previous tobacco marketing. A small exploratory qualitative study with 11 to 16 year olds in Scotland indicate that adolescents currently view e-cigarettes as a distinct product type, separate from nicotine replacement products and traditional cigarettes. However, the findings showed a lack of terminology surrounding e-cigarettes and some participants could not make a distinction between smoking cigarettes and the use of e-cigarettes. While there was little engagement with e-cigarette products or e-cigarette marketing, marketing exposure was evident on a subconscious level (Ford & MacKintosh, 2014). As tobacco companies increasingly move into the e-cigarette market, bringing 'novelty' packs such as the Blu e-Cigs Smart Pack, and e-cigarette usage increases (Booth, 2014), it will be crucial to see whether or not this will have an impact on adolescent smoking attitudes. The Blu Smart Pack, for example, includes a social feature which alerts the user when there is another Blu e-Cigs user within 50 feet. This feature is designed to encourage the social activity of e-cigarette usage, which may tap into adolescent concerns about forming social relations and group identity (Amos & Bostock, 2007; Amos, Gray, Currie, & Elton, 1997; Wiltshire, Amos, Haw, & McNeill, 2005). In the Ford and MacKintosh study, e-cigarettes were sometimes seen as a more appealing option for fitting in with peers, or experimenting with cigarettes, for those who may be put off by the harmful nature of traditional cigarettes.

Finally, all the tobacco brands used as stimuli in the study easily generated distinct user imagery and communicated consistent messages. It is likely that this occurs from a well-defined product, which has received substantial investment to develop and refine brands and packs over time. E-cigarettes provide an opportunity to explore the imagery generated, and the messages communicated, by a product category in relative infancy. E-cigarettes include a range of product types, with different flavours, made and marketed by different types of companies and sold through a variety of channels. Ford and MacKintosh's (2014) preliminary qualitative study highlights that there may be potential cause for concern over the messages communicated to adolescents through e-cigarette pack and product design. When exposed to e-cigarette packs and products, it was apparent that some of these contained messages which appealed to adolescents. This resulted in confusion about who e-cigarettes are intended for. Some aspects of these products, especially sweet and fruity flavours, were identified as being for young never smokers rather than for adult smokers who want to quit. The study found little in the way of consistent imagery, but some positive imagery was generated by the packaging of brands owned by tobacco companies. It is likely that e-cigarette product design, brands and packaging will be developed and refined over time with further marketing investment. There is therefore a need to monitor the impact of e-cigarette pack and product design, along with adolescents' exposure to and engagement with e-cigarette marketing.

8.6 Implications for public health policy and practice

At the time of writing, Ireland and New Zealand have committed to following Australia's lead and introduce plain packaging. In the UK, Sir Cyril Chantler was tasked with conducting an independent review into plain packaging in November 2013. This review was to consider the evidence of whether plain packaging is likely to lead to a decrease in tobacco consumption, with a particular emphasis on reducing uptake among children (Chantler, 2014). The review findings were to inform a decision on standardised packaging by the UK Government. In April 2014, Chantler's conclusion was:

> Having reviewed the evidence it is in my view highly likely that standardised packaging would serve to reduce the rate of children taking up smoking and implausible that it would increase the consumption of tobacco. I am persuaded that branded packaging plays an important role in encouraging young people to smoke and in consolidating the habit irrespective of the intentions of the industry. Although I have not seen evidence that allows me to quantify the size of the likely impact of standardised packaging, I am satisfied that the body of evidence shows that standardised packaging, in conjunction with the current tobacco control regime, is very likely to lead to a modest but important reduction over time on the uptake and prevalence of smoking and thus have a positive impact on public health. (Chantler, 2014, p. 6)

With this conclusion, the UK Government were 'minded to introduce regulations' on plain packaging (Barber & Conway, 2014, p. 22). Draft regulations for plain packaging and a final short consultation were published on June 26th 2014 (Department of Health, 2014). Even so, many backbench MPs are reported to oppose plain packaging, with 50 having signed a commons motions opposing the measure (Martin, 2014). This opposition occurs despite much support for plain packaging within the public health

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community; proponents of plain packaging include the World Health Organisation, US Surgeon General, European Public Health Alliance, Public Health England and the Royal College of Physicians.

There have also been concerns around tobacco industry techniques to influence policy on this issue. Ulucanlar, Fooks, Hatchard and Gilmore (2014) highlight that a particular technique of tobacco companies is to try and manipulate, misrepresent and ultimately undermine the evidence which is 'unfavourable to their interests' (Ulucanlar et al., 2014, p. 2). This approach was evident in tobacco industry submissions to the 2012 consultation on plain packaging. A recurrent theme was to dismiss the findings of the systematic review funded by the Department of Health, by shedding doubt on the evidence base (Moodie et al., 2012a; Ulucanlar et al., 2014). Better Regulation requirements involve seeking the views of stakeholders and companies within policymaking and Chantler was careful to give a voice to the tobacco industry, alongside public health, within his independent review. While there have been concerns that stakeholder consultation makes it easier for private companies with vested interests to obstruct public health policy (Ulucanlar et al., 2014), Chantler's review endorsed the findings of the systematic review, and concluded plain packaging would likely benefit public health, despite listening to the evidence as presented by tobacco companies.

This study provides support for statutory controls on tobacco packaging. It provides the first direct evidence that the attractiveness of cigarette packaging is associated with susceptibility to smoke. The study benefits from a national sample of adolescents. Given that smoking prevalence is in line with national data (Fuller, 2012), the sample is likely to be representative of the wider adolescent population in the UK. This suggests that mandating plain packaging may help to reduce smoking susceptibility, which corroborates the Chantler review's conclusion. Differences among the packaging styles highlight the influence of innovative and unique branding elements on adolescents'

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future smoking intentions. Despite marketing restrictions on advertising, promotions, sponsorship and POS displays, children continue to be influenced by tobacco companies through packaging design. The Tobacco Advertising and Promotions Act 2002, designed to be a comprehensive ban on the forms of tobacco marketing, left a gap by failing recognise the important role of packaging. The study therefore confirms the need for policymakers to control this powerful type of marketing and countries considering plain packaging should consider following Australia's lead. Member states of the European Union are free to introduce plain packaging under the new Tobacco Products Directive (TPD), which came into force on 19 May 2014, but this is not mandatory.

Furthermore the research emphasises the need for a standard pack shape and method of opening, providing support for two of the key revisions to the new TPD. The TPD prohibits compact slimmer 'perfume' style packs, deemed to mislead consumers about relative harm, and packs must have a standard, flip top or side-hinge opening. This partial pack standardisation, however, fails to prevent graphics, such as colour, from attracting attention to the pack while detracting attention from the on-pack warnings. Lighter and brighter colours also mislead people in terms of harm. Article 11 of the FCTC states that plain packaging may help 'address industry package design techniques that may suggest that some products are less harmful than others' (WHO, 2008b, p. 8). In this regard, plain packaging which mandates a drab brown colour, in addition to a standardised pack shape, would be the most effective way of reducing misperceptions of harm.

