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The role of colour on brand identity and brand choice for children – a working paper

Abstract

The effect of colour on individuals is a well documented phenomenon with general consensus drawn with regards to the effect on emotions and mood. What is more ambiguous however is the effect of colour on marketing practices, specifically the effects of colour on brand choice. Although there is a growing body of empirically-based research into these effects there are still major research gaps, the main limitations being the exclusion of value and chroma in experiments, the testing of colour preferences with no reference to specific product categories and the relatively small sample sizes. This paper reports a work in progress of an empirical study designed to examine such research gaps: that of the effects of colour on brand choice for different aged children with a focus on the effects of hue, value and chroma on a range of product categories within the healthy snack foods market. The findings will provide valuable guidelines for successful future marketing strategies.

Keywords

Colour, brands, children, identity, value, chroma.

Introduction

There are three critical areas pertaining to this working paper. First, the rise in the importance of brands and subsequently brand management strategies; second, the role that colour plays in differentiating between brands; and third, the role of children as consumers and in turn the rise of marketing towards this increasingly important segment. This paper identifies the linkages between all three areas in addition to considering the rising problem in the UK of obesity (30% of children in the UK are overweight, one fifth of whom are obese; Schofield and Cracknell, 2007) by addressing how to make healthy snack foods more appealing to younger consumers.

Justification for the Research

The average child in the US, Australia or UK sees between 20-40,000 television advertising commercials per year (Lindstrom, 2003). With this level of exposure children have a major influence on the household budget and in addition they learn about and become conscious of brands at an increasingly early age (Hackley, 2005). Burke (2005) contends that children as young as two easily recognise brand logos, while Kelly and Kulman (2004) claim that children can recognise logos by 18 months and that by 2 years old, many ask for products by brand name. Attachment to brands and labels starts young and it is suggested the average 10 year old has internalised 300-400 brands (Mayo, 2005). In addition, it is proposed that the earlier the marketer establishes brand awareness and recognition in the child, the stronger the brand association and imagery are likely to be when they become independent consumers (Ross and Harradine, 2004). Research conducted by Roper and Shah (2007) identified that children between the ages of 7 and 11 displayed a very high level of brand awareness and chose brands due to their functional benefits and for their ability to build certain images that the children desired. In addition, 90% of children researched agreed if they saw a brand in a television or magazine advert, it would have a positive affect on their purchase intentions (Roper and Shah, 2007). The task for the marketer therefore is to understand the role of children as premature adult consumers, in order to develop long-term, profitable relationships in the future.

One way of making brands appealing to children is through the use of colour. Colour and its effect has been researched extensively in psychology and educational studies, however due to the background of these studies, the effect of colour on brand choice has been omitted. These studies are useful to identify preferred colours and so forth but due to their non marketing discipline the applicability and validity of the results for brands are limited. The research proposed within this paper will contribute to the body of knowledge pertaining to the effects of colour by examining the effects of age, gender and product categories on colour choice. This research aims to overcome methodological weaknesses of prior studies by analysing the effects of value and chroma on brand choice in addition to incorporating a large sample size.

The proposed research will incorporate 3 product categories from the healthy snack foods market with the intention of providing recommendations on how to make them more appealing to children which, with respect to current obesity concerns, is much needed. The study will contribute to marketing practice via its aim to provide recommendations with regards to future successful marketing strategies of brands within the healthy snack foods product categories analysed.

What are Brands?

Brands help individuals decide what to wear, eat, use, how they shop, travel and manage their money. They surround consumers with beacons of familiarity and consistency. The term 'brand' is not a new concept. The Oxford English Dictionary traces the development of the word "brand" from the Germanic word "brandr" which was referred to the mark made by burning cattle with a hot iron, a usage first noted in 1552. The earliest definition of "marketing" was just after this date, in 1561 (Jevons, 2005), hence it is suggested that branding may have preceded marketing.

