Shopping Centre Choice: A Behavioural Perspective

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Statement of Copyright

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Dedication

To my loved ones, for your never-ending patience, support and love.

Abstract

This thesis examines the use of behavioural and cognitive-behavioural models, to determine whether they can explain consumer shopping centre choice. Two studies were conducted, to examine how well different theoretical models previously used to explain consumer purchase behaviour can explain patronage behaviour with respect to shopping centres. The stimulus-organism-response (SOR) and behavioural perspective model (BPM) were the models examined in this thesis, as the SOR has previously been used to examine store patronage, and the BPM is widely used in consumer research to explain different types of consumer behaviour. Original scale measures were developed across the two studies where necessary to measure variables in new ways. The thesis explores the use of verbal reporting to measure learning history and consequences at an individual level. The BPM presents a good frame with which to explain consumer patronage responses, while the SOR model applied did not. The BPM showed that social and physical stimuli in the environment act as the main drivers of patronage response, with consequences and learning history also offering some contribution to explain this behaviour. The model was extended to consider the effect of behaviour setting stimuli on emotional response, determining that part of the impact of physical and social stimuli on patronage response is mediated by pleasure. The thesis confirmed that the BPM is a suitable model to extend into application for patronage decisions at the shopping centre level, but that it is more applicable at this level when emotional response is also considered.

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1. Introduction

The introductory chapter provides the context for the thesis, presenting background information and an overview of the rationale and objectives for the research. It also outlines the potential value of the thesis for theoreticians and for practitioners. It outlines other research approaches, and finally, presents an overview of the structure of the thesis.

Retailers in the UK face an increasingly competitive situation, and to compete must be able to get a strong understanding of their customers and what affects their patronage choices. The context of this environment will be presented in this chapter. The study area shall be presented, then factors leading to the retail landscape in the UK today put forward. The history of retail in the UK is discussed, before more recent trends, such as the growth of out-of-town shopping centres, homogenisation of the high street and growth of the Internet are discussed. This sets the context in which understanding the factors that drive patronage behaviour is critical.

Retailing has evolved over many years, culminating in one of the most competitive retail environments experienced in the UK, leading to an imperative to understand how consumers choose and use retail spaces. Retailing can trace its roots back millennia, to the Bazaars and Agoras of ancient times. Bazaars are permanent marketplaces or streets of shops devoted to the sale of products and services. In many pre-industrial Muslim towns and cities, the remains of the bazaars can be found next to the remnants of palaces and mosques (Dale 2010). Collectively, these structures together form the concept of 'Empire and Emporia', with the bazaars and other such commercial structures having a major part to play as economic and political structures in the ancient world (Dale 2010). In Tehran, Iran, areas of the city have bazaar-like structures dating as far back as 4000 BC. The Grand Bazaar in Istanbul, a covered market, opened in 1481, is one of the oldest, and largest of these (ArchNet 2010), and has grown considerably over the years to now contain over 4,400 shops throughout the 64 streets within. Shops were grouped by type of merchandise and service sold. From around the 5th Century B.C (Zananiri, Hademenos et al. 2010), the Agoras of Ancient Greece were vibrant marketplaces where the public could go to buy from travelling, and more permanently based merchants with shop stalls (Thompson 1993). In the Roman Empire, from around 100BC, Forums provided gathering places for merchants to sell their wares to the public, alongside public debates and meetings. Trajan's market was built around 100BC in Rome, Italy, housing shops that sold a wide variety of

merchandise. These, and many such ancient retail structures are the forerunners of the shopping centres that are familiar to us today.

1.1 Research Context

This section shall explore the various factors which have lead to the retail landscape as it exists in the UK at present, starting with a historical account of retailing in the country, and the impacts of trends from the United States (US) and beyond on the historical retail context. Retail has been a competitive industry for many years, with retailers attempting to differentiate themselves from their competitors. However, bricks-and-mortar retailers have been facing increasingly difficult times in the last ten years (Mesure 2005).

During the 20th century, western society moved toward a more consumer and consumption oriented culture(Marston and Modarres 2001; Burroughs 2010). As a result of a growth in consumption, academic interest focused on uncovering and understanding the drivers of consumption and the processes of consumption. For the retail industry itself, the preferences, choices and behaviour of consumers fundamentally affected the evolution of the retail landscape (Birkin, Clarke et al. 2002), and at present patronage and repatronage behaviour is of central concern to retailers today (Heider and Moeller ; Vaccaro, Yucetepe et al. 2011; Kollewe 2012). Research addresses consumer related factors, from choice of product, to use of product, through to examination of the choice of and uses of services. More recently, research has moved on to examine the consumption of experiences as well (Kim, Sullivan et al. 2007; Sullivan and Heitmeyer 2008). So too has research expanded beyond the realm of the purchase itself, to examine choice relating to retail decisions, as the growth of the consumer society led to an explosion of retail opportunities (Reutterer and Teller 2009; Goodman, Lockshin et al. 2010).