The findings also show that differences in cigarette appearance can generate interest, provide novelty, communicate positive imagery and mislead consumers in respect to product harm. While providing support for the ban on branding, colour and other decorative elements on cigarettes in Australia, this study suggests that standardising diameter could further reduce the opportunity for tobacco companies to communicate

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with and influence young people. While it is not possible to make policy recommendations from the small exploratory component of the study which examined cigarette appearance, the proposed ban on cigarettes less than 7.5mm in diameter, which was outlined in the draft proposed TPD, but dropped from the final TPD, seems like a missed opportunity for tobacco control policy in Europe. Similarly, the draft regulations for plain packaging in the UK, should the Government decide to implement this, places no restrictions on cigarette diameter. Globally, female smoking rates are increasing and cigarettes with smaller diameters are primarily designed to attract women (Amos, Greaves, Nichter, & Bloch, 2012; Carpenter et al., 2005). It has been suggested that gendered tobacco control strategies could help to reverse the smoking epidemic in women (Amos et al., 2012). Restrictions on slimmer cigarettes, which communicated glamour, slimness and class to the girls in this study, could be one potential avenue to help achieve this.

It is important to recognise, however, that plain packaging legislation will not provide a 'silver bullet' to tobacco consumption and youth smoking uptake. The Royal College of Physicians Tobacco Advisory group state that 'the individual components of tobacco control policy typically have modest effects' (Royal College of Physicians, 2010, p. 182). Only a comprehensive tobacco control strategy, which includes marketing restrictions alongside pricing, restricted access for young people, bans on smoking in public places and cars, controls on POS display, education on the harms of smoking and support for cessation, can attempt to tackle the myriad of factors which influence youth smoking. Plain packaging will, to some extent, limit the effects of branding such as removing the aspirational qualities and positive imagery that branded packaging evokes, but is unlikely to eradicate this. Therefore, other potential avenues need to be monitored; particularly the messages adolescents are exposed to from mainstream, traditional and social media environments.

The dynamic nature of tobacco packaging could also be adopted by public health. Packaging design is driven by creative and technological industries, which increasingly find new ways to use the pack as a means of promoting the product. While controlling this marketing tool through plain packaging restricts packaging's promotional role, public health could creatively use similar 'novelty' techniques to communicate with people. Some potential public health innovative packaging measures have recently been explored with young female smokers, aged 16 to 24 (Moodie, McKell, Purves, & de Andrade, 2012c). Measures included pack inserts with harm or cessation messages, quick response (QR) barcodes which direct to NHS stop-smoking websites, 'talking' packs which play a short health warning or cessation message every time the pack is opened, and cigarettes which displayed a text health warning on the filter or cigarette paper. However, the study found participants' perceptions of the possible impact of the measures were mixed. This approach shifts the focus of packaging from a promotional to an educational tool, relying on informational messages, when, as this thesis indicates, encouraging emotion may be a more effective way to engage people. Finding a way to arouse positive emotion - a tobacco industry technique - rather than messages which affect self-esteem and personal comfort, for example by fostering guilt and shame in smokers, could heighten the urgency to adopt more healthy behaviour (Marques & Domegan, 2011). Care also needs to be taken with innovative public health measures, not to create covetable packs through gimmickry.

One persuasive approach potentially worth exploring is the use of dissuasive cigarettes through colour. Initial exploratory work by Hoek et al. (2012b), and the negative adolescent responses to the brown coloured cigarette in this study, suggests cigarettes designed to minimise appeal may have the potential to work in a similar way to plain packaging by exposing the product as harmful, dirty and not a product young people identify with. Rather than an overt message which directly tells people about harm or

that they shouldn't smoke, dissuasive design communicates this message through product cues.

If the UK Government proceeds with plain packaging, May 2016 is the proposed introductory date. In the interim, young people continue to be exposed to the messages communicated through branded tobacco pack and product design. As such, incorporating information about design, and how it is used by tobacco companies within a social influences resistance model, could help adolescents recognise how they continue to be targeted by tobacco companies. In the US this approach has been found to help smoking prevention efforts (Lantz et al., 2000). Within Scotland, the Curriculum for Excellence provides local authorities, schools and teachers with flexibility so they can develop opportunities to discourage tobacco use, whether as part of the science curriculum; personal, social, health and economic (PSHE) education; and in England, activities related to National Healthy School Status (Scottish Executive, 2004; NICE, 2010). Information related to the pressure coming from tobacco companies to smoke could also be integrated into classroom discussions in a range of subject areas. For example discussions around tobacco marketing generally, or packaging specifically, could be relevant when teaching art and design, media studies, history and citizenship.

Tobacco control by its very name involves controlling and containing tobacco industry activity which would otherwise exacerbate the appeal of smoking. One key leaning from the marketing of tobacco is that there are powerful techniques available for engaging with people to influence their behaviour. Chapter 3 highlighted that tobacco companies have invested much effort in generating an intimate understanding of its key target audience – young people. Creating and developing brands and packs which appeal to aspirational needs and which positively influence affective responses likely contribute to young people smoking and strong brand loyalty to tobacco brands. For example, the

affective responses to branded packaging in the focus groups were powerful enough to quash participants' very negative smoking and smoker attitudes.

Public health could use such tools in a similarly creative way. While public health has started to recognise the importance and 'primacy' of affective responses, for example, within anti-smoking adverts, there is a tendency to limit messages to a one-size-fits all approach which arouses negative emotions such as shock, horror and fear (Hoek et al., 2013). In the US, the 'truth' campaign used 'youth marketing' techniques and TV advertising to counter tobacco marketing influences (Hicks, 2001). The campaign was initially launched in Florida in 1998, and was followed by a national roll-out in 2000. It utilised exposés of manipulative marketing strategies rather than didactic messages telling young people not to smoke, deglamorised smoking and portrayed young people confronting tobacco companies about their practices (Farrelly, Davis, Haviland, Messeri, & Healton, 2005). It is linked with sustained increases in anti-tobacco attitudes and a significant drop in youth smoking prevalence (Farrelly, Davis, Duke, & Messeri, 2009; Thrasher et al., 2004). Such a campaign fits into a tobacco industry denormalisation strategy which aims of reduce the acceptability of smoking. Research around tobacco industry denormalisation has primarily focused on young people due to the influence of perceived social norms, peer influence and social setting in youth smoking (Hammond, Fong, Zanna, & Thrasher, 2006; Ling, Neilands, & Glantz, 2007).

The 'truth' campaign was built around the recognition that symbolic and emotional rather than health-focused values underlie youth smoking (Hastings & Domegan, 2014; Hicks, 2001). Furthermore the campaign messages resonated with youth concerns about being manipulated (Hammond et al., 2006). The campaign's success is largely attributable to it being youth driven, facilitated by a strong focus on qualitative research with the very group it was intended to target. Just as this thesis highlights the importance of working with young people, for example, developing research tools using as far as

possible their language and tone within survey measures, this is crucial in a social marketing approach which is designed to foster voluntary behaviour change and instil the desire to protect health. Working in partnership with young people, building trust and relationships, can not only help to understand their motivations and competing unhealthy behaviours, it can help develop jointly designed, youth relevant tobacco control strategies. Encouraging youth participation, such as the Scottish Government's Youth Commission on Smoking Prevention, enables young people to become involved in, and responsible for, their futures. This moves beyond young people being able to resist tobacco industry influences encouraging them to smoke, to giving them a voice and empowering them to influence upstream behaviour change and policy. The Youth Commission's recommendations of a 12 month investigation into young people's thoughts and habits around smoking will feed into policy makers' decisions about strategies designed to prevent young people from using tobacco (Young Scot, 2014). This is essential if the Scottish Government's target of creating a tobacco-free generation by 2034 is to be realised (Scottish Government, 2013).