Development of Brands

There has been a plethora of research conducted into the area of brand building and development (Maklan and Knox, 1997; Alreck and Settle, 1999; Baldinger *et al.*, 2002; Petromilli *et al.*, 2002; Boyle, 2003; Urde, 2003; Byrnes *et al.*, 2005; Davies, 2005; Vallaster and de Chernatony, 2006) and in today's market, having a well thought through brand

strategy can have a substantial impact on a company's bottom line (Petromilli *et al.*, 2002) and ultimately is a key contribution to corporate success (Martinez and de Chernatony, 2004). Brand building must be continuously engaged in and the process should be an evolution not a revolution (Urde, 2003). For instance, brands need constantly updating and modifying in order to ensure that they satisfy ever changing consumer needs. To achieve long term success and growth, however, brands need to focus not just on market penetration but on developing customer loyalty and relationships (Baldinger *et al.*, 2002). This customer orientated concept has led to a variety of studies conducted into the various dimensions of brands and what and how they communicate with consumers (Grace and O'Cass, 2002; Lange and Dahlén, 2003; Hayes *et al.*, 2006), one way to communicate with potential and existing customers is through a brands image and visual identity.

Visual Identity

There is currently more emphasis on colour in the marketplace than ever, with millions spent by companies on brands' distinctive colour combinations (Tutssel, 2001). As brands become increasingly important they need to be instantly recognisable, with colour an integral part in that process (Cork, 2006). It is suggested that on average, 80% of the information we assimilate through our senses is visual (Knouw, 2006). Hence a brands' visual identity is critical. The logo, symbols, colour scheme and type-font all contribute to this visual identity (Baker and Balmer, 1997). There are different views surrounding the essence of brand image and brand identity and overlaps in understanding and theory are often made. What is generally agreed upon, however, is the importance of visual identity for a brand, and that colour is a major element.

The Importance of Colour

Colour can prompt a swifter response to a brand than either the written word or imagery (Tutssel, 2001; Clegg, 2004) and is the quickest path to emotion creation (Haynes, 2006). Senses are the receptors of sensations and the link to memory which feeds into emotions. 99% of all brand communication today is focused on two of our senses: sight and hearing (Lindstrom, 2005; Haynes, 2006), and colour, at all ages, is an integral part of that communication. On average people make judgements with respect to products (and people)

within 90 seconds of their initial interactions, and between 62-90% of this assessment is based on colour alone (Singh, 2006). However despite the figures quoted there is an absence of empirical evidence in the extant literature, with much of the published research based on anecdotal rather than empirical evidence (Heath, 1997; Knouw, 2006; Singh, 2006).

The Effect of Colour on Emotions

The relationship between colour and behaviour, especially between colour and emotional response, is rich and complex (Nakshian, 1964). Research into the effect of colour on emotions identifies certain key findings and trends alongside differing viewpoints with regards to matching certain colours and emotions. There is consistency of opinion regarding associations between the colour red and warming/arousing emotions (Tatibana, 1937; Odbert et al., 1942; Wexner, 1954; Kwallek et al., 1988), however, the interpretation is split between positive warming and negative anxiety associations linked to the emotion of arousal (Nakshian, 1964; Kwallek et al., 1988). There is consistency in findings that yellow is perceived to be a warm/playful colour (Tatibana, 1937; Odbert et al., 1942; Wexner, 1954) without the negative connotations attached to red. This is due to yellow being more strongly associated with playful and cheerful emotions while red takes on more stimulating emotions. There is a lack of consistency with findings towards the colour blue. Associations with the emotions tender (Odbert et al., 1942; Wexner, 1954) and soothing (Wexner, 1954) place a calming emphasis on the colour, while other emotions of cold (Tatibana, 1937) and depression (Kwallek et al., 1988) relate almost negative connotations to blue. These findings suggest that the emotional effects of colour can affect individuals in various ways, with some colours more clearly defined in the minds of individuals than others.

Children and Colour

An area of growing concern and interest is how age affects the role that colour plays. Youth, it has been suggested, is a very important age segment in relation to the key role associated with colour and its power in decision making (Heath, 1997). It has been shown, for example, how important colour is in attracting a child to a particular toy (Apfel, 1993).

The old belief that children are colour blind during the first years of life and that a child sees in different degrees of black and white (Marsden, 1903) has been disproved by researchers (Marsden, 1903; Staples, 1932). Additionally, there have been claims that the blue sensation is lacking in early life (Myers, 1908). This theory concurs with evidence that in infancy red and yellow are strongly preferred (Holden and Bosse, 1900; Myers, 1908; Staples, 1932) and are much more effective in eliciting responses than blue and green (Holden and Bosse, 1900). Research into colour mood associations of children is of similar vein to research conducted on adults. Pre-school aged children (three-four years old) associated the colour brown to sad and yellow to happy stories (Lawler and Lawler, 1965) which concurs with research conducted on adults and their associations with yellow (Tatibana, 1937; Odbert *et al.*, 1942; Wexner, 1954).

