

The impact of the colour red on product price perceptions in retail, print advertising

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ABSTRACT

Colour is often an important non verbal cue in advertising. Much research has been dedicated to the creative aspects of advertising generally and to factors affecting consumer response in relation to marketing, advertising and pricing. This study looks at the colour red and investigates whether use predominant use of red in sale promotions print advertising is justified on the basis of its ability to impact cognitively or affectively.

The study comprises of two experiments, one for awareness and one for price perception and purchase intent. In each experiment, red is compared to other colours in order to establish any significant differences. The second experiment goes further to examine whether the intensity of colour, verbal cues or demographic differences have an impact on the results.

The literature review begins with an examination of price theory and the role of sales promotions in organizations. It considers advertising response models with focus on the persuasive hierarchy AIDA model. The impact of colour is then considered along with consumer psychology and behavior as well as theories relating to demographic and cultural responses to colour in advertising. Argument from the sources is then put forward to suggest that research into the effects of colour in advertising is underexplored and that the role of colour in affecting response is complex and is over oversimplifies by advertising practitioners.

The research results are presented revealing few significant differences between red and alternative colours for awareness, price perception or purchase intent. The result for awareness is blurred by research limitations, but red does not emerge as a candidate for exacting higher levels of awareness than a number of other colours. In the second experiment, red is found to be inferior to blue in affecting purchase intent. Red at 50% saturation is shown to have a more positive impact on purchase intent than a red hue at full saturation. Demographic splits do not show conclusive results, but it is suggested that

a larger sample size would induce a better price perception of red for the black community than for other racial groupings.

Discussion and recommendations follow. In this study, red shows no qualities to justify its predominant use in price promotion advertising and more benefit might be obtained for the brand by differentiating through use of alternative colours that may stand out in a sea of red over traditional sale periods.

The principle recommendations are, firstly, the need to acquire a deeper understanding of the effect of colour in advertising. In the more complex, competitive global marketplace competition for customer attention is high and the margin of error for irrelevant advertising appeals are low. Secondly, the argument is made for colour usage to be built around long term branding concerns rather than short term requirements for advertising response.

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CHAPTER 1: ORIENTATION

1.1 INTRODUCTION

Why and when people buy from companies offering products and services is known as 'consumer behavior'. One of the dominant methods by which organisations seek to influence this behavior and attract customers to their products and services is through advertising.

When one talks of consumer behavior or about the markets for products and services, we are naturally concerned with multiple disciplines. The behavioral sciences including economics, psychology and sociology contribute to theories that marketers must incorporate into their thinking and planning in order to advertise optimally. Marketers need to understand exactly how advertising works, in order to construct effective marketing strategies (Vakratsas and Ambler, 1999).

Consumer responses to advertising are affected by the external environment, such as cultural influences, and by personal psychological traits, influencing preferences. Consequently, advertisers need to pay a great deal of attention to the form and content of their advertisements, understanding that any decision regarding the structure, layout, colour, size and verbal cues used may have positive or negative consequences. Colour is often an important non verbal cue in advertising. Human beings, according to the Institute of Colour Research, make subconscious judgments on an item within 90 seconds and 62% to 92% of those judgments are made on colour alone (<www.ccicolor.com/research.html>, no date). Consequently, it is hardly surprising that advertising practitioners use colour to affect the impact and attitude towards their advertising.

In addition to sociological and psychological influences, economic theories of supply and demand play a role in achieving, or limiting, advertising objectives. Price theory is concerned with how pricing affects consumer demand and visa versa. Organisations use

various pricing strategies to influence demand. Sale promotions are often used by companies as a short term pricing strategy to gain market share or clear stock, through mass discounting where demand has fallen.

The creative art of colour usage in advertising and the more scientific discipline of pricing strategy must be worked together for advertising to achieve its objectives. According to the AIDA model of advertising response, a model frequently discussed and used in advertising literature, these sequential objectives are to: attract *Attention*; generate *Interest*; create *Desire* and; incite *Action* (Barenblatt and Sinclair, 1989; Vakratsas and Ambler, 1999; Perreault and McCarthy, 2005).

The focus of this study is concerned with the use of red in advertising and the reasons why it is so often used by advertisers as a cue for price promotions, such as sales. Apart from affective influence, individual colours may also have greater or lesser cognitive impact.

Many organisations that have no red in their logos and do not usually use it as part of their advertising palette, will regularly use it as a background and highlight colour when on sale. An illustrative example of this is the Hub, a department store retailer in South Africa, which ordinarily uses black and blue price points in its promotional product catalogues, distributed as press inserts. However, the company runs two sale promotions per year, at which time the pricing and background of the advertising, and in-store promotional point of sale material, is dominated by red. The use of red in sale promotions, as opposed to the use of any other colour, appears to dominate in retail advertising.

This phenomenon may be due to the advertising manager's intuitive perception of red as an impact colour that will attract attention to advertising. This accepted, why would a manager with this perception not use red in *all* advertising? A consideration of this may be the apparent assumption by managers that readers draw an association between the dominant usage of red in advertising, as a highlight and background colour, and special

price promotions. Consequently, the colour is frequently used when the objective of advertising is to use price discounts to attract customers. It follows that, if red is considered to act as a signal of low prices, advertisers use it in order to affect consumers' response to advertising and insodoing, create an interest and intention to purchase.

1.2 RESEARCH PURPOSE AND OBJECTIVES

The fundamental objective of this research report is to indicate whether the predominant use of red in print advertising of sale and price promotions is justified on any socio-scientific basis. The research addresses the question of whether another colour, of similar or less intensity, or an absence of colour might be used as effectively to firstly create impact or secondly contribute to favorable price perceptions. Moreover, will the colour have the power to influence the intention of the consumer to purchase in the event, or absence, of positive price perceptions?

Much research has been dedicated to the creative aspects of advertising generally and to factors affecting consumer response in relation to marketing, advertising and pricing. A great deal of this research, however, is not specific and is rather broad in its application. Researchers confirm that there is a dearth of research relating to specific influences of colour on response to advertising. The focus of the study is intended to provide more specific findings on consumer response to colour in advertising than is commonly found in most research on the subject.

This study has the specific aim to confirm or challenge the status of red as the most impactful, affective and influential colour for sale and price promotions. Impact refers to the attention grabbing properties of red (cognition) - the power to draw attention to the advertisement itself. Affect relates to its capacity to induce a feeling or opinion. Influence relates to its power to create intention in response to the advertisement. After all, "in order for an advertisement to have the potential to influence audience behavior, it must be seen and read" (Schindler, 1986: 71). Affect and intention, as they are referred to here, stand apart from considerations of *impact*.

A further consideration within this investigation is one of demographic and cultural differences - specifically gender, race and age. In their response to colour in advertising, do variances exist between subsets of the population?

An important purpose of the study is to establish whether marketers could use alternative colours equally effectively to attract attention and suggestive price cues, when advertising promotional sales. This is especially so given that many retailers conduct sale promotions over the same periods. For example, the clothing fashion retailers in South Africa are usually on sale following the busy Christmas and New Year period in order to clear summer seasonal stock and make way for the introduction of autumn and winter stock. This pattern is repeated in July and August preceding the introduction of summer stock. It is not uncommon for ten or fifteen national clothing retailers to be on sale simultaneously over these periods. Many of these retailers use red as the dominant colour in their advertising and promotions material sale headings and price points.

If alternative colours are shown to be equally effective, this would allow such retailers the creative freedom to advertise more distinctively. In a highly competitive marketplace, advertisers look to differentiate their advertising (along with other elements of the marketing mix) through creative execution, in order to capture consumer attention. Advertising originality has the power to enhance information stored about advertised brands (Pieters, Warlop & Wedel, 2002). Thus, to break through the clutter or advertising 'noise', it would be preferable for an organization to find a distinctive sale colour, rather than following an unjustified communication practice.

Alternatively, if red *is* shown to impact generally on consumers' perceptions of price and thus enhance perceptions of value, it can be argued that it should be used more generally to communicate the price/value benefit of products.

1.3 STATEMENT OF PROBLEMS AND SUBPROBLEMS

PRIMARY PROBLEM: Will consumers cognitive and affective response to print advertising using a dominant background and highlight colour of red, vary from their response to advertising backgrounds of another dominant colour or an absence of colour, with regard to attracting attention and affecting perceptions about advertised product price?

SUBPROBLEM 1: Are customers impacted on a cognitive level by advertising where the dominant colour is red to a degree that would not be matched by another colour?

SUBPROBLEM 2: Have consumers been conditioned to respond to red as having a special price connotation?

SUBPROBLEM 3: Is it necessary for verbal cues such as “Sale” or “Discount” to co-exist with red in order to affect the price perceptions relating to advertised goods?

SUBPROBLEM 4: If there *is* a positive relationship between red and the degree to which consumers are attracted to or affected by an advertisement, is this attraction or perception related to the colour *value* of the red on an advertisement? Would a different shade or intensity of red make a difference?

SUBPROBLEM 5: Marketing and advertising campaigns are usually targeted at specific segments of the population and vary communication styles to allow for homogeneity between segments. To what degree do the findings hold true for alternative demographic groups defined by gender, age and racial profile?

SUBPROBLEM 6: If the use of red in advertising has an affect or no affect on price perceptions, will it have an effect on the *intention to purchase* advertised product.

1.4 DEFINITIONS

AIDA: An anagram of Awareness, Interest, Desire and Action. AIDA is a model for advertising response, indicating the manner and order in which consumers respond to advertising.

Advertising: “Any paid for form of non personal presentation of ideas, goods and services” by an identified sponsor (Perreault and McCarthy, 2005:379).

OSL: Optimal Stimulation Level. The hue and saturation level which gives rise to the highest levels of stimulation of an individual. Individuals with high OSL’s experience pleasure from ads whose dominant colour has a red hue and which is saturated.

Price: “Price is the amount of money that is charged for something of value” (Perrault and McCarthy, 2005: 464) and is “what a customer must give up to get the benefits offered by the rest of the firms marketing mix, so it plays a direct role in shaping customer value” (465).

Value: The worth of a product or a service, but not necessarily the price. Good value exists where there is a positive difference between the price of a product or service and the worth of the product placed on it by the consumer. Value can exist across the full scale of the market, from luxury goods to basic commodities but ‘value’ orientated business are usually considered to be those that trade off product features and benefits with price, finding the optimal middle ground.

Marketing mix: The five elements considered critical to organizational success namely the product itself, the price of the product, people to purchase the product (the market), a place to sell it (location) and promotion, the various means to communicate the other elements in the marketplace.

Target market: The persons or groups identified by organizations as being the most likely consumers of their products and services, and targeted accordingly.

Colour hue and saturation: Hue is the position of the colour within the chromatic colour spectrum – making it red or blue, for example. Saturation is the degree and intensity to which the pigment is present in the hue.

1.5 DELIMITATIONS OF THE STUDY

The research is not intended to establish what alternative colors may prove to be better or equal in terms of their potential to attract attention and communicate messages about price. The objective is simply to establish whether response to red is significantly different to other individual colours to which it can be compared.

Although the study takes an account of the stated intentions of subjects to consider purchase, it does not consider actual purchase behavior to indicate the likelihood that purchases are affected by colour usage, as might be obtained through an experimental study.

Another consideration is that the colours of the products in the research survey have been factored out, whereas in typical advertisements, the colour of the product may play a role in affecting overall colour perceptions. In order to eliminate product colour as a factor, only monochromatic grayscale images have been used. In a ‘normal’ advertising setting, where full colour is almost always available to advertisers, the background colours blend with the colours of the advertised product to create an overall effect. Thus, this study will not consider the potential of full colour product images to create advertising impact or affect price perceptions.

This research project has been limited to consider the impact of the colour red in advertising and is not designed to take account of consumer attitudes, such as advertising likeability, or perceptions of product dimensions such as quality. Equally, it fails to

account for how brand recognition and the use of colours in branding may committally influence the dynamics of colour impact and affect. Conversely, the contribution of advertising and colour usage to building brand awareness and brand value is also not considered in the research experiments, though it is discussed under the literature review and recommendations. Sale promotion advertising is generally utilized to bring about a rapid response, as discussed above, rather than for brand building. It may, however, reasonably follow that if using red in a dominant fashion is shown to enhance impact and raise awareness there may be positive spin offs for the brand.

This study is quantitative in nature and will not attempt to provide depth, in terms of a qualitative investigation, into the reasons behind the results of the research. A qualitative study would certainly add meaning to the results and help to explain *how* colour works to affect perceptions in individuals. However, due to limitations of time and resources available to this researcher, it is beyond means but might instead be considered a potential subject for a future study.

Finally, the resource limitations on the researcher make it necessary to limit the research in a number of ways, and thus the application of results should be limited accordingly, for the results to remain valid:

- The number of research subjects is limited to 360 and the geographic spread of the subjects is limited to the metropolitan areas of Durban and Johannesburg within the provinces of kwa Zulu Natal and Gauteng in South Africa.
- There exists great potential to explore the cultural aspects of colour response to advertising in far greater depth than is undertaken here. For instance, there may be differences to the response of a Zulu speaking person from an urban metropolitan area to a Xhosa speaking rural inhabitant of the Eastern Cape. However, it is assumed that any variations demonstrated between the crude demographic groupings used for this survey would play out similarly if additional demographic

splits were incorporated– that is by showing either very little variation or by following the pattern of significant variability in the research findings.