APPENDICES

Appendix 1: Focus groups discussion brief

Introduction
- Introduce myself and project (about how products are marketed to attract young people's attention, want to know what they think about certain products, likes and dislikes).
- Format of discussion, tape-recorder, confidentiality.
- Introduce selves, names, hobbies, leisure activities, what you like to do in your spare time.

Warm up
Talk a little bit about shopping.
- What shops do you visit? Favourite?
- Who do you go shopping with? Where? (What is it like there?)
- When you have money of your own what kind of things do you buy?
- How do you decide which things to buy?

1. Open activity
- 2 bags with range of products, some you may have seen before, take some time to have a look through them and put them out onto the floor.
- Talk amongst yourselves, group together in whatever way you feel is appropriate. 16 squares, no right or wrong way, other groups may do it differently.

Discuss groupings & contrasts – why some there and some here?

- If grouped by product category, ask to try and forget product type and think about how they look.

2. Mapping exercise
1. Order from most appealing to least appealing/for someone like me
   - Discuss order/reasoning behind order. Target products - why X is different from Y?
   - What is it you like/dislike about them?
   - Good /bad features
   - What do you think the product is like?

2. Order for someone (not) like me
   - Just thinking about how the product looks, what is it trying to say?
   - Imagine these products were people – can you describe them? **See product list**

3. Tobacco pack exposure
- What I want to focus on with your group is tobacco.
- Think about packets of cigarettes.
  - Where do you see them?   Describe that to me.
  - How often do you come across them?
  - Who do you see them with?

4. All tobacco packs (*including plain Kerrods*)
- Pass round some packs. Take some time to have a look at them, see how they feel in your hand, some of them open in different ways.

  a) Talk amongst yourselves for a few minutes to see if there's any way in which they can be grouped together

  Discuss groupings & reasoning

  b) Repeat mapping activity

- Go through different styles of pack – **See product list.**
- Have you seen this pack before? Where? What situations? Who had it?
- What springs to mind when you see this pack? What words would you use to describe this pack - positive or negative?
- Imagine that pack is a person – can you describe?

5. Ordering – **See product list**
- Now put these packs in order of:
- Group 1 & 2 show cards.

- Discuss ordering and reasons for decisions.
- Draw contrasts between 2 packs that are ordered differently.
- Why is this one at this end and this other one over here?

- Ask participants to choose their favourite pack. Hold it in your hand, imagine it was your pack. How does it make you feel? Contrast with plain pack.

6. Product Awareness
- Now think about the cigarettes that you have seen.
  - What have they looked liked?
  - Are they all the same? If different, why? Describe the differences
  - How often do you see cigarettes, where do you see cigarettes?

7. Product ordering
- Show a variety of single cigarettes.
  - a. Group together in any way you see appropriate – discuss.
  - b. Place in order of attractiveness / strength / harm - discuss order.

8. Standardised packs
- a. Group together in whatever way you feel is appropriate - discuss
- b. Place in order of attractiveness / strength / harm - discuss order.
- c. Words to describe packs and personification of packs * – **See product list.**

9. Packaging as marketing
- Refer back to packaging discussion.
  - Any situation where you were drawn to a product because of how it looked?
  - Ever been tempted to try a product because of how it looked?
  - What was it that you liked?
  - Did you try it? Were you happy with it/disappointed?
- How important or unimportant is packaging in getting people to try products?' Why?
- Think about different product categories – are there some products where packaging is more or less important than others?
- Link back to the earlier exercise with the range of products.

10. Plain packaging
- How important or unimportant do you think tobacco packaging is to somebody thinking of starting smoking? Why?
- People are talking about introducing plain packs for tobacco (show Kerrods brown pack)
- What do you think about this idea?
- Why do you think they want to do this?
- What do you think this will mean for young people who smoke/don't smoke/thinking of starting smoking? Why?

*Product lists for activities

Activity 2 – General products personification

Contrast: Vimto candy & Godiva
              Whisky & Cider
              L'oreal & Daily moisturiser
              Boots body spray & Lynx

Activity 4 – Tobacco packs to discuss: Superslims
                      B&H Slide
                      Mayfair 14s
                      Lambert & Butler
                      Sovereign
                      Plain Kerrods

Activity 5 – For ordering, take away: Mayfair Smooth
                      American Spirit
                      Winston
                      Silk Cut Silver
                      Superkings
                      Dunhill
                      Club
                      Vogue
                      Chesterfield
                      Golden Virginia Box

Activity 8 – Standardised packs

Discuss: Superslims
      Slide
      Pall Mall

Appendix 2: Observation sheet

Focus Groups April 2011

Date .... Time............................... Group ....

Observations - *General Products*	Initially	Grouping/Ranking exercises
Facial Expressions		
Body Language		
Verbal Expressions		

Observations - *Tobacco*	Initially	Grouping/Ranking exercises
Facial Expressions		
Body Language		
Verbal Expressions		

Observations - *Single Cigarettes*	Initially	Ranking exercises
Facial Expressions		
Body Language		
Verbal Expressions		

Observations - *Plain Packs*	Initially	Ranking exercises
Facial Expressions		
Body Language		
Verbal Expressions		

Appendix 3: Recruitment questionnaire

YOUNG PEOPLE'S VIEWS AND EXPERIENCES OF CONSUMER PRODUCTS

Recruitment Questionnaire

Spring/Summer 2011

Hello / good evening etc, I am doing some research on behalf of the University of Stirling to find out what young people think about the different ways that products are marketed. We will be looking at products such as soft drinks, food, cosmetics/toiletries, alcohol and tobacco.
Can you help me by answering a few quick questions?

[NB. Please ensure that respondent has answered all of the questions below, prior to recruitment]

PROFILE

Sex: Male   [   ]   **Age**: 15   [   ]

       Female   [   ]   [   ]

                                          [   ]

Occupation of Chief Income Earner: …………………………………….

Social Class: ABC1   [   ]

                  C2DE   [   ]

Q1 Which of the following, if any, have you been to in the past week?
SHOWCARD 1

McDonalds	☐
Burger King	☐
Arbys	☐
Kentucky Fried Chicken	☐
Pizza Hut	☐
Dunkin Donuts	☐
None of the above	☐
Don't know	☐

Q2 Companies sometimes have special promotions for their customers. Which of the following have you ever participated in?

SHOWCARD 2

Sent off for a free gift, advertised on a product	☐
Received a free gift inside or along with a product	☐
Bought a product, with another, extra product free	☐
Collected coupons, tokens from a product	☐
Collected points on a loyalty card	☐
Entered a competition advertised on a product	☐
Entered a prize draw	☐

Q3 Which of the following best describes you?
(Please tell me the letter which matches your answer)

SHOWCARD 3

I have never smoked a cigarette before	☐	X Recruit as 'Non Smoker'
I have tried a cigarette in the past, but I do not smoke now	☐	Y Recruit as 'Non Smoker'
I smoke one or more cigarettes a week	☐	Z Recruit as 'Smoker'

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Appendix 4: Participant information sheet and consent form (focus groups)

INSTITUTE FOR SOCIAL MARKETING

University of Stirling & The Open University
Stirling FK9 4LA Scotland

Telephone: +44 (0) 1786 46 7390
Facsimilie: +44 (0) 1786 46 6449
Email: ctcr@stir.ac.uk

<u>Young People's Views and Experiences of Consumer Products</u>

YOUNG PERSON INFORMATION SHEET

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following carefully and discuss it with others if you wish. If there is anything you are not clear about or if you would like further information, please ask.