Only a handful of studies have been conducted into the effects of colour on brand choice among children. Heath (1997) looked at the effects of colour on the youth market and concluded that children love neon colours, especially green and yellow. Walsh *et al.* (1990) showed that children favoured red then green when choosing sweets, while Hutchings (2006) suggested that with regards to food marketing children prefer strong colours, especially bright high-contrast, saturated colours. Marshall *et al.* (2006) identified high correlations between favourite colour and choice of product packaging. Walsh *et al.* (1990) identified preferences for colours of sweets being red, green, orange and yellow respectively with no difference in preference found in terms of age, gender, or for the three different sweet types.

Colour Preferences

There are many confounding factors that affect the aesthetic evaluation of colours. While all colours tend to be inherently pleasant (i.e. rated above indifference), their aesthetic effect depends on the associations they arouse in individual observers (Helson and Lansford, 1970). Prior research has established a preference for the darker/more saturated colours (red, blue and violet) over that for the lighter colours (orange, yellow, and green) (Holden and Bosse, 1900; Katz and Breed, 1922; Staples, 1932; Valdez and Mehrabian, 1994). Table 1 defines hue, value and chroma and gives examples of each.

Table 1 Definitions of Hue, Value and Chroma

Hue	The pigment of colour: blue, red, yellow etc. (Gorn et al., 1997).
Value	Degree to darkness or lightness of the colour in relation to the scale of pure black to pure white. Low value colours tend to have a 'blackish' quality while high value colours have a 'whitish' quality, hence making high value colours pastel like in appearance (Lichtle, 2007).
Chroma	Refers to saturation: highly saturated colours contain a greater percentage of pigment. Low chroma colours are predominantly dull while high chroma colours are rich and deep (Gorn et al., 1997).

Early studies into the psychological effects of colour identify age as a factor which influences colour preferences. Extant research into the responses of infants to colour concluded that the most outstanding colour effect of infants was red (Staples, 1932). At each age between the ages of 6-24 months red was always preferred, whether compared with yellow, green or blue. With the exception of the interest in blue, preferences became less marked as the age of the infant increased (Staples, 1932) which reinforces comments that with increasing age, blue preferences increase (Holden and Bosse, 1900; Katz and Breed, 1922).

It seems apparent that age is an important variable in affecting colour preferences, therefore including a diversity of age of subjects in primary research is vital (Katz and Breed, 1922). Repeated measure designs (Helson and Lansford, 1970; Staples and Walton, 1933) has resulted in findings that conditioning can occur for colour preferences (Staples and Walton, 1933; Whitfield and Wiltshire, 1990) however this could also be interpreted as a methodological weakness as subjects may become more accustomed to the research design and other influential variables may affect the outcomes.

Based on the research critiqued here there appears to be a consistency in opinion that certain colours are rated more favourably than others (Holden and Bosse, 1900; Myers, 1908;

Staples, 1932; Katz and Breed, 1922; Valdez and Mehrabian, 1994). The research question will be to test this theory. Therefore the following propositions will be tested;

Proposition One - Certain colours (hues) will be more popular than others.

Based on the research critiqued here there appears to be a general consistency in opinion with the exception of Hogg (1969) that more saturated colours are rated more favourably than less saturated colours (Holden and Bosse, 1900; Katz and Breed, 1922; Staples, 1932; Guilford, 1940; Helson and Lansford, 1970; Bornstein, 1975; Valdez and Mehrabian, 1994). The research question will be to further test this theory. Therefore the following proposition will be tested;

Proposition Two - More saturated (high chroma) colours will be rated more positively than less saturated (low chroma) colours.

Also based on research critiqued there appears to be a consistency in opinion that high value colours i.e. those lighter and more pastel like in appearance are preferred to low value colours (Guilford, 1940; McManus et al., 1981). Therefore the following proposition will be tested;

Proposition Three – high value colours will be rated more positively than low value colours.

Additionally there appears to be a theme regarding colour preferences changing as children age. Therefore the following proposition will be tested;

Proposition Four – Children of different ages will have different colour preferences.