- The survey takes no account of income or educational levels. Socio economic standing is likely to be an influential factor in advertising response in that more sophisticated consumers will perceive creative advertising aspects and pricing differently. It disregards the relative importance of price to different consumers in relation to the advertised product. The need for a consumer to pay a particular price for a product relates to the relative importance of the advertised products and the price expectation of the consumer for the product. This need competes with other consumer needs – such as the need for recognition that the product may fulfill. The study incorporates a broad spectrum of consumers and thus attempts to keep the sample as random as possible, but beyond that, it ignores the influence that sophistication levels may have within the full spectrum of results.
- The study is restricted to retail, print advertising and cannot be necessarily applied to make assumptions about either how colour works in other industries, or to other media forms. Some of the literature that is reviewed does, however, relate to these considerations and is discussed.
- The study on consumer price perception relating to red is limited to a comparison to blue, yellow, green and greyscale, each with a set hue and saturation level. Red itself was used at a set hue and again at a 50% level of that hue. It is possible that other colours or hues at different levels of saturation of those might have returned different results, but the survey could not reasonably accommodate further variables due to the large number of additional subjects that would have been required.
- The format of the survey and questionnaire used for the study used a range of semi-durable product that might conceivably be advertised together by an

organisation. It is assumed that similar results may be found with print advertising fast moving consumer goods and durable goods.

1.6 IMPORTANCE OF THE STUDY

Advertisers and their agencies understand the importance of the colour, but lack specific knowledge on applications. Researchers have focused on broader aspects of colour in advertising but the body of research that looks more specifically at the application of colour in advertising and advertising in relevant context is small and has a western focus (Aslam, 2006). Consequently organisations and their advertising agencies fall back on intuition, anecdotal evidence, personal preferences and standard practices to make decisions on colour (Gorn, Chattopadhyay, Yi, & Dahl, 1997). Agencies use a one size fits all approach and organisations copycat one another. Aslam (2006:7) states that this “notion of colour universality is fraught with risk”

This study contributes to a body of evidence on colour response that can help marketers to better understand the role of colour and enable them to use their advertising spend for better results. Much of advertising spend is wasted on ineffective campaigns (Vakratsas and Ambler, 1999). Research initiatives, such as this, assist in minimizing the many millions of rands that are invested in advertising executional cues that do not work.

The literature review below shows evidence that the lack of research into how colour and other advertising cues affect consumer response has begun to change. Recent research has begun to look at these areas in more detail, attempting to deal with the complexities of appropriate methodology. This study contributes to the impetus behind this new initiative and is unique in that it looks at a specific dimension of product value- namely price- and considers its relationship to a colour.

It is likely that many advertisers have simply assumed that a positive relationship exists between red and advertising impact and that it outperforms other colours in this regard. Furthermore it seems that the advertisers’ notion of the consumers’ association of low

prices with the dominant use of red is also taken as given. Should this notion be dispelled and it is indicated that another colour may equally serve the purpose, the adherence to the common practice of using red to advertise sale promotions will be shown to be questionable.

Notwithstanding the particular results of this study, similar questioning approaches to stereotyped practices in other research on colour or other executional cues and advertising are bound to reveal some exciting anomalies and ultimately lead to better advertising decisions among advertisers.

In an advertising age where specific relevance and differentiated approaches are required to impact the target market, theory that opens the door to a freer approach will offer competitive advantage to organisations incorporating such ideas.

1.7 OUTLINE OF RESEARCH REPORT

This report begins with a literature review, which considers theory and opinion of contributors to debates on advertising, colour, price-theory and consumer response. The literature review is broken into discussion categories that represent chains of thought pertinent to the subject areas of the report. It begins with a brief discussion of pricing, confined mostly to its relationship with advertising and sale promotions. The debate then moves to more general approaches to advertising form and content and how these are believed to work. Thereafter, it becomes more specific to colour and examines the literature on how colour impacts consumers and how it is used in advertising, particularly in print.

The next section of the report puts forward the formal propositions that are tested by the research. The methods and processes by which the requisite data will be gathered to test the hypotheses are then detailed. This includes information regarding the selection of research subjects – the sample group- to avoid statistical bias and ensure randomness, to

protect the validity of the results. The section divulges the methods by which the sample group will be surveyed to achieve standardisation, accuracy and the relevance of the measurements.

The results of the study are then given using statistical tests to establish significance and making pronouncements on the hypotheses. The results are discussed and potential reasons for the results are suggested. This is followed by general conclusions and recommendations for marketers and for future research.

CHAPTER 2: A THEORETICAL BACKGROUND TO ADVERTISING, PRICING, SALES PROMOTIONS, COLOUR RESPONSE AND CONSUMER BEHAVIOR

The topic of this research study is grounded within various general theoretical concerns including economics and pricing theory, psychology and colour, behavioral science and consumer response as well as marketing and advertising theory. Primarily, however, this is a study rooted in advertising theory. Advertising, in one form or another, has been around since the dawn of commercialism, but accelerated with the advent of the commercial printing press. Since then, the complex nature of its workings has been the inspiration for countless books, articles and theories.

As early as the late nineteenth century an advertising model existed that set out the process of how successful advertising worked. This theoretical model - AIDA- has been used extensively in marketing texts since that time to explain how advertising makes impacts consumer behavior (Barenblatt and Sinclair, 1989; Vakratsas and Ambler, 1999; Perrault and McCarthy, 2005). AIDA, an anagram of Awareness, Interest, Desire and Action, proposes that advertising is designed to impact consumers, and lead to a more competitive company position, either through: increasing awareness; stimulating interest, for example improving the product or service perception; increasing desire for the product or service and; resulting in action taken by the consumer to acquire the product or service.

Instead of a more general focus, this study is pinpointed on a particular aspect of consumer response to advertising – colour as a suggestive cue. Colour has always carried meaning and significance for humankind. Aslam (2006) refers to theories of colour and light in ancient Greece and the colour theories of Aristotle and Hippocrates. Religious, political and social symbolism is contained in colours. More than that, colour has physical dimension. Waves of light enter the eye and are interpreted by the brain. Aslam (2006: 17) suggests that the brain may act “as a perpetual tool for our visual-cognitive and visual-affective functions”.

We use colour to make better sense of the world around us, so it is hardly surprising that advertisers use colour for cognitive and affective influence. Advertising studies in colour look at a wide variety of these effects, including colour contrasts (Schindler, 1986), colour quality (McGann and Snook-Luther, 1993; Gorn et al, 1997), colour impact (Fernandez and Rosen, 2000; Meyers-Levy and Peracchio, 1995) and intensity (Gorn et al, 1997). A reasonable amount of literature on colour and advertising is also focused on colour preferences and emphasises social differences in colour response (Aslam, 2006; Lee and Barnes, 1990).

The study enters the realm of basic price theory as it relates to advertising. It sets out to explore the link between advertising and consumer response to colour as it affects price perceptions. The researcher could find almost no literature pertaining to this specific combination. However, certain studies that are discussed in the literature review look at advertising as a signal of quality (Zhao, 2000) or as affecting price sensitivity (Kaul and Wittink, 1995).

CHAPTER 3: LITERATURE REVIEW

The dominant features of research relating to this study are grouped under headings for convenience and relevance to the above stated aims of the research report:

3.1 Advertising and price theory, including the role of sales promotions

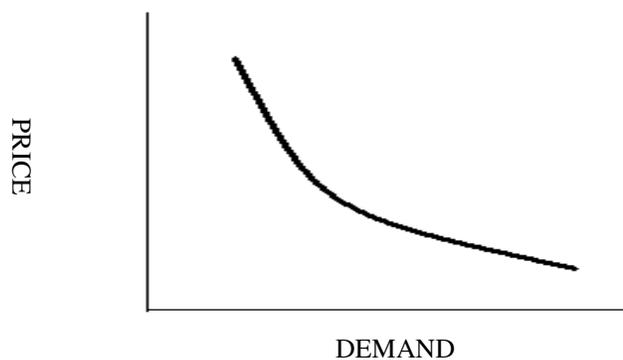
Price forms part of the “five P’s” of the marketing mix, namely: product, promotion, place, people and price. Price theory follows the basic rules of supply and demand: Consumers behave in accordance with “the law of diminishing demand” where “if the price of a product is raised, a smaller quantity will be demanded” and visa versa (Perreault and McCarthy, 2005: 626). By lowering prices, the organization hopes to stimulate demand in the marketplace in order to match its supplies. Price is usually inversely related to demand for product (See Figure. 3.1). The degree to which this occurs depends on whether demand is elastic or inelastic. Where demand is elastic, it means that “if prices are dropped, the quantity demanded will stretch (increase) enough to increase total revenue” (Perreault and McCarthy, 2005: 628). A number of moderating factors to this rule exist. For example, the level of price sensitivity in the marketplace and the type of consumers in the marketplace will affect the response to price fluctuations (Kaul and Wittink, 1995).

Kaul and Wittink (1995: G158) also acknowledge that the “effects of manufacturer and retailer margins (on price) should be substantiated further”. A study by Hall and Hitch (1988) of British entrepreneurs found that prices are usually set according to a principle of full average cost, including a conventional allowance for profit, rather than the widely theorized principle of price calculations based on marginal cost and marginal revenue, where profits are maximized. Businesses charged prices with the long run of profit and demand in mind, taking goodwill into account or using traditional prices “which had been proved acceptable to consumers” (Hall and Hitch, 1988:19). Thereafter, the study found, prices might be affected by heavy competition, shifting up in periods of exceptionally

high demand and down in periods of exceptionally low demand. However, in the main, the same prices for similar products would apply in the marketplace, based on the full cost principle. The price set is often the *full cost* of a dominant competitor as opposed to the average full cost of competitors, with other producers adjusting their profit margins accordingly. The study is mostly limited to manufacturers and the survey sample was small and may therefore be somewhat limited in its applicability. However the general principle put forward is of interest. Prices are not set according to formulaic principles but according to what producers and consumers regard as a fair and ‘right’ price. Factors of supply and demand on pricing may be limited by principles of fairness and perceptions of value. This is where the role of advertising is important, as it not only drives awareness and informs, but it shapes perceptions about the product, often in the mere creative execution.

Perreault and McCarthy (2005: 466) state that organisational objectives should guide pricing. These policies must take into account, inter alia, product life cycle and demand. They discuss price strategies, which can be flexed to introduce new products into the market or cut prices of late stage life cycle products. Temporary or permanent price cuts can be used to drive demand and capture market share or shed slow moving inventory as “low prices do attract customers” (475).

Fig 3.1 Price Demand Curve



Source: Perreault and McCarthy (2005)

Perception of price by the consumer is a critical aspect of price setting. “If a firm’s price is lower than a customer’s reference price, customers may view the product as a better value and demand may increase” (Perreault and McCarthy, 2005: 514). Perreault and McCarthy also discuss various pricing strategies. Strategies are set according to the objective of the company: Prices can be set according to costs, for example using an average markup percent to ensure the company sells the product at a price that will cover product costs and make a requisite profit (469). The other pricing approach is demand orientated. This includes strategies designed to affect consumer response such as “leader pricing” – setting of bargains to get customers into store. (515).

The relationship between pricing and advertising is more complex than merely dropping prices to stimulate response. Advertising plays a role in shaping consumer expectations about price and product in a number of ways. Zhao (2000), for example, discusses advertising as a signal of quality. He notes that advertising product is generally perceived as being better quality than non advertised product as only high quality firms can afford it. Thus, advertisers push advertising spend to signal quality, which can allow the firm to charge a price premium. However, Zhao finds that when advertising is used to raise new product awareness *and* as a quality signaling device (i.e. when the product quality is not known), mimicry by low-quality-product firms dissipates this benefit. Accordingly, in such circumstances, high quality firms should in fact reduce advertising and push up prices.

The scope of Zhao’s study is narrow in that its aim is to investigate optimal pricing and advertising strategies for *new* product. However, it is useful to consider in that it confirms how the messages sent to consumers through advertising are not always overt and that consumer response may be learned behavior. If consumers infer from the presence of advertising that the product is of better quality than might otherwise be assumed, this is likely the result, at least in part, of past experience, comparing product quality from firms that advertise to product from firms that do not.

Advertising itself is found to be linked to price sensitivity. Kaul and Wittink (1995) make empirical generalizations regarding price sensitivity, price and advertising based on their research studies. They find that an increase in price advertising leads to higher price sensitivity, but that non price advertising leads to lower price sensitivity. The interpretation by the researchers is that non-price advertising leads to more differentiation which can in turn lead to lower price sensitivity on the part of consumers. Also, where non- price information is the focus, price is not noticed to the same extent by consumers.

An implication is that sales promotions are *designed* to increase price sensitivity and drive consumers to the advertiser's brand. The impact of the price point in advertising – including design, size and colour is the means by which the message to consumers is intensified.

The role of the sales promotion is to stimulate immediate interest and induce product purchase (Perreault and McCarthy, 2005: 300). Very often, price is the driver of the sales promotion. Retailers use low prices to introduce new products and to clear overstock or products nearing the end of their lifecycle where demand is falling. Perreault and McCarthy have the view that consumer product firms, particularly the growing number of competitive retail chains, compete mostly in mature markets and this is the reason for increasing sales promotions. Increased competition has led to increase price sensitivity, “so sales promotion has been used as a tool to overcome consumer price resistance” (455).