The retail landscape in the UK is fairly complex in terms of the variety of retail formats that currently exist, owed in part to the natural evolution of towns and cities through government policy (Birkin, Clarke et al. 2002), the growth of chain retailers and subsequent closure of independent stores (Simms, Oram et al. 2002). It also owes its current face in part to the emergence of the 'mall' in North America: "the Egyptians have pyramids, the Chinese have a great wall, the British have immaculate lawns, the Germans have castles, the Dutch have canals, the Italians have grand churches. And the Americans have shopping centres" (Jackson 1996

p1111), who goes on to argue that the mall had become a global phenomenon by the end of the twentieth century.

1.1.1 Historical Retailing in the UK

Retailing has been a force within the UK for many years now, generating around 8% of the country's Gross Domestic Product (GDP) (BIS 2012), with roots developing back to the Neolithic trade of goods (Bradley 1971). In Roman times market towns like Chester and Londinium (London) developed around the first century BC (Wacher: 1997), often to trade with nearby forts (Mason 2001). At the time of the Domesday book in 1086, 112 boroughs and a further 39 towns were recorded to contain markets (Britnell 2000), though these were predominantly in the south of England, with York among the few exceptions. Neither County Durham nor Northumberland were included within the Domesday Book, so it is less clear when market towns in these areas first developed. In the North East, the study area, the earliest known mention of a market was in Durham in the 12th century, by Symeon of Durham (Symeon 1104-1108). Between 1199 and 1480, around 2800 markets are thought to have emerged throughout England and Wales (Gosling and Maitland 1976). Markets were central to the development of towns, as Clark (2000, p58) argues: "Towns generally had charters permitting markets to be held, and the market stall, the most primitive shop form, influenced the developing townscape".

In 1565 The Royal Exchange was set up as a bourse, or exchange in the city of London as a centre for commerce, though it was officially opened by Queen Elizabeth I in 1571. Over the years it has been rebuilt twice, following its destruction by fires, first in the Great Fire of London in 1666, then in 1838.

The 'retail store', the outwards facing physical space in which consumers may purchase goods, as we would recognise it today, rose to dominance throughout the 18th century (Walsh 1995). Prior to this, markets, peddlers, and auctions were the dominant means through which individuals could purchase goods in exchange for money, although shops and shopping centres had existed as far back as Roman times (Clark 2000). Though little archaeological evidence remains for retail spaces from roman times beyond archaeological evidence, (anon 2008), stores from as early as the 14thcentury still remain in towns around Britain. Clark presents

photographic evidence of surviving historic retail spaces around Britain, with the earliest example (exhibit 1) believed to date back circa 1386 (Clark 2000).

Exhibit 1: Cornmarket, Oxford
Source: Clark 2000, p70

Studies suggest that in the 18th century, retailing changed, with the growth of independent shops, which co-existed with other forms, but grew to dominate for the sale of durables and semi-durables (Walsh 1995). Shops at this time existed in many formats- market stall, lock-up, and fixed retail shop (Walsh 1995). Retailers learned early on what worked well, and many of the features they engineered into their shops at that time still can be seen in modern shops- distinctive fascias, dominant signs and large projecting windows marked retail shops out from other buildings, and from each other (Walsh 1995). Over time, these retail shops grew in size (Walsh 1995).

The display and marketing of goods for retail sale are not new phenomena, but existed before the American 'mall' was ever created. Research suggests that retailing was a major cultural force throughout the 18th century in England, thanks, in no small measure, to the growth of industrialisation and the increased capacity for producing goods for market (Walsh 1995). In the 18th century, the growth of retail shops brought about the decline of the traditional street market and itinerant trader from the very start of the century (Cox and Dannehl 2007; Deutsch 2010).

With the growth of independent stores came also the development of exclusive shopping areas, where many shops clustered together to provide goods- St James's, the Fleet Market (opened 1737) and the rebuilt Royal Exchange, were some of the earliest organised shopping centres to emerge in the UK (Walsh 1995). By 1776 Adam Smith in discussion of England said "to found a great empire for the sole purpose of raising up a people of customers, may at first sight appear a project fit only for a nation of shopkeepers" (Smith and Garnier 1838).

As industrialisation continued into the 19th century, and mechanisation grew, the scope of retailing grew with it, and department stores emerged as a dominant format (Walsh 1995).

Retailers have used window displays to show off their merchandise and attract attention from potential customers, since 1850 (Jeffreys 1954; Walsh 1995), though some studies have indicated that such displays, and the engineering of the interior of stores goes back much further in the UK, at least as far back as the early eighteenth century (Walsh 1995). One of the most notable changes in retailing in the 19th century was the development of the department store, a dominant and characteristically extravagant retail force throughout this period (Chaney 1983). Other retail formats emerged during this time in the UK, most notably shopping arcades (Geist 1985), partially enclosed walkways with retail units lining either side. One such notable example is the Burlington Arcade, which opened in London in 1819 (Jackson 1996), with 72 two storey units dedicated to the sale of jewellery and luxury goods to London's elite. The arcade is an important predecessor of the 19th Century European Gallerias such as Passage Saint-Hubert (now the Royal Galleries of Saint-Hubert) in Brussels, Belgium in 1847, Passazh in St Petersburg, Russia in 1848, and Galleria Vittorio Emanuele II in Milan, Italy in 1867, which is itself described as looking and feeling like a 'modern mall', and the modern day shopping centres themselves (Jackson 1996).