Colour and Effects on Brand Attitude

Colour can be used as a marketing tool to influence an individual's attitude towards an advert and subsequently the brand (Lichtle, 2007). Choosing the right colour(s) for brands and their advertising can ultimately affect brand attitudes (Gorn et al., 1997). Key strengths of research

conducted into colour and the effects on brand attitude include the use of fictitious brands which illustrates the effect of colour in a marketing context (Percy and Rossiter, 1983; Gorn et al., 1997), however limitations include only one brand being tested, only one product category being tested, and the testing of product categories with possible prior colour associations (Percy and Rossiter, 1983; Gorn et al., 1997).

These limitations will be addressed through testing the following propositions;

Proposition Five – Colour will have an effect on brand choice.

Proposition Six - Different product categories will identify different colour preferences.

There are various influences on colour preferences of individuals. These influences and the colour associations they imply need to be understood by marketing practitioners who are interested in determining colour associations for their brands. Grossman and Wisenblit (1999) claim that it is important to understand that consumers have different colour preferences for different product categories.

Gender

An additional influence on colour preference is gender, for instance pink may be gender associated in the child toy market, but it would be unacceptable in the kitchen décor market (Hutchings, 2006). There has been a great deal of research conducted in to whether there is a gender difference in response to colour and although findings are ambiguous, many investigations have indicated that there are differences in colour preferences (Katz and Breed, 1922; Staples, 1932; Lane, 1991; Khouw, 2006; Singh, 2006). Helson and Lansford (1970) identified that warm colours (red, yellow-red and yellow) were rated higher by women while the cool colours (blue, purple-blue, purple and red-purple) were rated higher by men. Solomon (2004) discussed that women are drawn toward brighter tones and are more sensitive to subtle shadings and patterns. McManus et al. (1981) discovered that there was a tendency for females to strongly dislike green-yellow, whilst males strongly disliked black. This finding that males strongly dislike black somewhat counters Helson and Lansford (1970)

argument that males prefer cooler colours. Therefore the research proposed will investigate this theme and test whether gender affects colour preferences of children by testing the following proposition;

Proposition Seven - There will be an association between colour preference and gender.

Research Gaps and Contribution to Knowledge

There appears to be consistent themes emerging with regards to research limitations of the extant research on the effects of colour on consumers. One of the major limitations of the available research is a considerable amount of researchers fail to test the effects of chroma and value (Katz and Breed, 1922; Tatibana, 1937; Odbert *et al.*, 1942; Wexner, 1954; Lawler and Lawler, 1965; Choungovrian, 1967; Johnson, 1977; Walsh *et al.*, 1990; Marshall *et al.*, 2006). These are important variables of hue (Gorn *et al.*, 1997) and existing research has identified that brighter and more saturated colours result in more pleasant emotions (Valdez and Mehrabian, 1994).

Another limitation is the relatively small sample size of subjects involved in the research (1-43) (Myers, 1908; Staples and Walton, 1933; Lawler and Lawler, 1965; Helson and Lansford, 1970; Offenbach, 1980; McManus *et al.*, 1981; Kwallek *et al.*, 1988; Marshal *et al.*, 2006) with the smallest sample being the researchers own child (Myers, 1908). The validity of this study therefore needs to be taken into question.

A methodological gap of the vast majority of previous research conducted into colour is that the research studies are from a psychology and not a marketing discipline (Katz and breed, 1922; Staples, 1932; Staples and Walton, 1933; Guilford and Smith, 1959; Helson and Lansford, 1970; McManus *et al.*, 1981; Byrnes, 1983). As a result there is a general failure to apply product or brand associations to the research design therefore limiting the marketing applications of the findings. Those studies which did make reference to brands or product categories were constrained in that they tested only one brand (Percy and Rossiter, 1983; Gorn *et al.*, 1997), only one product category (Percy and Rossiter, 1983; Gorn *et al.*, 1997) or they tested product categories with possible prior colour associations (Percy and Rossiter,

1983). A further criticism of this field is the lack of recent research studies. The majority of extant research is dated pre 1980 and little has been published in recent years. This provides a significant constraint for the applicability of research findings from earlier studies as preferences, and cultural influences may have changed in recent years. What was popular twenty years ago may no longer be the case.