3.2 Advertising, colour, consumer psychology and behavior

Chandy, Tellis, MacInnis and Thaivanich (2001) split research into advertising effect into *laboratory* studies on cognition, affect and intention and *econometric* studies, which look at how advertising has impacted purchasing behavior. However, they do not consider *why* consumers are affected by advertising.

Consumers respond to advertising because it stimulates or taps into wants and needs, which are requirements for satisfaction (Perreault and McCarthy, 2005). Customers may have several reasons for buying at the same time according to a four tier hierarchy of physiological, safety, social and personal needs (153). Consumer needs are often culturally learned and wrapped in a web of attitudes and beliefs. “Consumers select various ways to meet these needs sometimes because of differences in perception – how we gather and interpret information from the world around us” (155). Perreault and McCarthy identify a learning process by which the drive to satisfy needs is stimulated by cues in the marketing mix (including advertising cues), which in turn leads to a response and possible reinforcement.

The processing of the advertisement in accordance with needs, leads to the consumer forming conclusions about the product and potentially stimulates behavior. As stated above, this consumer view is a perception: The visual and written content of the advert – such as product descriptors, persuasive copy, print quality or colours – are used together with price to form an assessment of the relative value of the item. Higher than expected prices moderate the impact and may be off-putting for the consumer. Lower than expected prices drive demand.

A reality of advertising in the highly competitive modern world is that advertising is prolific. Advertising competes for consumer attention in a wide variety of mediums and runs the risk of being lost in the clutter. Pieters, Warlop and Wedel (2002) find that advertising originality enhances information storage by increasing the amount of attention devoted to it, particularly if the advertising is familiar. They identify a tension between originality and effectiveness and state that advertisers fear that “emphasis on ad originality may diminish the effectiveness of advertising” (777). However, this common view of advertisers is contradicted by their research findings that advertising originality stimulated attention and increased recall of brands.

Psychological and sociological factors affect perceptions of advertising and are influenced by the style and content of advertising execution. Percy and Rossiter (2001)

find that variations in picture size used in advertising can affect the beliefs about the product. The combined beliefs and attitudes (for a non-existent product) about taste, price, product qualities and the social acceptability of the product are impacted by picture size. This study also indicates that consumers are similarly influenced when it comes to colour.

Aslam (2006: 17) identifies two major schools of thought: One that contends that colour affects are based on instinct (innate) and another that holds that colour symbolism is learned and developed by association. “Colours alter the meanings of the objects or situations with which they are associated” (7). Aslam cites the colours of gold, crimson, scarlet and purple that were extracted from precious pigments in history and thus “indicated power, authority and opulence” (16). If one rejects the absoluteness of colour universality, the logical conclusion is that colours have different meanings in different cultures.

3.3 The cause and effect of advertising

There is a large body of theory concerned with advertising and how it affects the consumer. Econometric studies focus on the real impact of advertising in the market, but tend to ignore how the creative content of advertising has given rise to this impact. Conversely, behavioral studies are concerned with the advertising effect on *intentions* and are not focused on how advertising effects actual behavior (Chandy et al, 2001). Vakratsas and Ambler (1999) review 250 journal articles on the subject and classify seven different models for how advertising works (see Table 3.1).

This broad-reaching and definitive study includes “every significant and current theory” for consideration (1999: 27). The classification includes models, such as AIDA, which are referred to as ‘Persuasive Hierarchy’ models in that they follow a sequence of consumer affects from cognitive (thinking) to affective (feeling) to action (doing). Other models are classified which do not consider any affects on the consumer at all (Market Response models) or assign only a cognitive or affective response.

Vakratsas and Ambler (1999) also identify 'low involvement' hierarchy models which view advertising as weak – merely creating awareness and then inciting trial. Only after trial does the affective aspect come into play as the consumer is affected by the product experience. This in turns influences future behavior. This model thus turns the AIDA model inside out.

The classification also includes integrative models, where the hierarchical order of cognition, affect and action is not fixed as it depend on advertising context – for example the type of product, the type of consumer targeted or the type of medium used (Vakratsas and Ambler, 1999). Finally there are, according to Vakratsas and Ambler, hierarchy free models where no order of process exists. Here the response to advertised product may not mirror the response to the 'real' product in the marketplace and consequently cognition, affect and action might occur, or not, or may occur in any sequence in the behavioral response of the consumer.

Table 3.1 Taxonomy of models of how advertising works:

MODEL	NOTATION	SEQUENCE OF EFFECTS
Market response	(-)	No intermediate advertising effects considered
Cognitive information	C	"Think"
Pure affect	A	"Feel"
Persuasive hierarchy	CA	"Think" > "Feel" > "Do"
Low-involvement hierarchy	CEA	"Think" > "Do" > "Feel"
Integrative	(C)(A)(E)	Hierarchy not fixed, depends on product involvement
Hierarchy-free	NH	No particular hierarchy of effects is proposed

Source: Vakratsas and Ambler (1999: 27)

The classification and study of the advertising models leads Vakratsas and Ambler (1999) to make 25 generalisations about advertising, drawing from the body of research (see Appendix 1). Two of these are of particular relevance to this study: Firstly, from the pure affect models, “advertising need not be informative to be effective, nor need be verbal only; emotional and visual elements enhance preference” (30). Secondly, from the hierarchical models, is that attitude toward an advertisement is a “significant moderator” in the formation of brand or product attitudes (31).

Considerable focus has been placed on the Vakratsas and Ambler (1999) study under this subheading because it successfully addresses a very broad range of theories on the behavioral effect of advertising and pulls them together in a logical framework that is very useful to the researcher in a general assessment of advertising theory. Being broad in its scope, however, the study does not look at the creative aspects of advertising as an impact on consumer response in much detail, beyond recognizing that it exists. Various researchers have argued that the creative elements play a large role in shaping these effects: Originality and familiarity are important for cognitive impact (Pieters *et al*, 2002). The same advertising cues can have different effects on consumer behavior (Chandy *et al*, 2001)

The study by Chandy *et al* (2001) finds that advertising cues work in different ways at different stages of the product lifecycle: Emotion based appeals are more effective in established markets whereas argument based appeals are more effective in new markets. This is because at the early stages of the product lifecycle, consumers’ willingness to process information regarding the product is high and compelling message arguments are therefore impactful. Later on in the product cycle, once consumers are familiar with the product and its attributes, consumers are less interested in spending time processing information and respond better to emotional cues. Emotion laden ads, say Chandy *et al*, “may win consumers attention and help the retrieval of prior product knowledge from memory” (402). However, the study is exclusively focused on verbal cues and does not consider whether non verbal cues work in a similar fashion.

If the findings of Chandy *et al* can be extended to non verbal cues, it could suggest that an effective use of colour may function as an emotional appeal, bypassing complex verbal messages that consumers are unwilling to process due to their familiarity with the product. In other words, colour provides highly visible, easily processed symbolic messages, where consumers consciously or unconsciously associate that colour with a meaning. Vakratsas and Ambler (1999) cite numerous studies that *do* indicate that advertising does not need to be informative or verbal to be effective and that emotional and visual element play a role in affecting response.

Percy and Rossiter (2001) concur and conclude that visual elements can affect beliefs and attitudes towards advertising, even when there are no verbal components. They also find that colour used in advertising *can* have a significant effect on product perception, compared to non use of colour. Their study found a positive impact on the perception of taste for a bottled water product and that there was a moderate main effect of full colour on intention to purchase. However, there was no measurement of the *individual* effect of colour or any measure relating colour to the price perceptions of the product. The study was not set up to measure any specific colour and the colour(s) used within the study are not specified.

3.4 Colour/Advertising research as under-explored

The discussion on the Percy and Rossiter (2001) study moves the focus from more general research into advertising, price and colour into more specific literature on advertising and colour, which is now discussed in more detail. The researcher finds that less academic investigation has been done in this area.

This may help to explain the generalized application of colour in advertising that appears to prevail where creative teams approach advertising design with little but personal preference and knowledge of general practice. Latitude is given to these creative design teams by advertising managers who are none the wiser.

Hattwick, Needham and Olson (1950) are quoted as saying that “the advertiser who uses colours on the basis of a broad generalization or of personal bias is in danger of making gross mistakes” (Lee and Barnes, 1989: 25). Researchers into advertising and colour have noted that colour is used intuitively or on anecdotal evidence rather than scientifically (Gorn *et al*, 1997; Lichtle`, 2007) and that despite its importance, advertisers often fail to use colour to improve advertising response (Schindler, 1986; Lee and Barnes, 1989). This may be because despite the amount of research into colour on one hand and advertising response on the other, most researchers concede that there has been comparatively little research done into the specific affects of colours in influencing consumers attitudes towards the advertised product (Gorn *et al*, 1997; Lichtle`, 2007; Percy and Rossiter, 2001; Lee and Barnes, 1989).

There are some clues as to why research into aspects of creativity in marketing pursuits are lacking. In the S.A. Brand Custodian Survey, measurement and financial accountability was rated by branding practitioners as being one of the least important aspects of branding. Part of the reason for this is expressed as “the fear that measuring critical success factors such as “emotion” and “creativity” is very difficult to do and could limit its (advertising) effectiveness” (Journal of Marketing, 2007: 33). This view that originality is crushed by advertising research is directly disputed by Pieters *et al* (2002:777) who state that “while the creative process in advertising may sometimes be elusive and mysterious, the creative product... is not”. Their study uses methods such as eye-tracking and memory measures to demonstrate that differences in creative aspects can in fact be measured.

3.5 Advertising/Colour research as complex and applicable in context

Lichtle` (1997:38) suggests that the dearth of studies on colour in advertising is “because of the methodological problems inherent in this area of research”. Lichtle`s` study, conducted on a student sample and therefore limited from generalizations, found that attitude towards and advertisement can be influenced by hue, lightness (brightness) and

saturation of colour. Furthermore, this effect was moderated by the ‘optimal stimulation level’ of the individual. For example, “individuals with high Optimal Stimulation levels (OSL’s) experience pleasure from ads whose dominant colour has a red hue and which is saturated” (53). They were, however, more *aroused* by advertisements where the dominant colour was only slightly saturated. The colour of the advertisement does therefore not affect all individuals in the same way. Lichtle` recommends that advertisers use OSL measures when market studies are conducted, “to enable them to adapt the colour of their ad to the target market” (54).

Some of this complexity is also due to the fact that colour takes on new meaning, depending on the context (Aslam, 2006). Colour has meaning derived from social and demographic preferences and in the specific context in which it is used. An independent research study into the effectiveness of information and colour in yellow pages advertising found that effective use of colour was linked to the its potential enhancement of product, but not to its attention grabbing properties (Fernandez and Rosen, 2000). However, the research result is confined to directional advertising (advertising with the specific purpose of routing an interested party to a service provider) and relates only highly involved consumers. Fernandez and Rosen (2000: 70) caution that “not all findings from non directional media appear to transfer directly to directional media”.

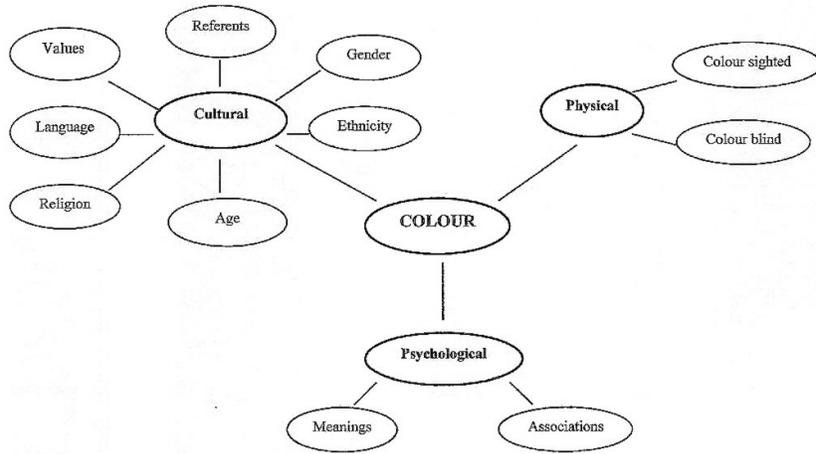
Similarly, research into the impact of full colour versus black and white versus colour *highlighted* photos found that when consumers processing motivation is low, colour is likely to enhance the perceived attractiveness of the photo or product (Meyers-Levy and Peracchio, 1995). However, when a consumer is more involved and examining an advertisement critically, colour can either support advertising claims or undermine advertisement claims by “usurping resources that would otherwise have been devoted to substantiating information” (121-122). This finding is supported by the later study of Chandy et al (2007), discussed above, which found that later in the product cycles, where motivation to process advertising information is low, emotional appeals work better than argument based appeal .

In the first of two experiments to understand the effects of colour in advertising, Meyers-Levy and Peracchio (1995) found that, for highly motivated viewers of an advertisement for a bicycle, the effectiveness of colour is moderated by the degree to which the advertisement consumes cognitive resources. If the advertising is cognitively demanding, colour was found to be distracting and the intended messages about the product were not as effective.