By this stage, retailing was at a level where many people were part of the retail industry. In 1832, Thomas Helps, a trader in the city of London set up (what is now known as) The Retail Trust, an organisation for employees in the drapery sector, to help when they were faced with hard times. By 1963, the North of England Co-operative Society, a new consumer co-operative emerged for consumers and retail employees, which was renamed as the Co-operative Wholesale Society (CWS) in 1872 (Graham 2008). The Co-operative Group, as it is now know, has over 4.5 million members and 123,000 employees (anon 2010).

1.1.2 The rise of the shopping centre in the UK

To put this study into context, it is important to consider the changes that have brought about the retail landscape we inhabit today, changes that have largely been experienced in the UK in the last 40 years, and in the broader context of North America and the rest of the world in the preceding years (Jackson 2000). Back in the 1950s, a new retail format emerged, which changed the retail landscape forever (Jackson 2000). In the UK, and in Europe as a whole, the High Street, the 'retail heart of towns and cities' dominated the retail landscape (Birkin, Clarke et al. 2002), serving clothing, footwear, jewellery and grocery markets. The growth of out-of-town

shopping centres and supermarkets led to increasingly difficult times for town and city centres (Simms, Oram et al. 2002).

In 1956, a new retail structure appeared in Minneapolis, USA, called Southdale, the first fully enclosed 'mall', as we recognise them now (Jackson 2000), to open in the world, though the first out-of-town shopping centre is suggested to be the Country Club Plaza in Kansas City, USA, which opened in 1923 (McGoldrick and Thompson 1992; Jackson 1996). Southdale, designed by Victor Gruen (Gruen and Smith 1960), was described at the time as 'a whole new shopping world in itself' (Pacione 2005). Over the following years, more of these structures sprung up across America as a "place and opportunity for participation in modern community life" (Gruen and Smith 1960, p24) and were heralded as a great success. Across the Atlantic, European countries had been paying attention, but it was still twenty years later, when UK retailing took its first tentative steps towards following suit, when Brent Cross opened in London in 1976 (Jackson 1996). It was changes to the regulatory environment in the UK, that enabled many more malls to open across the UK throughout the 1980s, with a wave of planning applications for new enclosed shopping centres located on the edge of major cities submitted to the new Thatcher administration of that time (Birkin, Clarke et al. 2002). In the period between 1986 and 1992, 6.6 million square metres (71 million square feet) of planned shopping centre area developed, with over half of this (around 56%) now in out of town locations (Reynolds 1993) as either shopping centres or retail warehouse parks (Hillier Parker 1991). The growth and success of the out-of-town shopping mall, and retail formats that later emerged can at least in part attribute its success to the increased mobility of consumers with growth in car ownership, and growth in usage of cars for longer work commutes (Birkin, Clarke et al. 2002).

Many British regional shopping centres developed in existing town and city centres, or in new town developments such as Milton Keynes, Washington or Cramlington (Ward 1983). At the time when most regional shopping centres were being planned and built, government policy was intended to protect city-centres, and city centre redevelopments were preferred over out-of-town sites. They were able to learn many lessons from American out-of-town developments, which had, in many large towns and small cities, lead to the abandonment and decay of town centres as customers flocked to newly opening out-of-town malls (Kowinski 1985; Lord and Guy 1991; Guy and Lord 1993). Despite best efforts, development of out-of-town shopping centres could not help but impact upon inner-city retail areas (BDP Planning 1992). However, redevelopments of old city centres would present planners with new problems. Along with

physical constraints of developments, the question remained of how enclosed city centre shopping centres would integrate into a city centre shopping area as a whole (Howard 1992). Parking provision for consumers in out-of-town shopping centres in the UK is far more generous than parking provisions in town centres, with between 6.5 and 10 car parking spaces per 1,000 square feet gross retail area (Howard 1992; Burt and Sparks 1994). This higher amount of parking is largely to facilitate the leisure use of these centres, by encouraging people to park and shop all day. Studies have determined that consumers tend to spend more money and make more purchases when shopping by car (McGoldrick 2002).

These out-of-town shopping centres, usually located next to major roads, presented opportunities for shoppers near and far to visit, and were very different from traditional shopping areas in town and city centres (Lowe 2005). For several years, the UK retail landscape was dominated by this distinctive dichotomy of in-town shopping centre, and out-of-town shopping centre, though this was to change.