What is the study about?
We are trying to find out about young people's awareness, views and experiences of consumer goods, with a focus on 15 year olds. We are particularly interested in how certain products are marketed to attract young people's attention. These products include soft drinks, food, cosmetics/toiletries, alcohol and tobacco. The findings will provide valuable insight into how adolescents regard products and may help to develop future policy with regards to the marketing of these products.

What will the study involve?
You will attend a small one-off discussion group, with around 4-5 other participants. The session will be held in an informal venue in Glasgow, such as a local hall or community centre. It will be conducted by two experienced academic researchers from the University of Stirling. The session will last around 90 minutes.

Do I have to take part?
Attendance at the discussion group is completely voluntary and you may withdraw at any time. The discussion will be audio-taped to ensure the researcher does not miss any important comments. Anonymous quotes may be used when presenting the study findings. Your name will be kept confidential and will not be used in any reports.

How do I take part?
If you would like to take part in a discussion group then please complete and return the consent form provided.

What do I get in return?
If you take part in a group discussion, you will receive a cash sum of £15.

Who can I contact for further information?
If you have any questions or would like to discuss the study further please contact:

Allison Ford,
Postgraduate Research Student
Institute for Social Marketing
University of Stirling & Open University
Tel: 07767 640 996

ISM Institute *for* Social Marketing
A collaboration between the University of Stirling and The Open University

<u>YOUNG PERSON CONSENT FORM</u>

Young people's views and experiences of consumer products

Please

initial box

1. I confirm that the above study has been explained to me and I have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree to the audio-recording of the discussion group.

4. I agree to take part in the discussion group.

5. I am aware that I will not be identified in the research findings.

_____ _____ _____

Name of Participant   Date   Signature

_____ _____ _____

Name of Person taking consent Date   Signature
(if different from researcher)

_____ _____ _____

Researcher   Date   Signature

1 for participant; 1 for researcher

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Appendix 5: Parent information sheet and consent form (focus groups)

UNIVERSITY OF STIRLING

Young People's Views and Experiences of Consumer Products

PARENT/GUARDIAN INFORMATION SHEET

Your child is being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following carefully and discuss it with others if you wish. If there is anything you are not clear about or if you would like further information, please ask.

What is the study about?
We are trying to find out about young people's awareness, views and experiences of consumer goods, with a focus on 15 year olds. We are particularly interested in how certain products are marketed to attract young people's attention. These products include soft drinks, food, cosmetics/toiletries, alcohol and tobacco. The findings will provide valuable insight into how adolescents regard products and may help to develop future policy with regards to the marketing of these products.

What will the study involve?
The study will involve your child attending a small one-off discussion group, with around 4-5 other participants. The session will be held in an informal venue in Glasgow, such as a local hall or community centre. It will be conducted by two experienced academic researchers from the University of Stirling. The session will last around 90 minutes.

Does my child have to take part?
Attendance at the discussion group is completely voluntary and the participant may withdraw at any time. The discussion will be audio-taped to ensure the researcher does not miss any important comments. Anonymous quotes may be used when presenting the study findings. Your child's name will be kept confidential and will not be used in any reports.

How does my child take part?
If you would like your child to take part in a discussion group then please complete and return the consent form provided.

What does my child get in return?
If your child takes part in a group discussion, they will receive a cash sum of £15.

Who can I contact for further information?
If you have any questions or would like to discuss the study further please contact:

Allison Ford,
Postgraduate Research Student
Institute for Social Marketing
University of Stirling & Open University
Tel: 07767 640 996

PARENT/GUARDIAN CONSENT FORM

Young people's views and experiences of consumer products

Please initial box

1. I confirm that the above study has been explained to me and I have had the opportunity to ask questions.

2. I understand that my child's participation is voluntary and that they are free to withdraw at any time, without giving any reason.

3. I agree to the audio-recording of the discussion group.

4. I agree that my child can take part in the discussion group and that they will receive £15 for taking part.

5. I am aware that my child will not be identified in the research findings.

_____
Name of Participant

_____ _____ _____
Name of Parent/Guardian   Date   Signature

_____ _____ _____
Name of Person taking consent   Date   Signature
(if different from researcher)

_____ _____ _____
Researcher   Date   Signature

1 for participant; 1 for researcher

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Appendix 6: Focus group stimuli

Consumer products packaging

Product category	Brand and product	Description
Men's toiletries	Boots body spray	Grey 'plain' own brand packaging
	Lynx deodorant body spray	Innovative twist spray cap, bright design, youth oriented
	Lynx bullet	Novel convenience product, bright design, youth oriented
	Nivea roll-on deodorant	Transparent packaging, 'regular' design for category
Ladies toiletries	Charles Worthington Frizz Free Shampoo	Compact travel size, blue design
	Bourgeois blusher	Limited edition, fashion 'Paris' design
	Body shop shower gel	Environmentally friendly packaging
	Smiles Colgate toothpaste	Child's design with Shrek character
	L'Oreal Sublime Bronze fake tan	Innovative spray nozzle
	Garnier Summerbody fake tan moisturiser	'Regular' moisturiser style packaging
	Plain perfume bottle	'Plain' glass bottle devoid of any branding
	Je Malone perfume bottle	Premium brand glass bottle
Food	Space raiders crisps	Price marked value packaging
	Pringles crisps	Price narked value packaging, tube structure
	Vimto spray	Novel candy spray product
	Freddo chocolate	Price marked value packaging, child's character
	Chocolate dip	Bright colourful cardboard design
	M&m's mini tube	Bright colourful plastic tube
	Godiva chocolate tin	Premium brand gold embossed tin
	Dairy Milk bar	'Regular' style of chocolate bar
Mints/Gum	Smints	Novel push dispenser, plastic box
	Mentos gum dispenser	Novel dispenser, plastic tube
	Wrigleys extra	'Regular' style chewing gum packaging
	Cobalt 5 cooling peppermint	Image based bright blue design
Alcohol	Glenlivet whisky	Product boxed, secondary packaging
	Pino Grigio fruity wine (can 187ml)	Convenience packaging, 187ml can, female oriented
	Tesco no frills beer	'Plain' own brand beer packaging
	Bicardi Breeze	Alcopop bottle
	Strong cider	Large plastic bottle, transparent packaging
	Carling can	Innovative 'taste lock' can
Drinks	Relentless Devotion energy drink	Image based design, youth oriented can
	Powerade sports drink	Transparent, bright blue product, sports cap
	KX energy drink	Red and blue can, designed as cheaper alternative to Red Bull brand
	Red Bull energy shot	Novel compact product, plastic bottle
	Water	'Regular' clear water bottle, screw cap
	Ribena	Carton, child oriented