In the second experiment, full colour and colour highlighted advertising was shown to student groups and results compared to black and white of the same advertising for a bicycle and for cycling clothing (Meyers-Levy and Peracchio, 1995). Two sets were created of each advertisement, one being function orientated and easily consumed and the other being more complex and image orientated. The second experiment also showed that colour in advertising enhances or undermines consumers' attitudes. Positive colour effects are contingent upon the consumer's motivation level, the effort required to process the advertising and whether the consumer has sufficient time and cognitive resources to avoid being distracted by the colour. They are also contingent upon whether consumers draw inferences from the colour that substantiates advertising claims. If not the effect of colour can be negative and black and white advertising could enhance ad effectiveness.

If it is not enough to confound advertisers to have to consider colour usage in connection with the complexity of the advertising message, Aslam (2006) asserts that cultural values and marketing objectives should also influence the choice of colour in marketing communications. Aslam argues from a cross-cultural perspective that appropriate colour usage is situational. The article considers colour effect on a psychological, physical and cultural basis (see Figure 3.2). It notes that "the decision to pursue a customized or a standardized marketing strategy may rest on whether the meanings or associations of colour are similar or different across cultures" (28).

Fig 3.2 The Levels of Colour Influence



Source: Aslam (2000:18)

Researchers do not always agree on the degree of difference in colour preferences and responses of different demographics. Schindler (1986: 70) states that “in terms of interpretation and preference, colours are generally not gender specific”. However, some colours “have come to be societally associated with masculinity or femininity, cultural interpretations, or emotional responses” (71). In practice also, advertisers often fail to appreciate any differences in how consumers in different target markets respond to colour: Schindler studies a sample of 565 magazine ads to investigate the effect of colour and contrast on advertising effectiveness and finds that the majority of magazine advertisers ignore accepted principles of colour contrast and employ the same colour and contrast strategies regardless of gender demographic at which the publications are aimed.

Similarly, Lee and Barnes (1990: 29) research results “suggest that advertisers may be missing an opportunity to differentially use colour in magazines where gender differences in the magazines audience exist” as several studies have found a gender difference in colour preference (1990: 29). They did however find existing differences in colour used in advertising for magazines orientated towards black and white audiences.

The broader application of findings by advertising practitioners is risky, to say the least and a clear need for further texts in the wide area of advertising colour in specific contexts is indicated.

To illustrate the points, about generalisation, complexity and context, an article on branding and colour in an online advertising trade journal entitled *The Colour of Money* refers to a chief executive at a colour consulting firm as saying that there are regional differences and gender differences in offering colour advice to brands (Mortimer, 2004). Ironically, as the point is rightly made to warn advertisers against generalizing around colour issues, the article also contains an inset panel listing colours and how colours take on different meanings in different parts of the world. With regards to red, it is claimed to be the “colour of prohibitions” in Europe, “unpopular in Ireland when used with blue and white”, “very popular in China as the colour of communism”, a symbol of love and life amongst Hindus and to be avoided in Paraguay because of political connotations (26). While there is no indication as to whether this specific information has been formally researched, it seems very likely that these are themselves broad generalizations, which may fail to assist and may even misdirect advertisers seeking to use colour in a relevant and appropriate manner.

3.6 Advertising/Colour and impact and attitudes towards product and advert

Dooley and Harkins, two psychologists at Xerox corporation demonstrated in 1970 that colours are superior in communicating emotion but black is equally effective in communicating information (Percy and Rossiter, 2001). Colour is “instrumental in attracting consumer attention to media advertisements” (Aslam, 2006: 26). Percy and Rossiter found a significant colour effect on attitudes towards a fictitious brand (2001). *Advertising Magazine* quotes Cahner’s Advertising Research report finding that 44% of readers remembered seeing a four colour, one page advertisement versus 33% who remember seeing a one page black and white advertisement (2001: 26). Gorn *et al* (1997)

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find differences in response to advertisements using different hue (colour), chroma (saturation) and value (darkness versus lightness), which led to differences in ad likeability, depending on higher levels of chroma and value.

It ~~is~~ seems clear that colour in advertising works on different levels and colour may have different powers to perform across three dimensions: Colour can attract attention; colour can be conducive to information and; colour can shape attitudes towards the product and advertising.

3.7 Advertising/Colour and colour qualities

Saturation (intensity) and lightness are variables used by recent researchers to investigate the impact of colour qualities and shades. Some research, while finding differences between colour and black and white, do not report variances on reactions to high intensity (saturated) versus low intensity colour (McGann, Snook and Luther, 1993). However, Schindler (1986) found that use of color can be detrimental when legibility and readability are negatively affected. The findings of Gorn *et al.* ~~(1997)~~ with regard to colour hue, chroma and value are also relevant here too as their finding is that saturation does indeed positively influence emotional response and attitude. Lichtle` (2007), whose study is discussed above, builds upon Gorn *et al.* ~~(1997)~~ with the finding that individuals' response to hue, saturation and lightness is dependant on the OSL (the optimal level of arousal to which individual aspire) of the individual ~~(1997)~~. Seekers of high stimulation prefer red while seekers of low stimulation prefer blue.

Thus, most of the literature points to advertising response as being highly contingent upon a number of factors and context. In view of this, it would appear likely that response to the colour red as an advertising price cue would not be uniform across differing sample groups. However it is also quite possible that the socialised aspect of red as a consistent connotation of price promotion has had a great enough general impact as to have overridden demographic and individual, contextual colour interpretations and preferences.

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A ~~final~~-~~further~~ point in consideration of the literature is that much of the available research is dedicated to testing attitudes and emotions of colour to the advertising itself – for example advertising likeability. Less research is focused on linking response to the advertised product.

3.8 Advertising and branding

An aspect of branding that is not considered in the research experiments in this study is the interplay of branding with colour and their concurrent effect on price perceptions. In fact, recognizing the impact that branding may play, this research specifically avoids the effect of the brand by using non branded products and creating a fictitious organizational identity.

The impact and potential of the brand reputation to impact selling has always been recognized, however this is an increasingly emphasized and objectivised aspect of marketing since the true value of the brand began to be measured and appreciated. Where, “ten years ago, most companies thought that focusing on the brand really meant focusing on the latest and greatest advertising campaign”, now “brands are more strategic than ever” (Davis and Dunn, 2003)

Ambler (2003) dedicates a chapter of his book on marketing metrics to the subject branding and stressing the importance of brand value to the organization. The concept of brand equity, according to Ambler, only gained publicity as recently as the 1990’s (41).

A model is presented showing branding as made up of the marketing mix together with environment, competitors and the category of product or service and together affecting consumer behavior over time (48). Over time the marketing mix is less important as it is superseded by past experience. Brand equity is seen as the distinction between marketing and selling. Selling “seeks and immediate order for the product”, whereas marketing invests resources some time “before it expects to reap rewards in sales” (50-51). This is

the marketing time lag which marketers must accept. As Ambler states, “advertising should be judged by its effect on brand equity rather than its effect on sales” (51).

Some of the benefits of strong branding, as it relates to pricing, are that strong brands are protected from price wars and can charge price premiums (Davis and Dunn, 2003). This might potentially negate the need for price promotions in the first place, but even in the event of a price promotion brand strength may result in higher consumer response levels.

Davis and Dunn (2003) are at pains to point out that branding goes beyond advertising colours and logos as there are many customer touch-points with the brand and each of these has an effect on how the brand is perceived. If building the brand is a process, the company goals are to “build awareness”, “differentiate benefits”, make “meaningful connections” and “drive (the) brand into consideration” (110). The most important role of advertising and promotions, according to Davis and Dunn, is the first objective – driving awareness.

On this point, there is some room for argument in that it seems to imply an almost purely cognitive role for advertising in building the brand and fails to recognize the affective or emotion based appeal that successful brand advertising incorporates and uses to reinforce the brand – not purely for awareness.

If brand equity revolves around the brand identity, built through the many organizational touch-points with customers, it follows that the brand identity through advertising needs to be consistently identifiable, relevant and evocative in order to leverage the power of the brand. Colour usage, if the emphasis is strategic, should follow suite and be used to build and reinforce the brand, rather than potentially undermining it with the secondary and short term goals of tactical promotions.

CHAPTER 4: RESEARCH METHODOLOGY

Following are the proposed assumptions that this study aims to test:

Proposition 1: Customers are impacted on a cognitive level by advertising where the dominant colour is red to a greater or lesser degree than by another dominant colour or absence of colour.

Proposition 2: There is a ~~positive~~ difference in price perceptions ~~of-between~~ consumers ~~to~~ viewing products advertised against a background and highlight colour of red versus another dominant colour.

Proposition ~~23~~: There is a ~~positive~~ difference in price perceptions ~~of-between~~ consumers to products advertised against a background and highlight colour of red, versus products with an absence of colour.

Proposition ~~34~~: The difference in price perception to products advertised against a background and highlight colour of red versus another dominant colour is ~~equivalent or less than~~ lesser or greater when red is used together with a verbal price cue.

Proposition ~~45~~: There is difference in price perception ~~to~~ between products advertised against a background and highlight colour of red ~~versus another dominant colour or and absence of colour is equal~~ lesser or greater than when using a shade of red with lower saturation.

Proposition ~~56~~: The difference in price perception between ~~to~~ products advertised against a background and highlight colour of red versus another colour is affected by age, gender ~~age~~, and racial profile.

The research ~~has been~~was structured as a quantitative survey of ~~400+~~360 individuals from a cross section of consumers from the Kwazulu Natal and Gauteng metropolitan areas of Durban and Johannesburg. The study ~~in was~~ split into two ~~part~~experiments:

Participants were surveyed, firstly, to measure the impact of advertising against a dominant background colour of red, versus an alternative colour of equal saturation or red at lower saturation level of 50% ~~and or~~ advertising that appears in black and white. ~~This was conducted through a recall study, explained more fully below.~~ Thereafter, the same participants ~~have been~~were surveyed to establish an association between products advertised against a dominant background colour of red with a perception of low prices for the advertised product. ~~The participants in this second experiment were also tested for purchase intent to establish if lower price perceptions translated into higher purchase intent.~~

The surveys were conducted by a group of ~~20-18~~ individuals selected by the researcher. ~~The 18 a~~Each ~~assistants were~~ tasked with gathering the survey information from 20 individuals ~~each~~. This was necessary to enable the researcher to obtain a sample size large enough to offer reliable results; particularly as the participants were split into demographic groups and the survey material (printed advertising simulations) were also split by colour. Each assistant was given a demographic guideline to work within, in order that the responses ~~are were reasonably equally split~~were reflected across:

GENDER: male and female

RACE: white, asian, black and coloured

AGE GROUP: <21-30, 31-40, 41-50, 51-60>

Research assistants were selected from a range of socio-economic profiles as it was expected that there would be a tendency on their part to select participants from similar economic background to themselves, due to the social groups that the research assistants belonged to and from which assistants would likely source participants. Assistants were requested to engage with participants individually or in groups of ~~four~~three or less. This

was favored over a group approach where venue bias could be a factor and where the inexperienced research assistant might struggle to control the process of a larger group adequately.

Prior to the survey being conducted, each research assistant ~~will be~~was briefed as to the manner in which to conduct each survey and with ~~a the~~ requirement that the assistant made an appointment at the respondents convenience and that the survey took place in a quiet room with no distractions for the 5 minutes required to complete the survey. This condition was aimed at achieving consistency. Assistants ~~will also be~~were briefed as to what should be explained and were cautioned as to leading or coaching the respondent.

Principally, ~~assistants were instructed not to indicate that the survey related to advertising in any way, prior to the first experiment, which relies on a natural reading of a printed newspaper page. Were subjects to be alerted to the purpose of the exercise, they would have paid unnatural attention to the advertising on the printed page,~~ rendering invalid ~~results~~ for ~~the recall study~~.

In the first experiment, ~~a recall study~~, participants were shown a ~~tabloid~~A4-sized page of ~~a simulated community newspaper copy~~ with six ~~product~~ advertisements, each advertising a single semi durable product, including clothing, footwear and household goods (see Appendix 2). ~~Each of The the~~ six products were advertised against a backdrop of six different colour options – but only one ~~of six~~ colour ~~variations was~~ used for each ~~advertisement~~product. One ~~product~~ advertisement featured red as the ~~background and~~ highlight colour, one red at 50% saturation, one blue, one green, one yellow and one in black and white.

The survey ~~is was~~ split into six sets of ~~67~~sixty and with each set the product positions and colours of each advertisement ~~are were~~ ~~shifted~~shifted. Thus, ~~any advert with red appear with equal frequency in all six positions and products are similarly rotated on the tabloid page the colours and product position were rotated. This has been~~was done to avoid any bias due to either the actual product featured or the position of the product or colour in the advertisement on the page. ~~One failure~~shortcoming, however, was that

although each product was represented on each of the six page variations used for the tests and each of the colours is used in each test and each product and colour is evenly rotated across the six page positions, each product did *not* appear equally in every colour. The impact of this is discussed in the study results.

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The product pictures themselves were shown in monochromatic greyscale in order to nullify any potential colour blend or conflict with the background colour, which might distort the effect of the main colour. All the advertisements appear at the identical size so that there is no effect of picture size. All products show a price and price is set at a level considered to be as low as consumers might find in the South African marketplace at any time. Any price perception differences between the products and page positional influence is irrelevant on the assumption that each of the test groups sees the same set of products, and that each product and colour is equally represented in each of the six page positions. This means that, once the results are considered in their totality, position and product influence can be discounted, leaving only colour as a factor to explain response variance. Within each group, positional influences – for example showing red in a prime page position such as the top right hand side – would result in bias within the sets. For this precise reason, the six groups cannot be considered individually to infer differences about colour.