1.1.3 New Retailing Formats

While new 'malls' started to spring up in the UK throughout the 1980s and 1990s (Lowe 2005), development of traditional 'malls' and 'retail outlets' started to decline in North America, as the retail topography reached saturation point (Kowinski 1985; Lord and Guy 1991; Guy and Lord 1993; Fernie 1995). Growth in comparison shopping, where consumers browse and compare several offerings for a single purchase, encouraged retailers to expand and diversify, and this resulted in the emergence of niche and lifestyle retailing in the 1980s (Guy 1998). The growth of retailing and emergence of new formats of retailing has evolved over many years. While consumer behaviour research does not have such an extensive past, discussion of the importance of consumers dates back many years too (Smith 1838) over the years, but has grown a great deal during the 20th century (Weaver 1935), partly out of the growth of consumer culture following world war II (Tadajewski 2009), with momentum in consumer research starting in earnest in the late 1940s and 1950s (Levy 2005). By the 1980s, computing technology had advanced to a stage that enabled retail marketing managers at both store and shopping centre level to gather and store more useful information about their customers (Grimshaw 1999), and utilise government sources of information to better understand who their customers are, what their characteristics are and where they live. The dissemination of 'geo-demographic' information to retailers enabled them to examine relationships between the demographic

structure of a population living in an area, and their needs as consumers (Mitchell and McGoldrick 1994). This facilitates the targeting of customers at particular locations, ensuring at the store level that an appropriate mix of products was provided to match the preferences held by consumers there (Beaumont and Inglis 1989; Birkin, Clarke et al. 2002). At the shopping centre level, the appropriate tenant mix of stores was provided to match the tastes and expectations of local consumers. Superstores and hypermarkets also grew at a dramatic rate in the UK, developing at an initially slower rate between 1975 and 1988, before growing at a much higher rate (Birkin, Clarke et al. 2002) after this time.

Realising that more of the same traditional malls and supermarkets would not suffice to meet the needs of the now demanding and savvy consumer, retailers recognised the need for new and interesting formats (Wrigley and Lowe 2002) for consumers to enjoy. So emerged the 'speciality centre', followed by downtown 'mega-structures' and 'festival marketplaces' (Wrigley 1988; Wrigley and Lowe 2002), and other formats, including 'power centres', 'hybrid centres' and 'street based retailing' (Marston and Modarres 2001). Speciality centres are anchorless collections of upmarket stores, cafes and restaurants, centred on specific retail and architectural themes (Goss 1992; Goss 1993; Wrigley and Lowe 2002), more likely to attract particular types of customers, rather than attempt to attract and cater to the whole consumption population. Mega-structures are colossal self-contained complexes including all functions possibly needed by consumers, including stores, cafes, restaurants, entertainment venues, health centres, salons, luxury apartments and hotels; spaces where consumers might never need to leave (Wrigley & Lowe 2002). Modern purpose-built shopping centres are designed with airy multi-level atriums, curved elevators, glass lifts and attractive walkways, to provide everything a consumer could want, contained conveniently under one roof. They serve as havens from the stresses of modern life, providing safe, pleasant, climate controlled refuges from the strains of society, closed circuit television (CCTV) cameras and private security forces ensuring that consumers feel safe (Warin, Moore 2008). It is this, safe, convenient, one stop fits all purposes angle that the more astute shopping centre managers push to market their offering to consumers, and help to differentiate them from competitor centres. As these new formats emerged, it became even more important for shopping centre marketing managers to understand the needs of their customers and ensure an appropriate tenant mix, not just of stores, but also of services and entertainment venues (Bloch, Ridgway et al. 1994; Martin and Turley 2004; Yiu and Xu 2012).

Retailing in the UK eventually followed the examples set by North America, after the 1980s, moving away from the further development of fully enclosed 'malls', towards a similarly complex retail landscape to the US, though the triggers of this change were different. The move away from ceaseless development of new fully-enclosed 'malls' reflected a change in policy by a British government, more reluctant to grant planning permissions as a result of a change in the economic and political circumstances (BDP Planning 1992). These new retail spaces were each designed to ensure the consumption, leisure, travel and lifestyle needs and demands of consumers could be best satisfied (Marston and Modarres 2001), while at the same time ensuring the integrity of existing towns and cities.

UK retail development has not yet reached the same level of maturity as in the US, which has many more flavours of shopping centre that have yet to materialise in the UK (Marston and Modarres 2001). This suggests that models developed on the North American retail landscape may lack relevance and validity when applied to the UK scene. However, it is clear that there has been a noteworthy move away from the traditional town-centre/ out-of-town centre dichotomy that prevailed throughout the 1980s and much of the 1990s (Fernie 1995). As the driving forces behind retail change is different to the US, and the shopping centre formats, old and new are very different from their US counterparts, it would not be prudent to adopt a US classification of shopping centres.

The British government continues to affirm its commitment to consumers in the UK in parliamentary statement PPS6 2005 (anon 2005), to ensure that the needs of the whole community, and in particular those groups who are likely to be socially excluded, can be met by ensuring they can choose from a wide range of shopping, leisure and local services. At the same time they pledge a commitment to ensure players in the retail and leisure sector are enhanced, and ensure fair and suitable levels of competition.

Considering these new and complex shopping centre formats, and Tauber's (1972) assertion that research focussing on buying alone is myopic, it is important that shopping itself is examined in detail. Considering that the new formats allow many other activities to be participated in, besides shopping, it is important not just to look at how and why people shop to buy, but how they shop, even when purchase is not a principal goal of the consumer (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982; Hirschman 1984). Studies suggest that many people visit stores and shopping centres without any clear intention to make a purchase, but may be based

on other recreational desires, and go there to consume other facilities and activities enabled by the shopping centres themselves (Bloch, Ridgway et al. 1991), and that consumers may leave a shopping centre without ever having made a purchase, and still be satisfied with the experience. Shopping has long been recognised as an enjoyable pastime in its own right, with retail history studies reporting sources from as early as 1709 taking enjoyment from shopping trips (Walsh 1995).