Development of Research Propositions

Based on extant research the following propositions will be tested;

Proposition One - Certain colours (hues) will be more popular than others.

This proposition will be tested by including 8 different colours in the primary research experiments.

Based on extant research there appears to be a general consistency in opinion that more saturated colours are rated more favourably than less saturated colours. Therefore the following proposition will be tested;

Proposition Two - More saturated (high chroma) colours will be rated more positively than less saturated (low chroma) colours.

This proposition will be tested by having high, neutral and low chroma shades of all 8 colours for use in the primary research experiments.

Also based on research critiqued there appears to be a consistency in opinion that high value colours i.e. those lighter and more pastel like in appearance are preferred to low value colours. Therefore the following proposition will be tested;

Proposition Three – high value colours will be rated more positively than low value colours.

This proposition will be tested by having high, neutral and low value shades of all 8 colours for use in the primary research experiments.

Additionally there appears to be a theme regarding colour preferences changing as children age. Therefore the following proposition will be tested;

Proposition Four – Children of different ages will have different colour preferences.

This proposition will be tested by having three age groups of children. The experiment will be repeated for all three age groups to identify if preferences differ.

The marketing applicability limitations will be addressed with the proposed research looking at a range of different product categories within the healthy snack foods market and therefore the following propositions will be tested;

Proposition Five – Colour will have an effect on brand choice.

This proposition will be tested by designing fictitious brand logos and presenting these on neutral grey packaging. The only difference will be the dominant colour in the logo.

Proposition Six - Different product categories will identify different colour preferences.

This proposition will be tested by including 3 product categories in the research design.

The proposed research will also test whether gender affects colour preferences of children by testing the following proposition;

Proposition Seven - There will be an association between colour preference and gender.

This proposition will be tested by incorporating a close male/female gender split in the subjects and recording their gender alongside their responses.

Exploratory Research

The proposed research will consist of experiments with a sample of 600 children in total from the age groups 4/5 (Reception class), 7/8 (Year 3) and 10/11 (Year 6) years of age. This will generate 200 responses from each age group. The different aged subjects will be presented with fictitious brand logos on neutral grey packaging (Munsell Atlas 5) from 3 product categories of cereal bars, fruit snack bags, and yoghurts within the healthy snacks food

market. The brand name will also be printed in Munsell Atlas 5 grey, therefore the only difference will be the dominant colour in the logo. The subjects will be asked to choose their preferred logo. The logos will vary in hue, value and chroma and will be sourced from the *Munsell Book of Color* which is the widely used system of colour notation developed by A. H. Munsell in 1905 which identifies colour in terms of three attributes: Hue, Value and Chroma. The subjects will also be asked their reasons for choosing the logo. The experiments will involve a classroom within the children's school. Children from the three age groups will be asked to individually enter the room and point to their preferred option.

The 8 different colours used in the experiment will be red, yellow, blue, green, pink, violet, orange, and purple. These colours have been chosen in order to answer the research propositions and in line with extant research. The 8 colours will be initially presented in a neutral chroma shade and also a neutral value shade. The 8 colours will be presented in the same experiment and the subject requested to choose their preferred one out of the 8 shades. These colours will be presented in random order by putting the templates into a box and shaking out the templates onto the table and showing them in the position of landing. This is to prevent biases to left or right hand side choices as a result of what hand the child writes with. Once the preferred colour has been chosen the subject will then be shown additional templates in the chosen colour initially in a low, neutral and high chroma and asked to choose their preferred one and secondly in a low, neutral and high value and asked to choose their preferred one. The whole experiment will then be repeated for the other 2 product categories. Therefore per subject, there will be 3 experiments of choice per product category, 9 in total for all product categories. Each experiment will take approximately 20 seconds per subject, therefore it should take each subject 1 minute to complete the experiment per product category and 3 minutes for all 3 product categories.

The brand names used in the logos are fictitious and have been chosen to reflect further the product category they represent. After discussions with the supervisory team the following brand names have been chosen; cereal bars product category – *Munch Crunch*, fruit snack bags product category – *Fruit Fans*, and yoghurt product category – *Cool Treat*. Appendix 1. illustrates the brand logos which will appear on the relevant packaging.