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The advertising used generic copy in the form of product descriptors, but no brand names, to avoid branding bias. Finally, the page appeared with a newspaper masthead, generic news editorial copy and news headlines in between the advertising, as one would expect to see it on a tabloid newspaper. The name given to the tabloid newspaper was an imaginary creation, to avoid possible associations that could occur were a *real* publication name to be used.

The test is monadic in that each participant only sees *one* of the page variations. The process ~~follows~~ followed the procedure of Percy and Rossiter (2001) who conducted a random survey to determine the effect of picture size and colour on response to print advertising (2001). Participants had their details recorded and were shown the page of

advertising and asked to read the whole page as they would an ordinary newspaper. Participants ~~are~~ were specifically not asked ~~specifically~~ to read the advertisements, so as to approximate a natural reading of the page. After a minute, the page was removed. ~~and participants were given a card to fill their detail on.~~

Participants were then tested for recall and asked to remember the products featuring in the six advertisements which appeared on the page. These were recorded by the research assistant, where the research subject was alone, or, where the research subjects were part of a group of two or three, the subjects were asked to ~~writen~~ write the products they recalled on ~~to a the card~~ response form. The participants were then handed back the page and were asked to rate the prices of each products advertised on a seven point bipolar scale: One – Extremely Low, 2- Low, 3- Fairly Low, 4 – Average, 5 – Fairly High, 6- High, 7- Extremely High. The seven point scale was used as the odd number allows a central point and the scale is sufficiently broad to record attitudinal groupings, without attempting to be too refined.

~~The A~~ second experiment was then conducted on the same participants. In this study, participants ~~are~~ were shown a single A4 advertisement showing a spread of semi durable products including clothing, footwear and household product (see Appendix 3). The products were not the same ones as were seen by the participants in the first experiment.

The simulated advertisement did not feature any product logos, but appeared with a corporate logo for a non existent company – “Barnley’s”. As with ~~experiment~~ Experiment 1, pictures were monochromatic, grayscale images of consistent quality. All products appeared with prices.

The advertisement was altered to reflect ~~four~~ six variances, thus making ~~four~~ six sets of ~~400~~ sixty:

- One set with a blue in background, highlight colour and price- pointing,

- One set with a yellow background, highlight colour and price-pointing.

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- One set in black and white only.
- One set in red with high saturation
- One set in red with low saturation (~~60~~50% screen of the above red).

- One set in red with high saturation and including a suggestive verbal price cue.

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~~In each of the four sets, 20 of them were further altered to carry the verbal price cue: "Price Cut Sale get great savings".~~ Once again, the test was monadic meaning participants each only saw one version of the above variants. This ~~allows~~ allowed the researcher to consider the impact of a single colour in isolation on a sub group of ~~partieipant-subjects~~ and to then compare the impact for the same advertisement, in a different colour, on other ~~partieipantssubjects~~.

After viewing the advertisement for one minute, ~~it was removed and partieipantssubjects~~ were asked to record their ~~ire~~ overall perception of prices for products in the advertisement. Once again, the seven point bi-polar scale was used.

Finally, in order to establish intention, participants were asked to respond to the following statement: "Based on the prices in the advert, I would buy product from this advertisement." Participants recorded their response on a ~~5-five~~ point Likert scale: 1. Strongly agree 2. Agree, 3. Neither agree nor disagree, 4. Disagree 5. Strongly disagree. Obviously, the stated intention was affected by product and ~~brand-perceptions-price preferences other than price~~, but any variations in response to this question, between the four colour sets, were of interest.

Data ~~will be~~ was captured and recorded on a spreadsheet (see Appendix 4) with the aim of formulating a distribution analysis to determine the mean and the standard deviation of the group and subgroups. The distribution ~~was then analysed analyses will then be compared~~ using the Kruskal-Wallis one way ANOVA, for Experiment 1, which allows for ~~ordinal~~ nominal measures - in terms of ~~three or more~~ two groups ~~to be compared~~ (red versus another colour). This is followed by a Pearson's Correlation test to determine

whether there is a significant relationship between the use of red and the greater or lesser likelihood of recall. This was done to determine the cognitive impact of red.

Experiment 2 – measuring price perceptions and purchase intention, according to colour, was analysed using independent samples two-tailed t tests, appropriate for comparing two sets of nominal data (red versus an alternative colour). The demographic variations are explored using a Tukey HSD, which allows for multiple variables to be compared simultaneously.

These tests were used to establish significance and to accept or –reject the stated propositions. In all instances, a significance level of 0.05 was set with a 95% confidence level. This means that any variations between colours or demographics that exceed this level were considered to be outside the realm of chance.

CHAPTER 5: RESEARCH RESULTS

Three hundred and sixty results were obtained in the survey with no missing results values. As anticipated, there was a tendency for research assistants to select subjects from similar backgrounds. This is in large part the– result of accessibility in respect of race, as in the work and home environments the mostly ‘white’, upper middle class research assistants, there was more limited access to ‘black-black’ and ‘asian-Asian’ research subjects. This is perhaps also reflective of the socially non-integrated society that prevails in South Africa.

Consequently, the research sample is overrepresented by 21-40 yr old subjects who make up, collectively, 65.8% of the sample (see Table 5.1). Nevertheless a fair representation of each of the age bands was obtained in order to enable comparisons on this demographic.

Table 5.1 Age Distribution of Research Subjects

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30 Yrs	147	40.8	40.8	40.8
	31-40 Yrs	90	25	25	65.8
	41-50 Yrs	64	17.8	17.8	83.6
	51-60 Yrs	59	16.4	16.4	100
	Total	360	100	100	

The sample bias also extends to the racial profile as 51.1% of respondents were ‘white’ (see Table 5.2). This is a larger than representative sample for the population. The survey canvassed 61 ‘black’ subjects, 61 ‘asian’ subjects and 50 four ‘coloured’ subjects. ‘Asian’ here refers to subjects of Indian decent and ‘coloured’ refers to subjects of mixed racial decent. ‘Black’ are almost exclusively subjects of Nguni or Sotho decent.

Table 5.2 Race Distribution of Research Subjects

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	61	16.9	16.9	16.9
	Asian	61	16.9	16.9	33.9
	White	184	51.1	51.1	85
	Coloured	54	15	15	100
	Total	360	100	100	

The sample was also skewed by gender with 61.9% of the sample being female (see Table 5.3). This is largely due to the fact that 72% of the research assistants were female and the greater likelihood of their selecting females as research subjects. A **healthy** sufficient number of male respondents were none the less canvassed to ensure sufficient stability and validity of the results for this demographic.

Table 5.3 Gender Distribution of Research Subjects

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	137	38.1	38.1	38.1

	Female	223	61.9	61.9	100
	Total	360	100	100	

As was noted above in the delimitations of the study, respondents came exclusively from major metropolitan areas and 84% of respondents were sourced from the Durban metropole of South Africa. Also, all respondents were either employed or living in a home where the breadwinner was employed. Most respondents can be assumed to come from middle to middle-upper class and from relatively more economically active backgrounds than the average population member, particularly those whose racial profile was white. The results that are discussed below need to be considered in light of this. Given that most retailers of semi durable and durable goods are less focused on the less economically active segments of the population, this skew is not considered to be problematic.

Results of Proposition 1

Customers are impacted on a cognitive level by advertising where the dominant colour is red to a greater or lesser degree than by another dominant colour or absence of colour.

Experiment 1 tests product recall by colour to ascertain whether for the same products in the same positions, colour will influence the likelihood of product recall. The results found a high degree of variability with products in Red recalled only 37% of the time versus a mean of 47.7%. (see Table 5.4) products in Blue were recalled 61% of the time and products in Black 62% of the time. Red was the worst performing colour followed by Green at 41%, Red (at 50% saturation) at 43% and Yellow at 44%.

Table 5.4 Descriptive Statistics of Experiment 1 – Product Recall by Colour

	N	Mean	Std. Deviation	Std. Error Mean
Blue	360	0.61	0.489	0.026
Red(50%)	360	0.43	0.501	0.026
Black	360	0.62	0.487	0.026
Red	360	0.37	0.484	0.026

Green	360	0.41	0.492	0.026
Yellow	360	0.44	0.498	0.026

The recall data was subjected to a one-sample t-test which found highly significant levels of variance in the mean differences of blue, black, red and gGreen. Red is significantly lower than the mean, with a mean difference of -0.105, well within the 95% confidence level limits.

Table 5.5 One-Sample t -Test – Product Recall by Colour

One-Sample Test						
Test Value = 0.477777777						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Blue	4.954	359	0	0.128	0.08	0.18
Red(50%)	-2	359	0.046	-0.053	-0.1	0
Black	5.413	359	0	0.139	0.09	0.19
Red	-4.089	358	0	-0.105	-0.15	-0.05
Green	-2.677	359	0.008	-0.069	-0.12	-0.02
Yellow	-1.271	359	0.205	-0.033	-0.08	0.02

However, a view of the distribution of the number of recall instances by product (refer Table 5.6) reveals that the shoe product (71.3 %) and the iron/kettle product (66.6%) recall levels are far higher than the ladies tops (25.4% recall) and comforters (36.2% recall)*. The table is colour coded to reflect the colours in which the product appeared in the experiment group for each of the six research sets. This has bearing on the results given that the shoe product is repeated twice in blue and yellow and the iron product twice in black and blue.

Table 5.6 Product Recall Distribution List *

Exp 1 Group	Mens Shoes	Crockery	Tees	Comforters	Ladies Tops	Iron
1	51	37	18	23	15	37
2	40	30	23	27	13	42
3	47	26	37	33	17	55
4	40	26	20	9	15	24

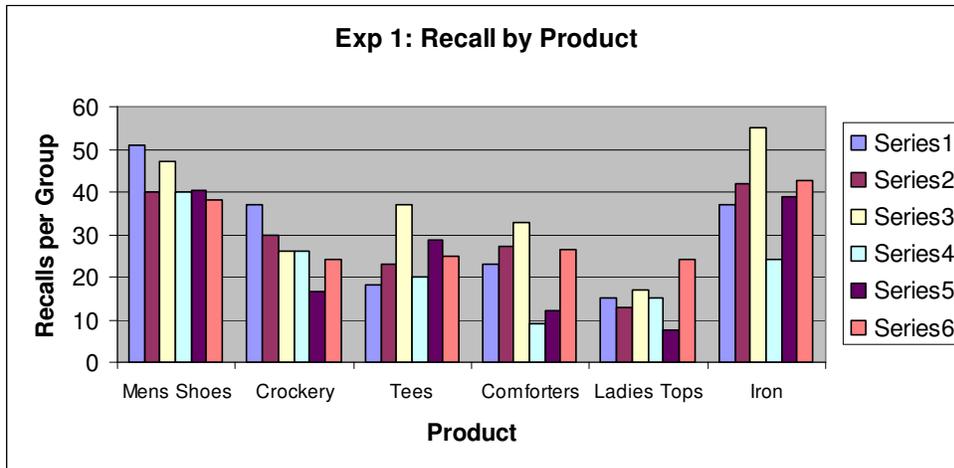
5	40.5	16.5	28.5	12	7.5	39
6	38.25	24	24.75	26.25	24	42.75
TOTAL	256.75	159.5	151.25	130.25	91.5	239.75
Mean Freq	42.79	26.58	25.21	21.71	15.25	39.96
Mean %	71.32	44.31	42.01	36.18	25.42	66.60

* Due to an error in the execution of the research, 20 extra surveys were carried out using Experiment 1 Format 5 and 20 fewer conducted using Experiment 1 Format 6. Consequently, data for Group 5 and group 6 have been weighted to rebalance actual frequencies.

Neither the iron nor the shoes appear in red in the experiment. In red, the ladies tops and the comforters appear twice. Given the fact that the product is an important factor in product recall, the variations in recall by colour may be explained by this duplication. It may also be easier to recall a distinctive profile or concept of an iron than the less distinctive ladies tops or, alternatively, the respective product prices may play a role in influencing recall.

Figure 5.1 shows more plainly the relative consistency of recall of product, regardless of colour or position. This is not to say that colour and position have no influence on recall, but the weight of impact lies clearly with the product itself.

Figure 5.1 Product Recall Distribution list



This is to be compared to Figure 5.2, showing the frequency distribution that occurred by position and by colour. Both variables show a high level of inconsistency within the variable, demonstrating that product is a greater factor for recall than position or colour, in this experiment. It should be noted however that there is an indication of the influence of position given that, for example, position 1 at the right hand top of page is recalled 203 times (or 56.4% of the possible recalls) versus 140.75 recalls in position 4 (23.5%), at the bottom right of the page. The mean recall level for each position was 47.5%. Each product appeared in each position on the page across the Experiment groups, and thus, although not the subject of this study, position is indicated as an important factor in advertising recall.