"This afternoon some ladies, having an opinion of my fancy in cloaths, desired me to accompany them to Ludgate-hill, which I take to be as agreeable an amusement as a lady can pass away three or four hours in" (Malcolm 1808, p133).

More recent studies have also focussed on hedonic shopping behaviour (Kang and Park-Poaps 2010). Indeed, it has been suggested that many enjoy shopping or browsing for goods, considering shopping as a leisure activity in its own right (Dholakia 1999). Other studies report 38% of their respondents as being 'leisure seeking' consumers (Sit, Merrilees et al. 2003). This investigation is indeed interested not in the choice and purchase of products within the shopping centre, but in the choice and consumption of the shopping centres themselves, and factors which lead to these behaviours, as shopping centres can themselves enable pleasurable experiences, separate from the goal to make a purchase (Allard, Babin et al. 2009).

The best shopping centres, as leisure destinations, offer experiential consumption, not just from the mix of stores, recreational venues and facilities within them, but also from the pleasurable and exciting environment they create, so that satisfaction may be derived from more than the sum of its parts but from the centre itself (Allard, Babin et al. 2009). This is not to say that purchase behaviour should itself be discounted. For many people visiting a shopping centre, the act of purchase is indeed key, for some people the act of shopping and purchase are indeed much more closely linked (Babin and Babin 2001). For others, this link is weaker, even for those whose primary reason for visiting the shopping centre, is to make a purchase.

Nevertheless, some shopping centre managers have recognised that new entertainment formats are useful ways of differentiating the centres from competitor centres in the area (Kirkup and Rafiq 1994), particularly given the rise in dominance of chain retailers across Britain. Much of the debate around the growth of the chain retailer, and the resultant homogenisation of British high streets has come from influential policy think tanks such as the new economics foundation.

(Conisbee, Kjell et al. 2005; Cox, Squires et al. 2010), though it has been discussed by academics also (Warnaby 2009; Bennison, Warnaby et al. 2010). Chain retailers now have such a dominant presence on the high street, that the top 75 retailers in the UK employ around two thirds of the total workforce in this sector. This has lead to a situation where not only do high streets around the country look like carbon copies of each other; 'clone towns' (Conisbee, Kjell et al. 2005), but out-of-town shopping centres also have the same composition (Conisbee, Kjell et al. 2005; Warnaby 2009; Bennison, Warnaby et al. 2010; Cox, Squires et al. 2010). Differentiation from competing shopping centres is incredibly difficult. While traditional department store anchors are still used in many shopping centres, other centres attempt to use leisure venues to attract customers and gain competitive advantage (Bloch, Ridgway et al. 1991). The Metro Centre, for example, is anchored by a multiplex cinema and food area at one extremity of the centre, two department stores (Debenhams and Marks and Spencer) at other extremities, and by a third department store: House of Frasier, in the middle of the centre.

The number of managed shopping centres in the UK at present is now 387, with most of these shopping centres being situated in England, and in particular the south east (Musa and Pitt 2009), see table 1.1. The study area for this investigation is the North East of England (henceforth referred to as 'the North East'), which currently has 12 managed shopping centres.

Table 1.1: Number of shopping centres in the UK
Source: Musa & Pitt (2009)

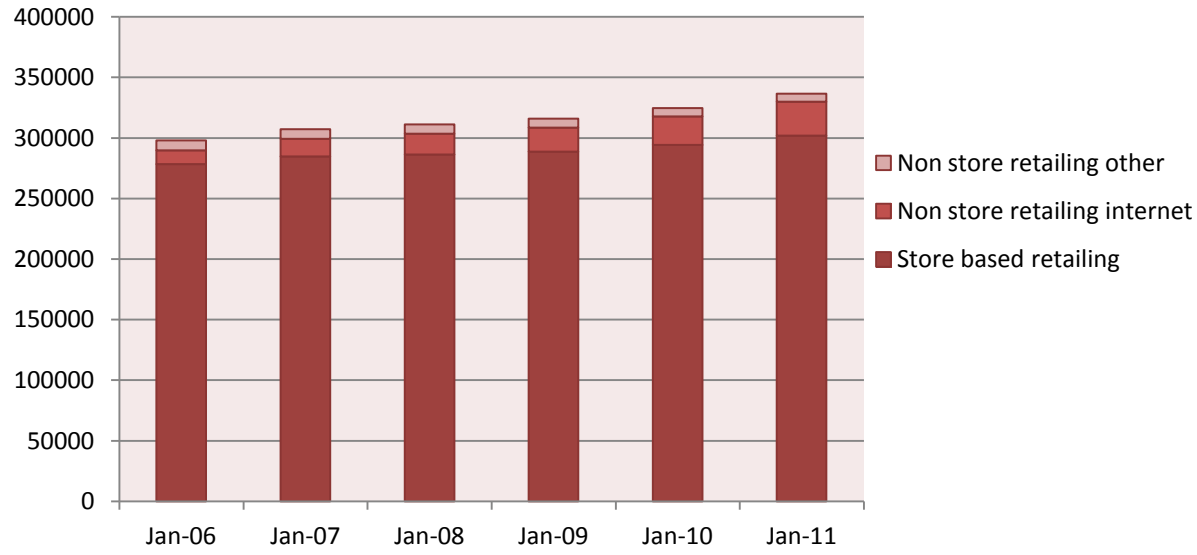
Countries and regions	*Numbers of shopping centres*
England	290
Greater London	54
East Anglia	16
East Midlands	14
North East	12
North West	40
South East	59
South West	30
West Midlands	31
Yorkshire and Humber	34
Northern Ireland	25
Scotland	47
Wales	25
Total numbers of UK shopping centres	387