Tobacco packaging

Brand and Variant	Description
Plain Kerrods	Dark brown 'plain' pack made up for purpose
Marlboro Bright Leaf	Innovative side flip opening, black
Silk Cut Superslims	Innovative superslims tall and narrow, white
Silk Cut Superslims (Limited edition)	Innovative superslims tall and narrow, purple floral design
B&H Silver slide	Innovative side slide opening pack, silver
B&H Silver bevelled edge	Innovative bevelled corner edge pack, silver
B&H Silver 14s	Value packaging, compact size, silver, red 'lego' 14 design
Mayfair 14s	Value packaging, compact size, blue, silver 14 design
Lambert & Butler Gold	Novel gold holographic design
Sovereign (normal black pack)	'Regular' black pack with gold sovereign design
Sovereign (Limited edition)	Limited edition version with 'cityscapes' nightlife design
Mayfair King Size	'Regular' blue pack style
Mayfair Smooth	Lighter blue design of 'regular' Mayfair pack
American Spirit	Novel bright yellow soft pack
Winston Red	Innovative rounded bevelled edge pack, red and white
Silk Cut Silver	Innovative sensory 'touch' pack, white
Superkings	Larger superkings size pack, black and gold
Dunhill	Larger size pack, red and silver
Club	Blue 'regular' style pack
Chesterfield	White pack with novel red design
Pall Mall Pink	Novel bright pink design
Vogue	Tall and flat supserslims size pack
Golden Virginia Box (Limited edition)	RYO limited edition box with 'leaf' design
Golden Virginia Pouch	RYO 'regular' style pouch

Example of novel packs with bright designs: Pall Mall and Lambert & Butler gold

Example of innovative packs with slimmer shapes: Silk Cut and Vogue superslims

Example of innovative packs with novel opening styles: Marlboro Bright Leaf and B&H

Example of value pack with 14 cigarettes: B&H Silver 14

Appendix 7: Interviewer-administered questionnaire (packaging module)

INSTITUTE FOR SOCIAL MARKETING

UNIVERSITY OF STIRLING
STIRLING FK9 4LA
Tel: 01786 46 7391 / 7390

MARKETING MONITOR

YTPS6/FWP4/2011

2011 Survey

(1-5)

Questionnaire No	

(6-8)

Interviewer ID No	

Title: Mr / Miss	First Name (in full):	Surname:
....	....	....

Address:

....

....

....

Postcode:
....

Tel No:

PARENTAL PERMISSION

Signature: ....

Relationship to child: ....

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INSTITUTE FOR SOCIAL MARKETING
UNIVERSITY OF STIRLING
STIRLING FK9 4LA
Tel: 01786 46 7391 / 7390

MARKETING MONITOR
YTPS6/FWP4/2011

2011 Survey

(1-5)

Questionnaire No	

(6-8)

Interviewer ID No	

Interviewer Name   Date

LOCATION

Country	(9)
Scotland	1
England	2
Northern Ireland	3
Wales	4

(14-16)

Ward

This interview was conducted in accordance with the Market Research Society Code of Conduct and the instructions given for this survey. The respondent was unknown to me. All information given to me must remain confidential.

Interviewer Signature   Date

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Q4   I'm going to show you some cards (SHOWCARDS 2-4) with descriptions of some ways that companies might try to attract attention to cigarettes. For each one can you tell me if you have seen anything like this in the last 6 months.

a. SHOWCARD 2

OBTAIN SINGLE RESPONSE
ENSURE RESPONDENT READS ALL EXAMPLES ON SHOWCARD

New or unusual pack design including:
       New or unusual shape or size
       New or unusual method of opening
       Limited edition packs
       Other change to design, including colour and markings

		(62)
Yes	1	
No	2	
DK	3	

IF YES, ASK: Can you tell me a bit about what you have seen and the brand that it was for?
PROBE FOR ANY OTHER BRANDS

Description of What Seen	Brand(s)	
………………………………….	…………….……………	(65-67)
………………………………….	…………….……………	(68-70)
………………………………….	…………….……………	(71-73)
………………………………….	…………….……………	(74-76)
………………………………….	…………….……………	(77-79)

c. SHOWCARD 4

Pack with the price marked on it

		(34)
Yes	1	
No	2	
DK	3	

PACKAGING

The next few questions are about the different styles of pack that cigarettes come in.

Q14   VISUAL PROMPT – PACKS A-E
SHOWCARDS 31-41

I'm going to show you a picture of five different cigarette packs with the name of the cigarettes covered up. I'll also show you some cards and I would like you to tell me the number that best describes what you think about how each of these packs looks. There are no right or wrong answers, we are just interested in what you think about the look of each pack, regardless of whether or not you smoke.

So, starting with this card (SHOWCARD 31) can you tell me the number that best matches what you think about each pack. What number best matches what you think about Pack a (POINT TO PACK A)?

REPEAT FOR EACH PACK - PACKS A-E
POINT TO EACH PACK ONE AT A TIME AND OBTAIN SINGLE RESPONSE FOR EACH
REPEAT FOR SHOWCARDS 31-41

SHOWCARD 31

a)

	Attractive				Unattractive		
						DK	
1. Pack a	1	2	3	4	5	6	(25)
2. Pack b	1	2	3	4	5	6	(26)
3. Pack c	1	2	3	4	5	6	(27)
4. Pack d	1	2	3	4	5	6	(28)
5. Pack e	1	2	3	4	5	6	(29)

SHOWCARD 32

b)

	Eye-catching				Not eye-catching		
						DK	
1. Pack a	1	2	3	4	5	6	(30)
2. Pack b	1	2	3	4	5	6	(31)
3. Pack c	1	2	3	4	5	6	(32)
4. Pack d	1	2	3	4	5	6	(33)
5. Pack e	1	2	3	4	5	6	(34)

c)

		Cool				Not cool		
							DK	
1.	Pack a	1	2	3	4	5	6	(35)
2.	Pack b	1	2	3	4	5	6	(36)
3.	Pack c	1	2	3	4	5	6	(37)
4.	Pack d	1	2	3	4	5	6	(38)
5.	Pack e	1	2	3	4	5	6	(39)

SHOWCARD 34

d)

		Not at all harmful				Very harmful		
							DK	
1.	Pack a	1	2	3	4	5	6	(40)
2.	Pack b	1	2	3	4	5	6	(41)
3.	Pack c	1	2	3	4	5	6	(42)
4.	Pack d	1	2	3	4	5	6	(43)
5.	Pack e	1	2	3	4	5	6	(44)

SHOWCARD 35

e)

		Fun				Boring		
							DK	
1.	Pack a	1	2	3	4	5	6	(45)
2.	Pack b	1	2	3	4	5	6	(46)
3.	Pack c	1	2	3	4	5	6	(47)
4.	Pack d	1	2	3	4	5	6	(48)
5.	Pack e	1	2	3	4	5	6	(49)

Q14 Continued

SHOWCARD 36

f)		Worth looking at			Not worth looking at			
							DK	
1.	Pack a	1	2	3	4	5	6	(50)
2.	Pack b	1	2	3	4	5	6	(51)
3.	Pack c	1	2	3	4	5	6	(52)
4.	Pack d	1	2	3	4	5	6	(53)
5.	Pack e	1	2	3	4	5	6	(54)

SHOWCARD 37

g)		Meant for someone like me			Not meant for someone like me			
							DK	
1.	Pack a	1	2	3	4	5	6	(55)
2.	Pack b	1	2	3	4	5	6	(56)
3.	Pack c	1	2	3	4	5	6	(57)
4.	Pack d	1	2	3	4	5	6	(58)
5.	Pack e	1	2	3	4	5	6	(59)

SHOWCARD 38

h)		Grown-up			Childish			
							DK	
1.	Pack a	1	2	3	4	5	6	(60)
2.	Pack b	1	2	3	4	5	6	(61)
3.	Pack c	1	2	3	4	5	6	(62)
4.	Pack d	1	2	3	4	5	6	(63)
5.	Pack e	1	2	3	4	5	6	(64)