Figure 5.2 Recall by Position

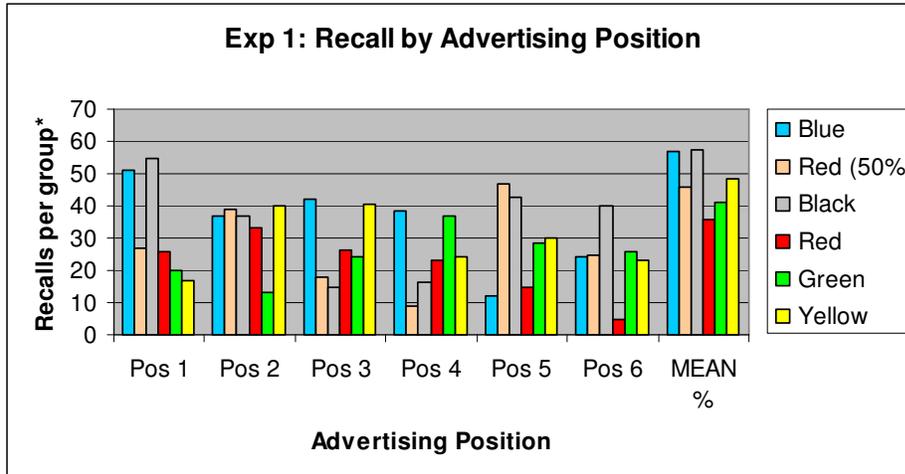


Table 5.7 Colour Recall by Advertising Position

	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	TOTAL	MEAN %
Blue	51	37	42	38.25	12	24	204.25	56.74
Red (50%)	27	39	18	9	47	24.75	164.75	45.76
Black	55	37	15	16.5	42.75	40	206.25	57.29
Red	26	33	26.25	23	15	5	128.25	35.63
Green	20	13	24	37	28.5	26	148.5	41.25
Yellow	24	40	40.5	17	30	23	174.5	48.47
TOTAL	203	199	165.75	140.75	175.25	142.75	1026.5	47.52
MEAN	33.83	33.17	27.63	23.46	29.21	23.79	28.514	
% Recall	56.39	55.28	46.04	39.10	48.68	39.65	47.52	

Colours in the study were evenly distributed across position, thus factoring out position as an influence on the colour results of the t- tests, shown in Table 5.5. However given the strong impact of product itself and that the products were not equally represented across the colour spectrum, the validity of the result is questionable and Proposition 1 must therefore be rejected.

Results of Proposition 2

Proposition 2: There is a difference in price perceptions between consumers viewing products advertised against a background and highlight colour of red versus another dominant colour.

An independent samples t-test was run comparing response of red to yellow as per of Experiment 2. The rating scale of 1-7 measured respondents' view of the price of a range of goods, with 1 being "Extremely Low". Sixty respondents saw a version of the advertisement in red and sixty in yellow. The mean rating for red was 3.6 and slightly below for yellow at 3.4 (see Table 5.8).

Table 5.8 Price Rating Descriptives – Red v Yellow

	Exp 2 Group	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Red	60	3.6	0.995	0.128
	Yellow	60	3.4	1.138	0.147

The variance in the means is shown to be insignificant (see Table 5.9) at a level of 0.308, where a significance level of 0.05 was set. This means that there is a 30.8% probability that the recorded variance is the result of chance.

Table 5.9 Independent Samples t-test – Red v Yellow – Price Rating

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Price Rating	Equal variances assumed	1.025	118	0.308	0.2	0.195	-0.186	0.586
	Equal variances not assumed	1.025	115.933	0.308	0.2	0.195	-0.186	0.586

Purchase intent, measured on a scale of 1-5, between red and yellow is also shown to be insignificant at a level of 0.346 (see Table 5.10).

Table 5.10 Independent Samples t-test – Red v Yellow – Purchase Intent

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Purch Intent	Equal variances assumed	0.947	118	0.346	0.2	0.211	-0.218	0.618
	Equal variances not assumed	0.947	117.924	0.346	0.2	0.211	-0.218	0.618

With regard to the differences in price perception between red and yellow, Proposition 2 must be rejected.

The t- test is then performed on the same sample group of red and compared to blue (see Table 5.11) The mean rating of blue on the 1-7 rating scale is slightly higher than red at 3.73.

Table 5.11 Price Rating Descriptives – Red v Blue

	Exp 2 Group	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Red	60	3.6	0.995	0.128
	Blue	60	3.73	0.989	0.128

The independent samples t-test run for blue against red once again shows low significance at 0.463, far off the required level of 0.05 (see Table 5.12).Table 5.12

Independent Samples t-test – Red v Blue – Price Rating

		t-test for Equality of Means						
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		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Price Rating	Equal variances assumed	-0.736	118	0.463	-0.133	0.181	-0.492	0.225
	Equal variances not assumed	-0.736	117.996	0.463	-0.133	0.181	-0.492	0.225

However, the result for *purchase intent* of red versus blue *does* show variance that is significant at a level of 0.019 (see Table 5.13). This means that although respondents to the red version of the advertisement did not openly perceive a price difference, when reflecting on the likelihood of purchasing, a factor of red led to a mean score of 2.68 (on a 5 point Likert scale) versus a significantly lower mean of 2.27 for blue. 1 indicates a high level of purchase intent and 5 a very low level. Respondents to the blue advertisement are more likely to respond to the advertisement and make a purchase.

Table 5.13 Independent Samples t-test – Red v Blue –Purchase Intent

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Purch Intent	Equal variances assumed	2.378	118	0.019	0.417	0.175	0.07	0.764
	Equal variances not assumed	2.378	95.168	0.019	0.417	0.175	0.069	0.765

Thus, although in respect of red versus blue, the proposition for *price perception* variance must be rejected due to low levels of significance, it is notable that there is an indication of significant variability between these two colours with regard to purchase intent.

Results of Proposition 3

Proposition 3: There is a difference in price perceptions between consumers to products advertised against a background and highlight colour of red, versus products with an absence of colour.

The sample group viewing the red advertisement did not differ except on a very small scale with the sample group who viewed the advertisement in greyscale, with means of 3.6 and 3.57 respectively on a seven point rating scale - 1 being extremely low prices and 7 being extremely high (see Table 5. 14).

Table 5.14 Price Rating Descriptives – Red v Black (Greyscale)

	Exp 2 Group	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Red	60	3.6	0.995	0.128
	Greyscale	60	3.57	0.963	0.124

The independent samples t-test confirms this, with a very low level of significance of 0.852 for the variance resulting between the sample groups (see Table 5.15).

Table 5.15 Independent Samples T Test – Red v Black –Price Rating

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Price Rating	Equal variances assumed	0.186	118	0.852	0.033	0.179	-0.321	0.387
	Equal variances not assumed	0.186	117.876	0.852	0.033	0.179	-0.321	0.387

The t-test for purchase intent results in a similarly low level of significant difference at 0.615. The mean difference was just 0.1 on the 5 point Likert scale on which purchase intent was measured (see table 5.16).

Table 5.16 Independent Samples t-test – Red v Black –Purchase Intent

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Purch Intent	Equal variances assumed	0.504	118	0.615	0.1	0.199	-0.293	0.493
	Equal variances not assumed	0.504	115.037	0.615	0.1	0.199	-0.293	0.493

Proposition 3 must be rejected in favour of a null hypotheses, based on these results.

Results of Proposition 4

Proposition 4: The difference in price perception to products advertised against a background and highlight colour of red versus another dominant colour is lesser or greater when red is used together with a verbal price cue.

Interestingly, the results of the sample group of red versus the sample group of red with a price cue (“Cut Price Sale... Lowest Prices Ever!”) were virtually identical. The mean difference between groups was just 0.017 (see Tables 5.17 and 5.18)

Table 5.17 Price Rating Descriptives – Red v Red with Cue

	Exp 2 Group	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Red	60	3.6	0.995	0.128
	Red with Cue	60	3.62	1.091	0.141

Table 5.18 Independent Samples t-test – Red v Red with Cue –Price Rating

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Price Rating	Equal variances assumed	-0.087	118	0.93	-0.017	0.191	-0.394	0.361
	Equal variances not assumed	-0.087	117.017	0.93	-0.017	0.191	-0.394	0.361

The significance of the differences in the means is very low at 0.93.

The t-test performed to measure the difference in stated purchase intent between with two groups *does* show some variance with a difference in the means of 0.317. The mean purchase intent rating for red with cue was 2.37 on a scale of 1 to 5 where 1 indicates the highest level of intent. This result for red with cue shows more intent to purchase than the red sample group, where the mean rating was 2.68.

However, the significance level of 0.087 falls outside of the required level of 0.05. The difference is not sufficiently strong to eliminate random chance as the factor behind the results variance (see Table 5.19).

Table 5.19 Independent Samples t-test – Red v Red with Cue – Purchase Intent.

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower
Purch Intent	Equal variances assumed	1.728	118	0.087	0.317	0.183	-0.046	0.68

	Equal variances not assumed	1.728	104.327	0.087	0.317	0.183	-0.047	0.68
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Consequently, particularly with respect to the price perception difference stated in Proposition 4, the proposition of a difference between red and red with cue cannot be accepted on the basis of these results.

Results of Proposition 5

Proposition 5: The difference in price perception between products advertised against a background and highlight colour of red versus another dominant colour or an absence of colour is lesser or greater when using a shade of red with lower saturation.

The descriptives on the price rating (see Table 5.20) show a 0.3 difference in the means of red versus red at 50% saturation on the 1-7 price rating scale. Products viewed in saturated red are rated as slightly more expensive (4.3%) than the same products, viewed in a paler version of the same hue. The standard deviations from the norm are large at .995 and .766 respectively, indicating high levels of variance within the samples, which makes it difficult to draw definitive conclusions from sample groups of this size.

Table 5.20 Price Rating Descriptives – Red v Red at 50% Saturation

	Exp 2 Group	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Red	60	3.6	0.995	0.128
	Red (50%)	60	3.3	0.766	0.099

The independent samples t-test run on red compared to red at 50% saturation (see Table 5.21) indicates that the significance level of the result – at 0.067 – fall just outside of the

range of acceptance of the 0.05 level set. Proposition 5 must therefore be rejected in favour of the possibility that this variance in the means may be the result of random chance.

Table 5.21 Independent Samples t-test – Red v Red at 50% Saturation – Price Rating

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Price Rating	Equal variances assumed	1.851	118	0.067	0.3	0.162	-0.021	0.621
	Equal variances not assumed	1.851	110.747	0.067	0.3	0.162	-0.021	0.621

Conversely, the Independent samples T test run for purchase intent (see Table 5.22) shows a significant level of variance at 0.02. Red has a mean on the 5 point scale of 2.68 and red at 50% saturation has a mean of 2.23. The higher score for red indicates that participants were more inclined to want to purchase items when viewed against a less intense version of the colour.

Table 5.22 Independent Samples t-test – Red v Red at 50% Saturation – Purchase Intent

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Upper	Lower
Purch Intent	Equal variances assumed	2.351	118	0.02	0.45	0.191	0.071	0.829

	Equal variances not assumed	2.351	111.131	0.02	0.45	0.191	0.071	0.829
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There is therefore no indication that red is perceived significantly differently in terms of price, but purchase intent is affected by the varying hues of red used in the experiment.

Results of Proposition 6

Proposition 6: The difference in price perception between products advertised against a background and highlight colour of red versus another colour is affected by age, gender and racial profile.

A Pearson Correlation was run to identify age as a factor of price perception variance in the experiment (see Table 5.23). This initial test was not related to colour and incorporated all samples. The results show an insignificant level of relatedness at 0.12, meaning that, in general, differences in the mean scores are not significantly related to age. Age is not shown to be affecting overall price perception in this study.

Table 5.23 Pearson Correlation – Age – Price Rating

		Price Rating	Age
Price Rating	Pearson Correlation	1	-0.082
	Sig. (2-tailed)		0.12
	N	360	360

Age	Pearson Correlation	-0.082	1
	Sig. (2-tailed)	0.12	
	N	360	360

The age bands were then consolidated into two categories (21-40 years and 41-60 years). This was done in order to create larger samples for more stable and reliable results to split the age bands by colour and test whether age was a factor when products were viewed in red (see Table 5.24) versus a consolidated basket of alternative colours (black, blue and yellow).

Neither age band in red shows a large difference in price perception on the mean score compared to 'non-red'. The differential in the mean variance for each grouping is consistent at 0.12.

On the 5 point scale used to measure purchase intent, the younger set viewing product in red show a higher level of intent, with a mean of 2.67 compared to 2.41 for other colours in this age band and 2.3 and 2.34 respectively for red and for 'non-red' in the 41 to 60 years age band.

Table 5.24 Price Rating and Purchase Intent Descriptives – Age – Red v Non Red

Group Statistics						
New Age		New colour	N	Mean	Std. Deviation	Std. Error Mean
21 - 40	Price Rating	Reds	73	3.67	1.068	0.125
		Colours	164	3.55	0.974	0.076
	Purch Intent	Reds	73	2.67	1.068	0.125
		Colours	164	2.41	0.984	0.077

41 - 60	Price Rating	Reds	47	3.51	0.997	0.145
		Colours	76	3.39	0.994	0.114
	Purch Intent	Reds	47	2.3	0.883	0.129
		Colours	76	2.34	0.888	0.102

The independent samples t-test run to test the significance of the difference in the means within each of the age bands shows a low level of significance in this difference between the means of red versus colours in the age band 21 to 40 years (0.387) and 41 to 60 years (0.583), for price perception (see Table 5.25). Equal variances (between the unequal sample sizes) are assumed.

The variance of 0.116 on the 5 point Likert scale for purchase intent for 21 to 40 year old respondents is more significant with a p-value of 0.072, but this still outside the required level of 0.05. The result for 41-60 years group is highly insignificant at 0.788.