Prior to the experiment the subjects' parents will be sent a consent form. In addition to providing their consent for their child to participate in the experiment, the parent will be asked to provide information on their child listing their full name, gender, age and ethnicity. This information will be for the purpose of identifying gender, age and cultural factors affecting colour choice. The child's name will be used to identify each subject at the beginning of each experiment. Information will also be obtained about each subject's favourite colour on the parent consent form. The question of favourite colour will be included with other 'favourites' questions to remove the impact of this question. It is recognised that parental influence may be strong for the younger subjects and also some subjects may respond 'unsure'. Once the results have been collated, analysis will be made to identify if a child's favourite colour has any effect on their colour choices. Also produced are letters of consent for parents and information sheets for parents and children. The research will be analysed using SPSS for Windows. Full ethical approval has been awarded for this research.

Piloting

The researcher recognises that studying children poses inherent issues, therefore the experiments will be carefully piloted and tested to identify any problems or areas of possible misunderstandings. A sample of 5 children per age group will be used in the pilot study and all 3 product categories will be tested. The procedure for each experiment will be tested and subjects will be asked for feedback on the ease of use and understanding of the tasks.

Sampling

Schools will be chosen from the Northwest England region. The researcher has already established contacts in a number of primary schools which will be chosen for use. A non probability sampling strategy of judgement sampling (Burns and Bush, 2008) will be used for choosing the 600 subjects. Key variables for selection will be age and gender with the researcher desiring as close to equal gender split as possible.

Conclusions

To conclude, colour and its effect has been researched extensively, however where the extant research fails to deliver is with regards to the effect of colour (hue) on brand choice. The

study proposed here will contribute to the body of knowledge pertaining to the effects of colour by examining the effects of age, gender and product categories on colour choice. Its aim is to provide recommendations with regards to future successful marketing strategies of brands within the healthy snack foods product categories analysed. This research aims also to fill a methodological gap in existing research by analysing the effects of value and chroma on brand choice in addition to incorporating a large sample size.

References

- Alreck, Pamela L. and Settle, Robert, B. (1999) 'Strategies for building consumer brand preference' *The Journal of Product and Brand Management*, vol.8, no.2, pp.130-144.
- Apfel, J. (1993) 'Red and yellow and green and blue: colour coding for the under eights'. *Ark*, (Winter), pp.12-13.
- Baker, Michael J. and Balmer, John M.T. (1997) 'Visual identity: trappings or substance?' *European Journal of Marketing*, vol.31, no.5, pp.366-382.
- Baldinger, Allan L., Blair, Edward and Echambdi, Raj (2002) 'Why brands grow' *Journal of Advertising*, pp.7-14.
- Boyle, Emily (2003) 'A study of entrepreneurial brand building in the manufacturing sector in the UK,' *Journal of Product and Brand Management*, vol.12, no.2, pp.79-93.
- Burke, David (2005) 'Two-year-olds branded by TV advertising'. *Ecologist*, September, vol.35, issue7, p.10.
- Burns, Alvin C. and Bush, Ronald F. (2008) *Basic Marketing Research 2nd edition*, Pearson Education, New Jersey.
- Byrnes, Deborah A (1983) 'Color association of children'. *The Journal of Psychology*, no.113, pp.247-250.
- Byrnes, Nanette, Berner, Robert, Zellner, Wendy, Symonds, William (2005) 'Branding: five new lessons'. *Business Week*, 14th February, issue.3920, pp.26-29.
- Choungovrian, Assador (1967) 'Introversion – Extroversion and color preferences'. *Journal of Projective Techniques and Personality*, vol.31, pp.92-94.
- Clegg, Alicia (2004) 'Showing your true colours'. *Marketing Week*, 3rd June, p.39.

Cork, Alan (2006) 'The colour of the future'. *Asia Pacific Coatings Journal*, June, p.3.

Davies, Scott (2005) 'Marketers challenged to respond to changing nature of brand building'. *Journal of Advertising Research*, June, vol.45, issue.2, p.198-200.

Gorn, Jerald G., Chattopadhyay, Amitara, Yi, Tracey, Dahl, Darren W. (1997) 'Effects of color as an executional cue in advertising: they're in the shade'. *Management Science*, vol.43, no.10, October, pp.1387-1400.

Grace, Debra and O'Cass, Aron (2002) 'Brand associations; looking through the eye of the beholder'. *Qualitative Market Research: An International Journal*, vol.5, no.2, pp.96-111.