Q14 Continued

SHOWCARD 39

i)

	Puts me off smoking				Tempts me to smoke		
						DK	
1. Pack a	1	2	3	4	5	6	(65)
2. Pack b	1	2	3	4	5	6	(66)
3. Pack c	1	2	3	4	5	6	(67)
4. Pack d	1	2	3	4	5	6	(68)
5. Pack e	1	2	3	4	5	6	(69)

SHOWCARD 40

j)

	I dislike this pack				I like this pack		
						DK	
1. Pack a	1	2	3	4	5	6	(70)
2. Pack b	1	2	3	4	5	6	(71)
3. Pack c	1	2	3	4	5	6	(72)
4. Pack d	1	2	3	4	5	6	(73)
5. Pack e	1	2	3	4	5	6	(74)

SHOWCARD 41

k)

	I would not like to have this pack				I would like to have this pack		
						DK	
1. Pack a	1	2	3	4	5	6	(75)
2. Pack b	1	2	3	4	5	6	(76)
3. Pack c	1	2	3	4	5	6	(77)
4. Pack d	1	2	3	4	5	6	(78)
5. Pack e	1	2	3	4	5	6	(79)

Q15 | VISUAL PROMPT – PACKS A-E AGAIN
SHOWCARDS 42-45

Now I'd like you to think about how you would feel if you had each pack.

Starting with this card (SHOWCARD 42) can you tell me the number that best describes how you think you would **feel** if you had, Pack a (POINT TO PACK A)?

REPEAT FOR EACH PACK - PACKS A-E
POINT TO EACH PACK ONE AT A TIME AND OBTAIN SINGLE RESPONSE FOR EACH
REPEAT FOR SHOWCARDS 42-45

CARD 4

SHOWCARD 42

a)

		Feel embarrassed				Not feel embarrassed		
							DK	
1.	Pack a	1	2	3	4	5	6	(15)
2.	Pack b	1	2	3	4	5	6	(16)
3.	Pack c	1	2	3	4	5	6	(17)
4.	Pack d	1	2	3	4	5	6	(18)
5.	Pack e	1	2	3	4	5	6	(19)

SHOWCARD 43

b)

		Feel proud				Not feel proud		
							DK	
1.	Pack a	1	2	3	4	5	6	(20)
2.	Pack b	1	2	3	4	5	6	(21)
3.	Pack c	1	2	3	4	5	6	(22)
4.	Pack d	1	2	3	4	5	6	(23)
5.	Pack e	1	2	3	4	5	6	(24)

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Q15 Continued

SHOWCARD 44

c)

		Feel disgusting			Not feel disgusting			
							DK	
1.	Pack a	1	2	3	4	5	6	(25)
2.	Pack b	1	2	3	4	5	6	(26)
3.	Pack c	1	2	3	4	5	6	(27)
4.	Pack d	1	2	3	4	5	6	(28)
5.	Pack e	1	2	3	4	5	6	(29)

SHOWCARD 45

d)

		Feel good			Not feel good			
							DK	
1.	Pack a	1	2	3	4	5	6	(30)
2.	Pack b	1	2	3	4	5	6	(31)
3.	Pack c	1	2	3	4	5	6	(32)
4.	Pack d	1	2	3	4	5	6	(33)
5.	Pack e	1	2	3	4	5	6	(34)

Appendix 8: Participant information sheet (survey)

FACTS International

UNIVERSITY OF STIRLING

INSTITUTE FOR SOCIAL MARKETING

University of Stirling & The Open University
Stirling FK9 4LA Scotland

Telephone: +44 (0) 1786 46 7390
Facsimilie: +44 (0) 1786 46 6449
Email: ctcr@stir.ac.uk

Marketing Monitor (YTPS6) - Opinions of Marketing and Smoking

INFORMATION SHEET FOR YOUNG PEOPLE

You are being invited to take part in a survey that is being run by FACTS International on behalf of the University of Stirling. We are interviewing over a thousand young people across the UK. Before you decide, it is important you understand why the research is being done and what it will involve. Please read this information sheet carefully and discuss it with others if you wish. If there is anything that you are not clear about, or if you would like further information, please ask.

What is the study about?
We want to find out what young people think about smoking and about the different ways that cigarettes are marketed. We also want to find out what things young people come across that aim to put people off smoking and what they think about these anti-smoking activities.

The information will be used to help develop policies about smoking and public health. We are interested in the opinions of all young people regardless of whether you have tried smoking or not. It is important that we speak to a mix of young people including some who smoke and some who do not smoke.

What will the study involve?
If you agree to take part, you will be interviewed in your home. The interviewer will ask you some questions from a questionnaire and will then give you a short questionnaire to complete by yourself and an envelope to seal it in. The questionnaires take around 35-40 minutes in total.

The information recorded is confidential and only members of the research team will see your answers. Your name will be kept confidential and will not be used in any reports. The findings of the research may be published but individuals will never be named.

What do I get in return?
If you take part in the interview you will receive a £5 Love2Shop voucher which can be used in a range of shops.

Do I have to take part?
Your participation is completely voluntary and you may withdraw at any time.

How do I take part?
If you wish to take part the interviewer will give you a consent form to complete before starting the interview.

What if I change my mind?
You are not obliged to participate in this study and you can choose to opt out at any time.

Are there any risks to me if I take part?
In any research study there is a possibility that you may feel uncomfortable talking about some of the topics or there is the risk that you share some personal or confidential information, by chance. However, we do not wish for this to happen. You do not have to answer any question that you feel is too personal or makes you uncomfortable.

Who can I contact for further information?
 If you have any questions or would like to discuss the study further, please contact:

Michelle Courtley
Project Manager

Appendix 9: Parent information sheet (survey)

FACTS international

UNIVERSITY OF STIRLING

Marketing Monitor (YTPS6) - Opinions of Marketing and Smoking

INFORMATION SHEET FOR PARENT

Your son/daughter is invited to take part in a survey that is being run by FACTS International, on behalf of the University of Stirling. We are interviewing over a thousand young people across the UK. Before you decide, it is important you understand why the research is being done and what it will involve. Please read this information sheet carefully and discuss it with others if you wish. If there is anything that you are not clear about, or if you would like further information, please ask.

What is the study about?
We want to find out what young people think about smoking and about the different ways that cigarettes are marketed. We also want to find out what things young people come across that aim to put people off smoking and what they think about these anti-smoking activities.

The information will be used to help develop policies about smoking and public health. We are interested in the opinions of all young people regardless of whether they have tried smoking or not. It is important that we speak to a mix of young people including some who smoke and some who do not smoke.

What will the study involve?
If you agree to your son/daughter taking part, they will be interviewed in your home. The interviewer will ask some questions from a questionnaire and will then give your son/daughter a short questionnaire to complete by himself/herself. The questionnaires take around 35-40 minutes in total.

The information recorded is confidential and only members of the research team will see your son/daughter's answers. Your son/daughter's name will be kept confidential and will not be used in any reports. The findings of the research may be published but individuals will never be named.

What does my son/daughter get in return?
If your son/daughter takes part in the interview they will receive a £5 Love2Shop voucher which can be used in a range of shops.

Do they have to take part?
Your son/daughter's participation is completely voluntary and they may withdraw at any time.

How do they take part?
If you would like your son/daughter to take part, the interviewer will give you each a consent form to complete before starting the interview.

What if I change my mind?
Your son/daughter is not obliged to participate in this study and they can choose to opt out at any time.