The purchase intention for the younger set may be more affected by colour, with red decreasing the intention to purchase. However the results of this test, and more especially the insignificant results of the price rating test for age and colour, are not sufficiently significant to accept the proposition that price perception is affected to any greater or lesser degree by colour, for different age groups.

To consider the effect of gender on price rating, the mean scores of males and females were compared and revealed a small difference in the mean scores (see Table 5.26) and an insignificant p-value of 0.622 for this variance (see Table 5.27).

Gender differences were then considered for the colour red versus the basket of alternative colours to establish whether red was more or less likely than other colours to affect price perceptions or purchase intent of males or females when viewing advertising.

The mean scores for price perception of respondents viewing red differed by 0.19 for males and 1.05 for females (see Table 5.28) The mean scores for purchase intent differed by 0.10 for males and 0.17 for females.

Table 5.25 Independent Samples t-test – Red v Non Red

New Age			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Upper	Lower
21 - 40	Price Rating	Equal variances assumed	0.251	0.617	0.867	235	0.387	0.122	0.141	-0.156	0.401
		Equal variances not assumed			0.837	127.464	0.404	0.122	0.146	-0.167	0.412
	Purch Intent	Equal variances assumed	1.269	0.261	1.805	235	0.072	0.257	0.142	-0.023	0.537
		Equal variances not assumed			1.749	128.585	0.083	0.257	0.147	-0.034	0.547
41 - 60	Price Rating	Equal variances assumed	0.001	0.981	0.627	121	0.532	0.116	0.185	-0.25	0.482
		Equal variances not assumed			0.627	97.38	0.532	0.116	0.185	-0.251	0.483
	Purch Intent	Equal variances assumed	0.003	0.956	-0.269	121	0.788	-0.044	0.164	-0.37	0.281
		Equal variances not assumed			-0.269	98.033	0.788	-0.044	0.164	-0.37	0.281

Table 5.26 Price Rating Descriptives – Gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Price Rating	Male	137	3.57	1.056	0.09
	Female	223	3.52	0.967	0.065

Table 5.27 Independent Samples t-test – Gender

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower
Price Rating	Equal variances assumed	0.493	358	0.622	0.054	0.109	-0.16	0.268
	Equal variances not assumed	0.483	268.657	0.629	0.054	0.111	-0.165	0.272

Table 5.28 Price Rating and Purchase Intent Descriptives – Gender – Red v Non Red

Gender		New colour	N	Mean	Std. Deviation	Std. Error Mean
Male	Price Rating	Reds	43	3.65	0.997	0.152
		Colours	94	3.53	1.085	0.112
	Purch Intent	Reds	43	2.67	0.892	0.136
		Colours	94	2.57	1.011	0.104
Female	Price Rating	Reds	77	3.58	1.068	0.122
		Colours	146	3.48	0.911	0.075
	Purch Intent	Reds	77	2.44	1.07	0.122
		Colours	146	2.27	0.898	0.074

Independent samples t-tests, run to establish significance for these variances, reveal that each set falls far outside the required limit of the 0.05 confidence allowance (see Table 5.29). The proposition that differences in price perceptions for red versus a basket of colours may vary significantly by gender must therefore be rejected in favour of a proposition that there is no such difference.

Finally differences in price perceptions were tested for race/ cultural variances. Table 5.30 shows that white respondents scored price with a mean of 3.36 versus scores of 3.62, 3.7 and 3.85 respectively for ‘black’, ‘asian’ and ‘coloured’ respondents. The Tukey HSD test (see Table 5.30) compares the means of multiple variables and reveals a significant level of variance between ‘white’ and ‘coloured’ respondents. ‘Coloured’ respondents rated the products viewed as being more expensive than white respondents in general.

Table 5.29 Independent Samples t-test – Red v Non Red

Gender			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Male	Price Rating	Equal variances assumed	0.056	0.814	0.612	135	0.542	0.119	0.195	-0.266	0.505
		Equal variances not assumed			0.632	88.103	0.529	0.119	0.189	-0.256	0.494
	Purch Intent	Equal variances assumed	1.524	0.219	0.557	135	0.579	0.1	0.18	-0.255	0.455
		Equal variances not assumed			0.583	91.516	0.561	0.1	0.171	-0.241	0.44
Female	Price Rating	Equal variances assumed	1.018	0.314	0.77	221	0.442	0.105	0.136	-0.164	0.374
		Equal variances not assumed			0.733	135.13	0.465	0.105	0.143	-0.178	0.388
	Purch Intent	Equal variances assumed	6.632	0.011	1.238	221	0.217	0.168	0.135	-0.099	0.434
		Equal variances not assumed			1.174	133.377	0.243	0.168	0.143	-0.115	0.45

The effects of colour were then considered according to the race variables. Once again red and red with cue were grouped on one side to be compared to a consolidated basket of colours, in order to boost sample sizes to acceptable levels. However, once split across five unequal racial samples, the groups for red are nevertheless small. Results may thus be unreliable and should be treated with caution.

Table 5.30 Price Rating Descriptives – Race

Descriptives							
Price Rating							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

					Lower Bound	Upper Bound	Lower Bound	Upper Bound
Black	61	3.62	1.035	0.133	3.36	3.89	1	7
Asian	61	3.7	1.243	0.159	3.39	4.02	1	7
White	184	3.36	0.942	0.069	3.22	3.5	1	6
Coloured	54	3.85	0.711	0.097	3.66	4.05	2	6
Total	360	3.54	1.001	0.053	3.43	3.64	1	7

Table 5.31 Tukey HSD – Race – Price Rating

Multiple Comparisons
 Dependent Variable: Price Rating
 Tukey HSD

(I) Race	(J) Race	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Upper Bound	Lower Bound
Black	Asian	-0.082	0.179	0.968	-0.54	0.38
	White	0.264	0.146	0.268	-0.11	0.64
	Coloured	-0.229	0.184	0.6	-0.7	0.25
Asian	Black	0.082	0.179	0.968	-0.38	0.54
	White	0.346	0.146	0.083	-0.03	0.72
	Coloured	-0.147	0.184	0.856	-0.62	0.33
White	Black	-0.264	0.146	0.268	-0.64	0.11
	Asian	-0.346	0.146	0.083	-0.72	0.03
	Coloured	-.493(*)	0.153	0.007	-0.89	-0.1
Coloured	Black	0.229	0.184	0.6	-0.25	0.7
	Asian	0.147	0.184	0.856	-0.33	0.62
	White	.493(*)	0.153	0.007	0.1	0.89

The variation in the means for price perception for ‘black’ respondents is exceptional in that it is the only grouping that rates red at a lower price than ‘non-red’, with a positive mean difference of 0.374 (see Table 5.32). ‘Asian’, ‘white’ and ‘coloured’ respondents each rate red as more expensive than the basket of colours with variances on the seven point scale of 0.575, 0.122 and 0.327 respectively.

None of the t-test results for price perception demonstrate a significant p value for the respective differences between red and non red in each racial category (see Table 5.33).

The proposition that racial profiles are a factor in colour effect on price perception can therefore not be accepted.

It is, however, worth noting that the racial groups, most especially ‘black’ respondents, do reflect differences for colour response and it is quite possible that a larger group of ‘black’ respondents would confirm that black consumers respond differently to their ‘white’, ‘asian’ and ‘coloured’ counterparts when it comes to reds affect on price perception in advertising.

With respect to purchase intent, the variances between red and the colours for each racial grouping are considerable smaller. ‘Black’ respondents show higher intent to purchase with red, recording a mean score of 2.12 as opposed to 2.2 for ‘black’ respondents viewing the advertisement in colour (see Table 5.32). Conversely, ‘asian’, ‘white’ and ‘coloured’ respondents each return *lower* purchase intent for red.

Given the small variances, it is not surprising that none of the t-test results for purchase intent even approach the required levels of significance for a real difference to be suggested (see Table 5.33). There is no evidence that red has any greater or lesser effect on purchase intent for any of the racial groupings.

Table 5.32 Price Rating and Purchase Intent Descriptives – Race - Red v Non Red

Race		New colour	N	Mean	Std. Deviation	Std. Error Mean
Black	Price Rating	Reds	17	3.35	0.862	0.209
		Colours	44	3.73	1.086	0.164
	Purch Intent	Reds	17	2.12	1.054	0.256
		Colours	44	2.2	1.002	0.151
Asian	Price Rating	Reds	12	4.17	1.115	0.322
		Colours	49	3.59	1.257	0.18
	Purch	Reds	12	2.25	0.754	0.218

	Intent	Colours	49	2.22	0.985	0.141
White	Price Rating	Reds	69	3.43	1.078	0.13
		Colours	115	3.31	0.852	0.079
	Purch Intent	Reds	69	2.72	0.983	0.118
		Colours	115	2.55	0.976	0.091
Coloured	Price Rating	Reds	22	4.05	0.785	0.167
		Colours	32	3.72	0.634	0.112
	Purch Intent	Reds	22	2.36	1.093	0.233
		Colours	32	2.34	0.653	0.115

Table 5.33 Independent Samples t-test – Red v Non Red

Race			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Black	Price Rating	Equal variances assumed	0.124	0.726	-1.272	59	0.208	-0.374	0.294	-0.963	0.214
		Equal variances not assumed			-1.41	36.545	0.167	-0.374	0.266	-0.913	0.164
	Purch Intent	Equal variances assumed	0.399	0.53	-0.299	59	0.766	-0.087	0.29	-0.668	0.494
		Equal variances not assumed			-0.293	27.864	0.772	-0.087	0.297	-0.695	0.521
Asian	Price Rating	Equal variances assumed	0.235	0.629	1.449	59	0.153	0.575	0.397	-0.219	1.369
		Equal variances not assumed			1.56	18.507	0.136	0.575	0.368	-0.198	1.347
	Purch Intent	Equal variances assumed	0.437	0.511	0.084	59	0.934	0.026	0.305	-0.584	0.635
		Equal variances not assumed			0.098	21.262	0.922	0.026	0.259	-0.513	0.564

White	Price Rating	Equal variances assumed	3.175	0.076	0.848	182	0.397	0.122	0.144	-0.161	0.405
		Equal variances not assumed			0.8	118.613	0.425	0.122	0.152	-0.179	0.423
	Purch Intent	Equal variances assumed	0.038	0.845	1.187	182	0.237	0.177	0.149	-0.117	0.471
		Equal variances not assumed			1.184	142.388	0.238	0.177	0.149	-0.118	0.472
Coloured	Price Rating	Equal variances assumed	0.287	0.594	1.687	52	0.098	0.327	0.194	-0.062	0.715
		Equal variances not assumed			1.621	38.769	0.113	0.327	0.202	-0.081	0.734
	Purch Intent	Equal variances assumed	5.532	0.022	0.084	52	0.934	0.02	0.238	-0.457	0.497
		Equal variances not assumed			0.076	31.293	0.94	0.02	0.26	-0.51	0.55

CHAPTER 6: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The test for the attention grabbing properties of colour in Experiment 1 and the various tests for the impact of colour on price perception in Experiment 2 do not offer much to suggest that the use of red is in any significant way likely to improve the price perception of the reader of a print advertisement.

If anything, there is more of a suggestion that red may *negatively* affect price perceptions – leading respondents to rate the products as more expensive than when considered

against the background of other colours. There may be a demographic exception to this in that the result for 'black' respondents within the sample indicates that products viewed are perceived as being less expensive when viewed in red. However, the sample size for black respondents viewing the advertisement in red was too small to yield a significant result.

The Experiments conducted for the purposes of this study were moulded around some of the pertinent issues debated in the literature discussed.

6.2 Advertising, colour and awareness

The AIDA Model described above is one of a number of models used to explain how advertising works. The broad_reaching Vakratsas and Ambler study (1999), which was discussed, segmented advertising response models into seven distinguishable types. In each of these, the cognitive and affective brain functions that may lead to a purchase decision are emphasized to different degrees. Alternatively they theorise a different *sequence* of effects. Certain models are applicable to different product categories depending on the level of emotional and intellectual involvement that such a purchase may require.

It was noted that the AIDA model falls into the 'Persuasive Hierarchy' category according to the Vakratsas and Ambler (1999) study, in that it ascribes to a sequence of consumer affects from cognitive (thinking) to affective (feeling) to action (doing). Thus, the initial objective of advertising practitioners, according to this model, is to ensure that advertising techniques employed address awareness.

Experiment 1 sets out to investigate whether red is more likely or to attract attention than another colour. Certainly, the results do suggest that there may be differences between the colours, but no significant result can be accepted due to the inherent bias within the experiment of the product itself and the position of that product. Although products (6) and product position (6) were rotated to attempt to avoid such bias, in effect, the research

would need to have incorporated 36 versions of the simulated tabloid advertisement into the experiment, instead of the six that were used.

This limitation may have been less significant but for the fact that the product itself proved to be such a powerful factor in awareness. Table 5.6 showed that men's shoes were recalled by over 70% of respondents, whereas ladies tops were at just over 25% total recall. The low and high recall were effected by position and, perhaps, colour but the ranking of awareness of men's shoes over ladies tops was in clearly in favour of men's shoes, regardless of colour or position. Whether this is due to the fact that the concept of a shoe is more distinctive and thus easier to be recalled than a ladies top or whether it is because respondents saw value in the shoe, due to the price and picture that was not equaled by the ladies tops, is a matter for conjecture. Whatever the case, all other things being equal, product appears to be a far greater force in attracting attention than colour.