1.1.4 The Growth of Non-Store Retailing

If the growth in popularity of out-of-town shopping centres impacted significantly on town centre shopping, then the growth in popularity of non-store retailing has undoubtedly impacted

on store-based (bricks-and-mortar) retailing. Store-based retail in the United Kingdom (UK) is big business, has had historical significance in shaping the towns and cities around the country, and affects almost everyone in the UK in some way. Retailers find themselves in a highly competitive situation. The rapid growth of non-store and online retailing (see figure 1.1) as an alternative retail format (EuroMonitor 2010) means that bricks-and-mortar retailers in towns and out-of-town shopping centres alike are competing not only with each other, but with online retailers who do not have to face the usual costs associated with physical retailing- premium unit rental for the most desirable locations, training and salary costs for frontline staff. As figure 1.1 below indicates, store-based retailing is still by far the largest form of retail format that exists in the UK, and continues to grow today. However, store-based retailing has witnessed a slowing of this growth in recent years.

Figure 1.1: Store-based compared with non-store retailing formats
Source: Retailing: Euromonitor (2012) from trade sources/national



The growth of all types of retailing slowed considerably between 2008 and 2010 in the UK (Euromonitor 2012). Store-based retailing slowed from growth of around 2.23% in 2007 to just 0.58% in 2008, with growth slowly picking up over the following years to 1.89% in 2010 and 2.52% in 2011. While other formats of non-store retailing (e.g. catalogue and television shopping) seem to have been declining over the period, Internet retailing has maintained the highest levels of growth. Internet retailing, which saw a significantly higher percentage growth, also saw a slowing in growth during this period, which persists into 2011. By 2007 the growth in Internet retailing stood at 20.61% per annum. This dropped to 15.17% in 2008, and its lowest growth 14.35% in 2009. The growth has been slow to pick back up, and held at 15.94% in 2011.

Internet retailing is still growing dramatically year on year, though it is valued at only a fraction of that of store-based retailing. Much of the Internet retailing competes directly with store-based retailers, with the sale of tangible goods (food, apparel, etc., entertainment media). The move of entertainment media (music, film, games and even books) away from tangible offerings (CDs, DVDs and Blu-ray) towards digital content (online streaming and downloads, kindle store) matches shifting consumer preferences in consumption behaviours, and further threatens the competitiveness of store-based retailers.

Mobile commerce (or M-commerce) is an area of Internet retailing that has also grown significantly. Though it is too early to tell definitively, predictions suggest that the proportion of internet sales made via mobile devices are set to grow significantly (Richmond 2011), growing in part by the wide scale take-up of smartphone devises, and also, through the emergence of a new kind of commodity- the mobile app, which can only be purchased online. The growth of the 'App' has a less direct impact on store-based retailers than alternative digital content and sale of tangible goods (having no comparable offering in store), but is still competing for a share of consumers' purses, which in a time of recession, also has a negative impact.

As Internet retailing has grown at a considerably higher rate to store-based retailing, there is a growing need for store-based retailers to better understand factors that influence individuals in their choice of shopping centre. The impact of the growth of internet shopping has been felt keenly on retail formats across the country, and perhaps most keenly on the high street, in the same way that the growth in popularity of the more convenient out of town malls impacted upon town centre shopping.

From figure 1.1 above it is clear that internet retailing is still a much smaller part of the retail sector than store-based retailing, but evidence suggests it is still growing (81.53% over the last five years, and even more so before that), while growth of store-based retailing shows some evidence of just 8% growth over the same period. This growth of Internet sales looks likely to continue on an upward trend. Traditional store-based retailing looked set to plateau until the slight improvement in 2011. There is little evidence to suggest that the growth of internet 'clicks' retailing over 'bricks-and-mortar' store-based retailing will mean the situation for shopping centres will get any better. Indeed, it looks likely that the situation for shopping centres is going to become increasingly more complicated in future years, as both 'pureplay' and 'bricks and clicks' sectors are growing (Mintel 2009). 'Pureplay' refers to businesses that originate and

operate purely on the Internet, while 'bricks and clicks' companies deal in both online (clicks) and offline (bricks) sales. Many 'bricks and click's grocery retailers have seen the significant growth of the 'clicks' component outstripping the growth of the 'bricks' side of the business, and might consider paring back the store side of retailing. This could well leave shopping centres that have traditionally been anchored by supermarkets, with an increasingly worrying situation of how they will primarily draw consumers in.