Are there any risks to my son/daughter if they take part?
In any research study there is a possibility that people may feel uncomfortable talking about some of the topics or there is the risk that they share some personal or confidential information, by chance. However, we do not wish for this to happen. Your son/daughter does not have to answer any question that they feel is too personal or makes them uncomfortable.

Who can I contact for further information?
If you have any questions or would like to discuss the study further, please contact:

Michelle Courtley
Project Manager

Appendix 10: Consent form (survey)

<u>CONSENT FORM- YOUTH TOBACCO POLICY SURVEY (YTPS)</u>

PARENTAL CONSENT   **Please Tick Box**

1.   I confirm that the above study has been explained to me and I
        have had the opportunity to ask questions

2.   I understand that my child's participation is voluntary and that
        he/she is free to withdraw at any time, without giving any reason

3.   I agree that my child can take part in the survey and that they will
        receive £5 for taking part

4.   I am aware that the results from the survey may be published but
        my child will not be identified in the research findings

_____   _____   _____
Name of person giving permission   Date   Signature

Relationship to child: ....

YOUNG PERSON CONSENT   **Please Tick Box**

1.   I confirm that the above study has been explained to me and I
        have had the opportunity to ask questions

2.   I understand that my participation is voluntary and that I am free
        to withdraw at any time, without giving any reason

3.   I agree to take part in the survey

4.   I am aware that the results from the survey may be published but
        I will not be identified in the research findings

_____   _____   _____
Name of Participant   Date   Signature

_____   _____   _____
Name of Interviewer taking consent   Date   Signature

Appendix 11: Principal components analysis

For each pack, a principal components analysis was conducted on the eleven cognitive items, to explore the potential for reducing these items to a smaller number of composite measures. Principal components analysis, along with reliability analysis, guided the derivation of two composite measures from nine of the 11 items: pack appraisal and pack receptivity. Principal components were extracted using varimax rotation with the criteria of eigenvalues greater than 1, consideration of the scree plot and component loadings >.4. Cut-off points were followed according to the guidance recommended by Hair, Tatham, Anderson & Black (1998) which suggests component loadings >.6 constitute high reliability, loadings around .5 are good, and loadings <.4 are considered too low to include.

Principal components factor analysis of 11 cognitive response items

The analysis was initially run for all 11 cognitive response items. For Mayfair, Pall Mall, and the plain pack, three components with eigenvalues of 1 or higher explained over 58% of the variance (63.82%, 63.76%, 58.42%). Two components were identified for Silk Cut Superslims and Marlboro Bright Leaf which explained over 55% of the variance (55.42% and 55.93%) (see tables 1-5).

For each pack, the analysis consistently identified five items included in component one: a) Unattractive /Attractive; b) Not eye-catching/Eye-catching; c) Not cool/Cool; d) Boring/Fun; e) Not worth looking at/Worth looking at. The loadings were high (>.6) for each item and for each pack. These combined items were interpreted as providing a composite measure of 'pack appraisal', which encompassed general pack impressions. The combined pack ratings provided an overall pack appraisal score ranging from 5-25 and indicated either a positive or negative pack appraisal

Four items identified in component two involved greater involvement and engagement with packaging. These items encompassed deeper consideration about packaging and involved more complex thoughts about identity and smoking. The four items were: a) Not meant for someone like me/Meant for someone like me; b) Puts me off/Tempts me to smoke; c) I dislike this pack/I like this pack; d) I would not like to have this pack/I would like to have this pack. The combined composite measure for these four items provided a score ranging from 4-20 which was interpreted as 'pack receptivity', and indicated whether or not respondents were receptive to the pack.

The factor loadings for four items included in component two were not as consistent as those included in component one. However, it was appropriate to include these four items to derive a second composite measure. The item 'Puts me off/Tempts me to smoke' had very high loadings (>.7) on component two for Mayfair (0.76), Pall Mall (0.79), and the plain pack (0.78), a good loading on Silk Cut Superslims (0.53) and a slightly lower loading for Marlboro Bright Leaf (0.49). Similarly, 'I would not like to have this pack/I would like to have this pack' had very high loadings for Mayfair (0.78), Pall Mall (0.79), and the plain pack (0.74), and good loadings on Silk Cut Superslims (0.52) and Marlboro Bright Leaf (0.52). The item 'Not meant for someone like me/Meant for someone like me' had high loadings for Mayfair (0.61) and Pall Mall (0.63), a good loadings for Silk Cut Superslims (0.50) and a lower loading for Marlboro Bright Leaf (0.48). This item loaded on component one for the plain pack (0.54). The final factor included in the receptivity composite measure was 'I dislike this pack/I like this pack', with good loadings on component two for Mayfair (0.62), Pall Mall (0.54), and the plain pack (0.70). This item loaded on component one for Silk Cut Superslims (0.72) and Marlboro Bright Leaf (0.70). Although these last two items were loaded on component one in some instances, they were deemed a better fit with the 'pack receptivity' measure. That they were loaded on component two for the majority of packs provided justification for this decision.

Principal components analysis was performed again on the nine items covered by the two components explained above. It was appropriate to eliminate the items 'Very harmful/Not at all harmful' and 'Grown-up/Childish' for the following reasons. Firstly, while the factor 'Very harmful/Not at all harmful' was loaded on component two for each pack, it could not be included as an item in the composite receptivity measure as it was not applicable to the receptivity construct. Secondly, 'Grown-up/Childish' did not load on either of the two salient components for three packs - Mayfair, Pall Mall and the plain pack. In these instances it was identified as a single item for a third and separate component.

Principal components factor analysis of nine cognitive response items

When the items 'Very harmful/Not at all harmful' and 'Grown-up/Childish' were excluded from the principal components analysis, two components with eigenvalues of 1 or higher were identified for Mayfair, Pall Mall and the plain pack, which explained 64.03%, 63.59%, and 59.08% of the variance. One component was identified for Silk Cut Superslims and Marlboro Bright Leaf which explained 54.26% and 55.29% of the variance (see tables 6-10).

For Mayfair, Pall Mall and the plain pack, five items had high loadings on component one (>.6). These were the same five factors previously identified as providing a composite measure of 'pack appraisal': a) Unattractive /Attractive; b) Not eye-catching/Eye-catching; c) Not cool/Cool; d) Boring/Fun; e)Not worth looking at/Worth looking at. The four items previously identified as providing a composite measure of 'pack receptivity' were loaded on component two for Mayfair and Pall Mall (>.58): a) Not meant for someone like me/Meant for someone like me; b) Puts me off/Tempts me to smoke; c) I dislike this pack/I like this pack; d) I would not like to have this pack/I

would like to have this pack. For the plain pack three of these items had very high loadings on component two.

Reliability analysis for two principal components

To test the internal reliability, components one and two were tested for internal consistency using Cronbach's alpha, which gives the internal consistency based on average correlations among items. A value above 0.8 is generally considered good and a value above 0.7 considered acceptable. Cronbach's alpha was good for component one, exceeding 0.8 for each pack (>.83, Table 11). Component one therefore had a high degree of internal reliability. Cronbach's alpha was acceptable for component two, exceeding the 0.7 threshold for each pack. The items comprising each component were systematically removed and replaced to see how the exclusion of a particular item would affect the reliability of the component. Cronbach's alpha was reduced if any of the items were removed, suggesting that the two component model for 'pack appraisal' and 'pack receptivity' was appropriate.