Grossman, Randi P. and Wisenblit, Joseph Z. (1999) 'What we know about consumers' colour choices'. *Journal of Marketing Practice: Applied Marketing Science*, vol.5, no.3, pp.78-88.

Guilford, J.P. (1940) 'There is a system in color preferences'. *Journal Optical Society America*, vol.30, September, pp.455-459.

Guilford, J.P. and Smith, Patricia, C. (1959) 'A system of color-preferences'. *The American Journal of Psychology*, vol.LXXII, December, no.4, pp.487-502.

Hackley, Chris (2005) *Advertising and Promotion: communicating brands*. SAGE Publications, London.

Hayes, J. Bryan, Bruce, L. Alford, Lawrence, Silver, Rice, P. York (2006) 'Looks matter in developing consumer-brand relationships'. *Journal of Product and Brand Management*, vol.15, no.5, pp.306-315.

Heath, Rebecca P. (1997) 'The wonderful world of colour'. *Marketing Tools*, vol.4, issue9, pp.44-51.

Helson, H. and Lansford, T. (1970) 'The role of spectral energy of source and background color in the pleasantness of object colours'. *Applied Optics*, vol.9, no.7, pp.1513-1562.

Hogg, James (1969) 'A principle components analysis of systematic differential judgements of single colors and color pairs'. *The Journal of General Psychology*, vol.80, pp.129-140.

Holden, Ward A and Bosse, K. K. (1900) 'The order of development of color perception and of color preference in the child'. *Archives of Ophthalmology*, vol.XXIX, no.3, pp.261-277.

Hutchings, John (2006) 'Talking about colour.....and ethics'. *Wiley Periodicals, Inc. Col Res Appl*, 31, pp.87-89. Published online in Wiley InterScience.

Jevons, Colin (2005) 'Names, brands, branding: beyond the signs, symbols, products and services'. *Journal of Product and brand management*, vol.14, no.2, pp.117-118.

Johnson, E.G. (1977) 'The development of color knowledge in preschool children'. *Child Development*, no.48, pp.308-311.

Katz, S.E and Breed, F.S. (1922) 'The color preferences of children'. *Journal of Applied Psychology*, vol.6, pp.255-266.

Kelly, Katy and Kulman, Linda (2004) 'Kid Power'. *U.S. news and world report*, vol.137, issue 8, pp.46-51.

Khouw, Natalia (2006) 'The meaning of color for gender.' *Colour Matters*, internet site <http://www.colormatters.com/khouw.html>. accessed 20/11/2006.

Kwallek, Nancy, Lewis, Carol M. and Robbins, Ann S. (1988) 'Effects of office interior color on workers' mood and productivity'. *Perceptual and Motor Skills*, vol.66, pp.123-128.

Lane, Randall (1991) 'Does orange mean cheap?' *Forbes*, 23rd December, pp.144-146.

Lange, Fredrik and Dahlén, Micael (2003) 'Let's be strange: brand familiarity and ad-brand incongruency'. *Journal of Product and Brand Management*, vol.12, no.7, pp.449-461.

Lawler, Carol, O. and Lawler, Edward, E. (1965) 'Color-mood associations in young children'. *The Journal of Genetic Psychology*, no.107, pp.29-32.

Lichtle, Marie-Christine (2007) 'The effect of an advertisement's colour on emotions evoked by an ad and attitude towards the ad'. *International Journal of Advertising*, vol.26, no.1, pp.37-62.

Lindstrom, Martin (2005) 'Broad sensory branding'. *Journal of Product and Brand Management*, vol.14, no.2, pp.84-87.

Lindstrom, Martin (2003) *Marketing targets Tweens' dreams*. Kogan Page, London.

Maklan, Stan and Knox, Simon (1997) 'Reinventing the brand: bridging the gap between customer and brand value'. *Journal of Product and Brand Management*, vol.6, no.2, pp.119-129.

Marsden, Rufus, E. (1903) 'The early color sense – further experiments'. *Psychology Review*, vol.10, pp.297-300.

Marshall, David, Stuart, Mark and Bell, Rick (2006) 'Examining the relationship between product package colour and product selection in preschoolers'. *Food Quality and Preference*, vol.17, issues 7-8, pp.615-621.