This supports the abovementioned study of Fernandez and Rosen (2000) where it was found that effective use of colour (in yellow pages advertising) was linked to the its enhancement of product, but not to its attention grabbing properties. It may also reinforce a view of pricing theory quoted from Perreault and McCarthy (2005: 475) that "low prices do attract customers", which could be re-stated in this case to read "low *advertised* prices attract customer attention'.

The position of the advertised product appears to be a secondary, though important, factor for awareness in the study. The range of results for position shown in Table 5.7 were from 59% for position one (top right of the page) to 39% for positions 4 and 6, at the bottom right and bottom left of the page. As each product had an opportunity to appear in each of the six positions for each group of 60 respondents, it would appear that position does play a role. The percentile range for position (17.3) is similar to the range for colour (21.1) in Table 5.7. However, as discussed in the results, not each product appeared in every colour, which resulted in a skew towards colours, such as blue and black, where the most highly recalled products (men's shoes and iron) were represented twice.

An actuarial scientist or an experienced statistician might devise a factor for this error based on the recall level of the products and apply it to the statistics for recall relating to colour and establish a more valid result. However, this was not undertaken and consequently the result for colour cannot be measured against position, to conclude which is the stronger factor for awareness.

However, given the fact that, for example mens' shoes (which appear twice in blue), are three times more likely to be recalled than ladies tops (which appear twice in red), it is fairly safe to assume that the percentile range for colour would have been significantly lower, had each product appeared in each colour. Consequently, the impact of position is likely to have been more considerable than the impact of colour in affecting recall.

Table 5.6 shows that, even *within* the product categories, in the four product categories where red is represented, only twice does the colour outperform the mean for recall for a product category. Red at 50% saturation and black (greyscale) also outperform the mean for a product category twice, yellow three times, blue four times and only green is less than red, outperforming the mean only once.

This manner of looking at the result for awareness within the product category factors out the influence of the product and may be enough *prima facie* evidence to suggest that, despite inconclusive results in this study, red in print advertising may not have the outstanding properties to attract attention and affect awareness that marketers and advertising practitioners may assume. Certainly other colours may be equally effective in this regard.

To conclude, it is important to again emphasize the point made in the setting out of the delimitations of the study, that this study does not take into account the many shades and hues of the colour spectrum, nor does it account for a complex myriad of other factors which might influence awareness in conjunction with colour, such as brand awareness. It

is possible that a different study using different products and colours or a different methodology would achieve different results.

6.2 Price Perception versus Intent

Experiment 2 of the study moves from considerations of awareness, in the AIDA model, to the areas of interest, desire and action.

The literature review within this study considers the point of Chandy *et al* (2001) that research into advertising effect can be split into *laboratory* studies on cognition, affect and intention and *econometric* studies.

It should not be assumed that positive perceptions created through advertising about products, including price, automatically translate into action.

For each consideration of price perception in the study a purchase intent measure was also taken. This is not the same as an *actual* measure of action taken, which could be achieved through a number of alternative methodologies, such as a practical experimental study designed to measure cause and effect. Nevertheless, this study does indicate a theoretical intention.

The results for purchase intention were discussed in the results section with the relevant tables. It is noteworthy that while, in certain instances, higher mean purchase intention flowed from a better mean price perception as one might expect, often this was not the case. The reasons for this are open to speculation, but the most obvious one is that customers may be more or less price sensitive to the product category of the advertised items, meaning that even where colour may influence a price perception, it does not necessarily influence the desire to purchase those products in the same way. Conversely, where there is no significant difference in price perception, there may be one for purchase intent. Use of colour may trigger unconscious perceptions or unmeasured perceptions unrelated to price, such as quality, leading to stronger intent

In most instances of this study, as with price perception, the differences in purchase intent, as affected by colour, were found to be negligible. Further discussion and conclusions on purchase intent appear below discussed in the context of the colours themselves and the demographic variations within the study.

6.3 Advertising colour and verbal cues

Percy and Rossiter (2001) found that that visual element can affect beliefs and attitudes towards advertising, even when there are no verbal components. This led to the question of whether, if red was used in conjunction with verbal cues about price, the positive effect on price perception or purchase intent would be any stronger. The result was that advertising red together with a price cue showed almost no difference compared to the same advertisement viewed with no verbal price cue.

Meyers-Levy and Peracchio (1995) noted that colour can either support advertising claims or undermine advertisement claims by usurping resources needed to substantiating information. This finding is supported by the later study of Chandy *et al* (2001) also discussed above, which found that where motivation to process advertising information is low, emotional appeals (such as might be affected by use of colour) can work without verbal cues.

In support of these findings, it would appear that for the range of familiar item types used in the experiment, the verbal cue did not add to the colour in forming a stronger price perception or purchase intent. This may be, as per Chandy *et al* (2001), that as the value of common product items was well understood, low involvement was needed to process the information. What is unsubstantiated, however, is whether red itself, as a non verbal cue, did anything to positively affect price perception in this sample group.

6.4 Colour differences in advertising, affecting perception

The results of this study found no instances of significant difference in price perception based on colour. However the purchase intent t-test comparison for the means of red and blue found a significant difference between respondents viewing the two colours. Respondents who viewed the advertisement in blue had stated a greater theoretical intention to purchase

Furthermore, when red was compared to red at 50% saturation, purchase intent was stronger with red at 50% saturation and the difference though not large (.45 on a 5 point scale), was significant in its strength.

For the balance of results on price perception and purchase intent, black, yellow and red with an advertising price cue show no significant differences, compared to red.

Lichtle's research (2007) found that individuals with high optimal stimulation levels (OSL's) prefer red to blue and visa versa. Does the result of red versus blue means that there was preponderance of individuals with low OSL's in the sample group and possibly in the population at large? It is not possible to say, but it is equally or more likely that there are other factors involved in this dynamic.

The examination of red at two levels of saturation was inspired by Lichtle's` (2007) study of students, which found that attitude towards and advertisement can be influenced by hue, lightness (brightness) and saturation of colour. Individuals with high OSL's experience pleasure from ads whose dominant colour has a saturated, red hue but they were more *aroused* by advertisements where the dominant colour was only slightly saturated. Gorn *et al* (1997) also reported finding differences in response to advertisements using different hues, saturation levels and colour values affecting ad likeability.

Lichtle's (2007) study was not intended to indicate general differences and preferences, but individual ones. However, *this* study on price perception considered whether there may be a *general* effect for price perception using red at different levels of saturation. As reported, there *was* a significant difference for purchase intent where red was used at 50% saturation. This may indicate that the 'arousal' level or a 'likeability' factor of a less saturated red leads respondents to view the products more positively, while leaving price perception relatively unaffected.

Other than the abovementioned exceptions, there were no other significant differences between red and other colours for either price perception or purchase intent.

Moreover, there is no basis, from the results of this study, to favour red as a vehicle for price promotions in hope or expectation that red will serve as a signal of lower prices.

This accepted, it leaves the door open for advertising practitioners to be more exploratory and differentiated in their use of colour advertising sale promotions. The optimal use of colour may in fact be to use it in an original rather than a standard manner. In support of this, the literature review cites Pieters *et al* (2002), who find that advertising originality stimulated attention and increased recall of brands.

6.5 Advertising and demographics

The final aspects of Experiment 2 were tests to measure the effect of red on price perception for different age groups, gender and racial profiles. In that the results showed limited difference in these demographical segments, Aslam's (2006) contention that colours alter the meanings of the objects or situations with which they are associated, cannot be conclusively extended to the effect of colour on price perception.

However, with larger sample sizes, the same test might well reveal significant results for price perception – as it was of interest that while ‘coloured’ respondents rated price 8.8% higher for red, ‘whites’ 3.6 higher and ‘asians’ 16% higher, on the seven point scale, ‘black’ respondents rated the same advertisement products as 10% *lower* when viewing them in red compared to ‘black’ respondents viewing the same advertised products in other colours. There is some evidence here to suggest that these differences may well exist and should be explored further through more colour studies.

With regards to gender, red did not appear to affect price perception and purchase intent, supporting Schindler’s (1986) finding that colour effects are generally not gender specific. Furthermore the study found no significant difference for age.

This is not to say that colour should be disregarded when it comes to gender, race or age. This scope of this colour study was narrow and intended only indicate whether red has an advantage when it comes to price perception or purchase intent for the particular colour option used in Experiment 2. The overall conclusion that is led is that advertising practitioners and marketers hold too much store by this colour for its ability to convey messages about price.

More than that, there is a suggestion being made through this example that the use of colours in advertising is unscientific and often crude in its generality. Markets are diverse and complex. Consequently, customer focused, market orientated organizations should do more to avoid oversimplification in regard to creative executions of advertising.

The Schindler (1986) study did find that *certain* colours have come to be societally associated with masculinity or femininity and cultural interpretations, as did Lee and Barnes (1990) with regard to gender preferences for colour. Both also contend that many advertisers do not appreciate any differences in how consumers in different target markets respond to colour.

Lee and Barnes (1990) study found some differences in advertising aimed at black and white audiences in America. In post apartheid in South Africa, there are more obvious attempts by advertisers to consider different cultural groups. Advertising appears to be more accepting and increasingly understanding of these differences and even affirming them. However, in the matter of colour, there appears to be no current studies which focus on this aspect. Given that powerful new markets segments are emerging in South Africa and in other emerging economies all over the world, it is important that more be done to add to the small body of knowledge that exists pertaining to the use of colour in advertising to appeal to these markets. Old, broad-brush approaches or untested mindsets that prevail in advertising may undermine efforts to tap into the emotions and minds of consumers.

The following further recommendations are put forward as justification for why the study of colour, and other creative aspects of advertising, requires added effort.

6.6 Colour for the future

Companies around the world, but particularly in emerging economies are attempting to become far more marketing orientated, meaning that the customer is at the centre of the company focus rather than its production capabilities, for example. The driving forces behind this shift are increased competition on a national and global scale as well as the easy access to information, brought about by technological advances.

In this environment there has tended focus on complexities has increased, in order to be more flexible and receptive towards customer needs. This complexity has included the methods and means of communication to markets and customers. Perhaps, however, with all the options, information and technology available to modern marketers, there is a risk that some of the fundamentals are ignored.

It is easy to forget, in the race to embrace the latest Marketing Information System or Customer Relationship Marketing approach, that the old questions of how advertising

works still require attention. This is because, as theory, they are never perfected and because the changing market environment means that this theory needs updating.

It is not difficult to conceive that marketers who use highly sophisticated means of segmenting, communicating and measuring returns from advertising may never really address or appreciate some of the fundamentals that underlie advertising at its most basic creative level: For example, the impact of colour in advertising in relation to advertising objectives.

As consumers are given more options in the marketplace, they naturally become more demanding that their personal expectations are met. The risk of failing to address these expectations is the loss of future market share. Competitive advantage may well turn on the better use of emotional appeals, such as colour usage in advertising. It makes sense that, if we wish to satisfy customer needs, we must understand their heart and minds even at a subconscious level.

The world has shifted generally towards more open political and social cultures. New markets are opening up that were previously considered unimportant or inaccessible. In South Africa this is especially so. Previously, large population groups and cultures were simply ignored. The same cultures now need to be affirmed. If marketers accept that colour interpretation and response is affected by culture, they should better understand how this may affect advertising response and devise strategies to incorporate these learnings.

One counter factor to this should be admitted: The Global marketplace and communications mediums may also lead to more global influences and some pulling together of culture and ideology. Consider, for example, the American influence in South Africa brought about by increased access to American television shows, movies and even brands. These have brought about certain cultural influences, which will doubtless affect advertising response to creative elements as they are recognized and identified with.

The competitive global drive has also led towards a more accountable approach to marketing. Metrics of various forms are being used increasingly to measure success or progress towards objectives. This new emphasis means that previously fuzzy or soft areas such as advertising design and conceptual bases, once left accountable to art departments at advertising agencies, are now required to be justified on a far more scientific and strategically integrated basis.

Aligned to this, through advances in technology, it is increasingly possible to measure things that could not previously be measured – such as brain wave activity in response to advertising. Medical science and psychology are better able to support thinking about how colour may affect the mind and this may well in future lead to more precise colour usage and leverage for competitive advantage.

Organisations that ignore this precision in a marketplace that permit ever smaller margins for error may struggle to survive in a highly competitive and cluttered advertising environment and where customer time and attention are limited. Together with words and images, colour is all that Marketers *have* to communicate with when it comes to print advertising.

Finally, considering that gaining competitive advantage and growing customer value are increasingly recognized as flowing from stronger brands, it is suggested that the true benefit that stands to be gained through colour usage lies in brand building rather tactical approaches based on generalized uses of colour, which are difficult to rationalize in complex fragmented markets. Advertisers should rather use colour in advertising to identify and build the brand and support brand objectives. If the use of colour serves to create a more identifiable corporate identity and create a familiar basis that customers can understand and relate to, it is likely to do a better job for the organization. It is quite likely that, given consistent and powerful colour usage for branding, standard meanings and interpretation can be overwritten by the brand.

In any event, given the questionable relationship of the colour red to price perceptions, it is surely unwise to give preference to the tactical use of unproven colour usage for short term objectives over the longer term objective of building the brand and its identity.

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