Table 1: Principal components factor analysis of 11 cognitive items for Mayfair – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2	Component 3
Unattractive / Attractive	0.79		
Not eye-catching / Eye-catching	0.86		
Not cool / Cool	0.75		
Very harmful / Not at all harmful		0.62	
Boring / Fun	0.70		
Not worth looking at / Worth looking at	0.61	0.48	
Not meant for someone like me/ Meant for someone like me		0.61	
Grown-up / Childish			1.00
Puts me off / Tempts me to smoke		0.76	
I dislike this pack / I like this pack	0.44	0.62	
I would not like to have this pack / I would like to have this pack		0.78	
Summary of PCA			
Eigenvalue	3.19	2.82	1.01
% of variance	28.99	25.67	9.15
Cumulative variance %	28.99	54.66	63.82

Table 2: Principal components factor analysis of 11 cognitive items for Silk Cut Superslims – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2
Unattractive / Attractive	0.79	
Not eye-catching / Eye-catching	0.80	
Not cool / Cool	0.78	
Very harmful / Not at all harmful		0.57
Boring / Fun	0.76	
Not worth looking at / Worth looking at	0.73	
Not meant for someone like me/ Meant for someone like me	0.48	0.50
Grown-up / Childish		0.63
Puts me off / Tempts me to smoke		0.53
I dislike this pack / I like this pack	0.72	
I would not like to have this pack / I would like to have this pack	0.54	0.52
Summary of PCA		
Eigenvalue	4.33	1.77
% of variance	39.35	16.07
Cumulative variance %	39.35	55.42

Table 3: Principal components factor analysis of 11 cognitive items for Marlboro Bright Leaf – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2
Unattractive / Attractive	0.79	
Not eye-catching / Eye-catching	0.79	
Not cool / Cool	0.78	
Very harmful / Not at all harmful		0.47
Boring / Fun	0.79	
Not worth looking at / Worth looking at	0.74	
Not meant for someone like me/ Meant for someone like me	0.53	0.48
Grown-up / Childish		0.68
Puts me off / Tempts me to smoke	0.49	0.49
I dislike this pack / I like this pack	0.70	
I would not like to have this pack / I would like to have this pack	0.57	0.52
Summary of PCA		
Eigenvalue	4.50	1.65
% of variance	40.90	15.03
Cumulative variance %	40.90	55.93

Table 4: Principal components factor analysis of 11 cognitive items for Pall Mall – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2	Component 3
Unattractive / Attractive	0.81		
Not eye-catching / Eye-catching	0.83		
Not cool / Cool	0.73		
Very harmful / Not at all harmful		0.55	
Boring / Fun	0.71		
Not worth looking at / Worth looking at	0.60	0.50	
Not meant for someone like me/ Meant for someone like me		0.63	
Grown-up / Childish			0.95
Puts me off / Tempts me to smoke		0.79	
I dislike this pack / I like this pack	0.51	0.54	
I would not like to have this pack / I would like to have this pack		0.79	
Summary of PCA			
Eigenvalue	3.21	2.75	1.06
% of variance	29.20	24.96	9.61
Cumulative variance %	29.20	54.16	63.76

Table 5: Principal components factor analysis of 11 cognitive items for the plain pack – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2	Component 3
Unattractive / Attractive	0.74		
Not eye-catching / Eye-catching	0.77		
Not cool / Cool	0.76		
Very harmful / Not at all harmful		0.45	
Boring / Fun	0.74		
Not worth looking at / Worth looking at	0.68		
Not meant for someone like me/ Meant for someone like me	0.44		
Grown-up / Childish			0.96
Puts me off / Tempts me to smoke		0.78	
I dislike this pack / I like this pack		0.70	
I would not like to have this pack / I would like to have this pack		0.74	
Summary of PCA			
Eigenvalue	3.24	2.17	1.01
% of variance	29.46	19.77	9.19
Cumulative variance %	29.46	49.23	58.42

Table 6: Principal components factor analysis of nine cognitive items for Mayfair – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2
Unattractive / Attractive	0.80	
Not eye-catching / Eye-catching	0.82	
Not cool / Cool	0.73	
Boring / Fun	0.69	
Not worth looking at / Worth looking at	0.60	
Not meant for someone like me/ Meant for someone like me		0.65
Puts me off / Tempts me to smoke		0.80
I dislike this pack / I like this pack		0.67
I would not like to have this pack / I would like to have this pack		0.82
Summary of PCA		
Eigenvalue	3.03	2.74
% of variance	33.61	30.42
Cumulative variance %	33.61	64.03

Table 7: Principal components factor analysis of nine cognitive items for Silk Cut Superslims – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1
Unattractive / Attractive	0.74
Not eye-catching / Eye-catching	0.75
Not cool / Cool	0.79
Boring / Fun	0.80
Not worth looking at / Worth looking at	0.80
Not meant for someone like me/ Meant for someone like me	0.64
Puts me off / Tempts me to smoke	0.63
I dislike this pack / I like this pack	0.75
I would not like to have this pack / I would like to have this pack	0.71
Summary of PCA	
Eigenvalue	4.883
% of variance	54.26

Table 8: Principal components factor analysis of nine cognitive items for Marlboro Bright Leaf – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1
Unattractive / Attractive	0.74
Not eye-catching / Eye-catching	0.74
Not cool / Cool	0.79
Boring / Fun	0.81
Not worth looking at / Worth looking at	0.81
Not meant for someone like me/ Meant for someone like me	0.67
Puts me off / Tempts me to smoke	0.63
I dislike this pack / I like this pack	0.76
I would not like to have this pack / I would like to have this pack	0.73
Summary of PCA	
Eigenvalue	4.98
% of variance	55.29

Table 9: Principal components factor analysis of nine cognitive items for Pall Mall – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2
Unattractive / Attractive	0.81	
Not eye-catching / Eye-catching	0.83	
Not cool / Cool	0.72	
Boring / Fun	0.71	
Not worth looking at / Worth looking at	0.60	0.51
Not meant for someone like me/ Meant for someone like me		0.66
Puts me off / Tempts me to smoke		0.80
I dislike this pack / I like this pack	0.46	0.58
I would not like to have this pack / I would like to have this pack		0.81
Summary of PCA		
Eigenvalue	3.10	2.73
% of variance	34.39	29.20
Cumulative variance %	34.39	63.59

Table 10: Principal components factor analysis of nine cognitive items for the plain pack – component loading coefficients, eigenvalues and variance (rotated component matrix)

Item	Component 1	Component 2
Unattractive / Attractive	0.74	
Not eye-catching / Eye-catching	0.76	
Not cool / Cool	0.75	
Boring / Fun	0.74	
Not worth looking at / Worth looking at	0.70	
Not meant for someone like me/ Meant for someone like me	0.53	
Puts me off / Tempts me to smoke		0.81
I dislike this pack / I like this pack		0.73
I would not like to have this pack / I would like to have this pack		0.76
Summary of PCA		
Eigenvalue	3.21	2.11
% of variance	35.61	23.47
Cumulative variance %	35.61	59.08

Table 11: Reliability scores for two principal components

Pack	Cronbach's Alpha Component 1	Cronbach's Alpha Component 2
Mayfair	0.85	0.80
Silk Cut Superslims	0.88	0.77
Marlboro Bright Leaf	0.88	0.79
Pall Mall	0.86	0.77
Plain Pack	0.83	0.73

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