Martinez, Eva and de Chernatony, Leslie (2004) 'The effect of brand extension strategies upon brand image.' *Journal of Consumer Marketing*, vol.21, no.1, pp.39-50.

Mayo, Ed (2005) *Shopping Generation*. National Consumer Council, London.

McManus, I.C., Jones, Amanda L. and Cottrell, Jill (1981) 'The aesthetics of colour'. *Perception*, Vol.10, pp.651-666.

Myers, Charles, S. (1908) 'Some observations on the development of the colour sense'. *Journal of Psychology*, vol.2, pp.353-362.

Nakshian, Jacob S. (1964) 'The effects of red and green surroundings on behaviour'. *The Journal of General Psychology*, vol.70, pp.143-161.

Odbert, H.S., Karwoski, T.F. and Eckerson, A.B. (1942) 'Studies in synesthetic thinking: musical and verbal associations of color and mood'. *The Journal of General Psychology*, vol.26, pp.153-173.

Offenbach, Stuart, I. (1980) 'Children's perception of Munsell colors'. *The Journal of Psychology*, no.104, pp.43-51.

Percy, Larry and Rossiter, John R. (1983) 'Effects of picture size and colour on brand attitude responses in print advertising'. *Advances in Consumer Research*, vol.10, issue.1, pp.17-20.

Petromilli, Michael, Morrison, Dan, Million, Michael (2002) 'Brand architecture: building portfolio value'. *Strategy and Leadership*, vol.30, no.5, pp.22-28.

Roper, Stuart and Shah, Binita (2007) 'Vulnerable consumers: the social impact of branding on children'. *Equal Opportunities International*, Vol.26, No.7, pp.712-728.

Ross, Jill and Harradine, Rod (2004) 'I'm not wearing that! Branding and young children'. *Journal of Fashion Marketing and Management*, vol.8, no.1, pp.11-26.

Schofield, Alan and Cracknell, David (2007) 'Food firms face curbs in bid to combat obesity'. *The Sunday Times*, 14th October, part.1,p.5.

Singh, Satyendra (2006) 'Impact of color on marketing'. *Management Decision*, vol.44, no.6, pp.783-789.

Solomon, Michael (2004) *Consumer Behaviour: buying, having, and being, 6th edition*. Pearson Education Incorporated, New Jersey.

Staples, Ruth (1932) 'The response of infants to color'. *Journal of Experimental Psychology*, vol.15, pp.119-141.

Staples, Ruth and Walton, William, E. (1933) 'A study of pleasurable experience as a factor in colour preference.' *Journal of Genetic Psychology*, vol.43, pp.217-223.

Tatibana, Yuuwoo (1937) 'Colour feelings of the Japanese: The inherent emotional effects of colours.' *Tohoku Psychological Following*, vol.5, pp.21-46.

Tutssel, Glenn (2001) 'But you can judge a brand by its colour'. *Brand Strategy*, November, pp.8-9.

Urde, Mats (2003) 'Core value-based corporate brand building'. *European Journal of Marketing*, vol.37, no.7/8. pp.1017-1040.

Valdez, Patricia and Mehrabian, Albert (1994) 'Effects of color on emotions' *Journal of Experimental Psychology: General*, vol.123, no.4, pp.394-409.

Vallaster, Christine and de Chernatony, Leslie (2006) 'Internal brand building and structuration: the role of leadership'. *European Journal of Marketing*, vol.40, no.7/8, pp.761-784.

Walsh, Lynn M., Toma, Ramses B., Tuveson, Richard and Sondhi, L. (1990) 'Color preference and food choice among children'. *The Journal of Psychology*, vol.124, issue.6, pp.645-653.

Wexner, Lois B. (1954) 'The degree to which colors (hues) are associated with mood-tones'. *The Journal of Applied Psychology*, vol.38, no.6, pp.432-435.

Whitfield, T.W.A and Wiltshire, T.J. (1990) 'Color psychology: a critical review'. *Genetic, Social and General Psychology Monographs*, vol.116, issue.4, p.387-412

APPENDIX 1. FICTITIOUS BRAND LOGOS

Product Category A: Cereal Bar



Arrow pointing to the logo: Dominant colour changing for each experiment

Product Category B: Fruit Snack Bags



Product Category C: Yoghurt