The high street has seen great challenges in recent years. The numbers of store-based retailers going into administration has increased dramatically over recent years. The first major hint of the high street woes came with the long established chain Woolworths entering into administration in Q4 2008, and the trend of high street retailers going into administration continues to this day. Recent reports show the health of the retail sector in the UK still looks poor, with more retailers entering administration in Q2 2012 compared with that period in 2011 (Remo 2012). It is in the context of the problems faced by store-based retailers that this research has relevance to managers of shopping centres, which require a strong understanding of the consumers of stores within it, to ensure long-term financial health and stability.

1.2 The Consumption Setting

This study intends to look at shopping as a consumer behaviour, rather than focus on purchase behaviour itself. As far back as the early 1970s, the question of why people shop was raised as an important issue. Studies suggested that examining factors that affect purchase may be somewhat limited, as consumers do not always shop specifically to buy (Tauber 1972), an assumption many marketing theories had made before, which lead to misinterpretations of consumer behaviour.

Though Tauber asserted that consumer behaviour is made up of three distinct activities; shopping, buying and consuming, research prior to this had almost exclusively focussed only on buying, with research on shopping and consuming conspicuous by its absence, ensuring a myopic view of consumer behaviour, focused entirely on the act of purchase. Previous research into the act of shopping had instead focussed on buying. This has changed slightly throughout the years, with progress made in research on shopping behaviour, to understand how and why people shop (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982), and how they choose where to shop, with consuming behaviour receiving further research (Birkin, Clarke et al.

2002). In the following decades, researchers agreed that the goal of consumption is not merely the acquisition of goods, but rather, the achievement of satisfying and enjoyable experiences (Belk 1982; Bloch, Ridgway et al. 1991). Shopping now encompasses a wider range of activities, including sightseeing, socialising, browsing, and eating and drinking (Jansen-Verbeke 1987; Ng 2003), giving rise to a new way of looking at what shopping centres provide for their customers- 'shoppertainment'. To remain competitive, and indeed, gain competitive advantage, shopping centres must consider how they can add value as an offering, ensuring they offer the benefits that their consumers would want, while minimising the costs needed to acquire them.

The retail spaces themselves were designed to represent the values of the shopping centre 'brand', with interior design, choice of fixtures and lighting and layout all engineered to communicate this brand, and be congruent with the consumer segments being targeted (Moore and Fernie). In trying to design a store or shopping centre to attract the customers, and in selecting an appropriate location, retailers were trying to create a lifestyle value that would be congruent or desirable to its target markets. Suburban shopping centres present different lifestyle images to their consumers than upmarket high street developments, reflecting the lifestyle values of customers who live nearby.

This investigation, rather than focus on the behaviour of individuals at a store level, shall focus on the behaviour of consumers at a shopping centre level, which offers consumers valuable experiences in its own right- from the shops they can visit, to the facilities and venues they can use, to the intrinsic experience of the shopping centre. It is especially important that shopping centre managers understand what draws consumers into the centre, as the rise in dominance of chain retailers across all formats of shopping centre means it is not simply a matter of which stores a shopping centre has that attracts consumers. Instead of considering products and services as the focus of consumer desire, the study shall look at the shopping centre, as an offering in itself that consumers desire (Dennis, Newman et al. 2005). In terms of value, the benefits might relate to tenant mix and intrinsic benefits of the shopping centre- atmospherics, activities enabled, and cost related to time and money needed to access the centre. In the context of the growth of Internet based retailing, store-based retailers must work to leverage resources not at the disposal of Internet based retailers- a physical presence with which to entice and amuse the consumer. This is why the focus of this thesis is on the experiential aspects of shopping in retail spaces, rather than on purchases within stores.

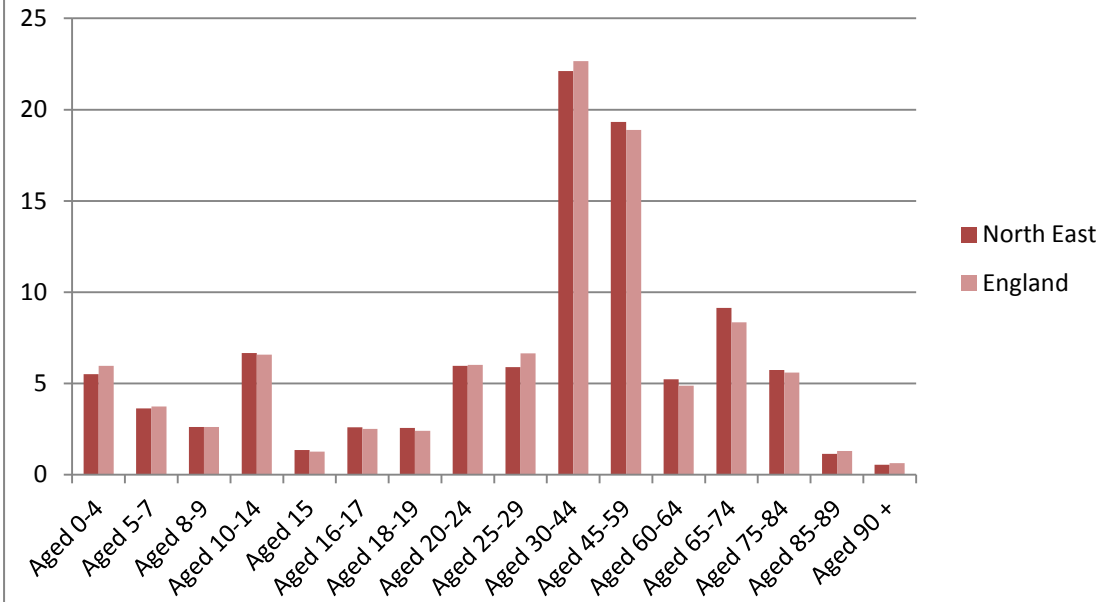
1.3 The Study Area

This study will look at consumer choice regarding shopping centres, with the empirical work to be carried out in the North East region of England, an area that encompasses the conurbations of Tyneside, Wearside and Teeside, within which population is distributed across major cities Newcastle and Middlesbrough, and numerous large towns/small cities, towns and villages. The North East was selected as a suitable area of study for two reasons, the composition of its retail landscape and demographic and socio-economic characteristics. Among other retail spaces the study area contains two of the top ten leading shopping centres in the UK (Mintel 2004a). The Metro Centre was the first and thus most established super-regional (>100,000m square gross retail space) out-of-town shopping centre in the UK (Dennis; Guy 1994b) and Eldon Square is located in the nearby city of Newcastle. Several retail parks round off the type of retail format offered around the area, and afford retail opportunities to consumers in the area. It was necessary to ensure consumers sampled had adequate choice of different types of shopping centre, and the North East provided as study area in which consumers have a wide array of retail choice within a reasonable distance.

As well as representing a good cross section of retail formats within a reasonable geographical area, the demographic and socio-economic composition of the north east is also fairly representative of the UK as a whole, though figures provided here are essentially taken from 2001 census data, as the 2011 data is still pending release. Figures are therefore subject to the accuracy issues inherent with data as it ages.

According to Neighbourhood statistics using data from the 2001 census, the ratio of males to females in the north east is comparable (0.484 in North East compared to 0.486 in the UK), and breakdown of other key population figures shows a very similar profile to the rest of England (anon 2010). Age composition is certainly comparable between the North East and England as a whole (figure 1.2).

Figure 1.2: Age Composition for North East compared with England (%)
Source: anon (2010) Neighbourhood Statistics- based on 2001 census



The north east may have above average levels of deprivation (ONS 2009), but has been shown to have comparable disposable income the rest of the UK (see appendix A). Additionally, looking at work related figures such as economic activity and occupation give a strong indication that the socio-economic composition of North East of England is highly representative of the rest of England. Examination of figures on occupations held across the North East (see figures 1.3 and 1.4) suggests there are smaller percentages of individuals (ages 16-74) in managerial and professional occupations than in England as a whole, and higher percentages in occupation relating to sales and customer services, machine operative and elementary occupations, though the difference appears marginal.

Figure 1.3: Occupations in the North East compared with England (%)
Source: anon (2010) Neighbourhood Statistics- based on 2001 census

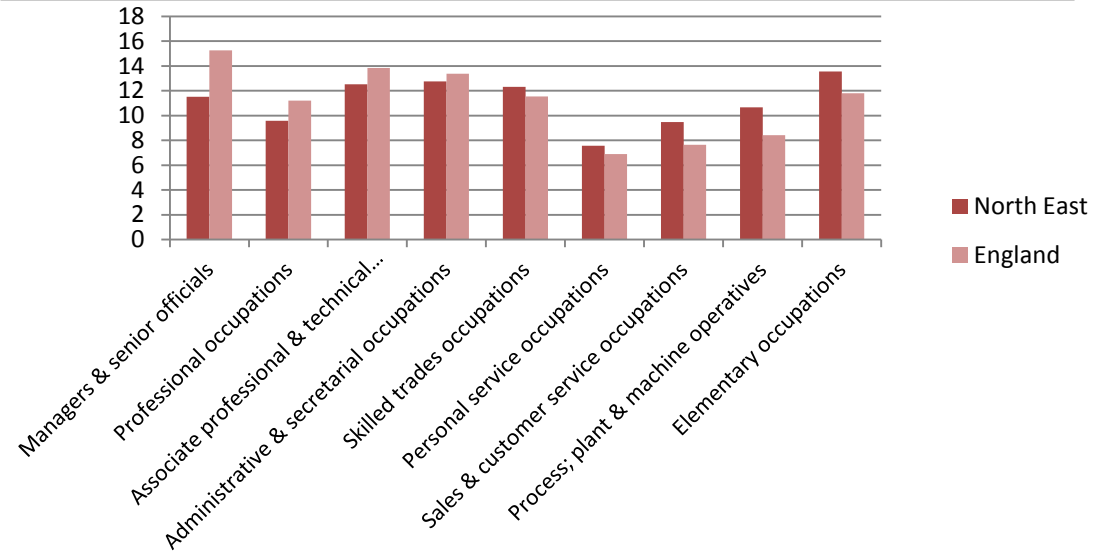
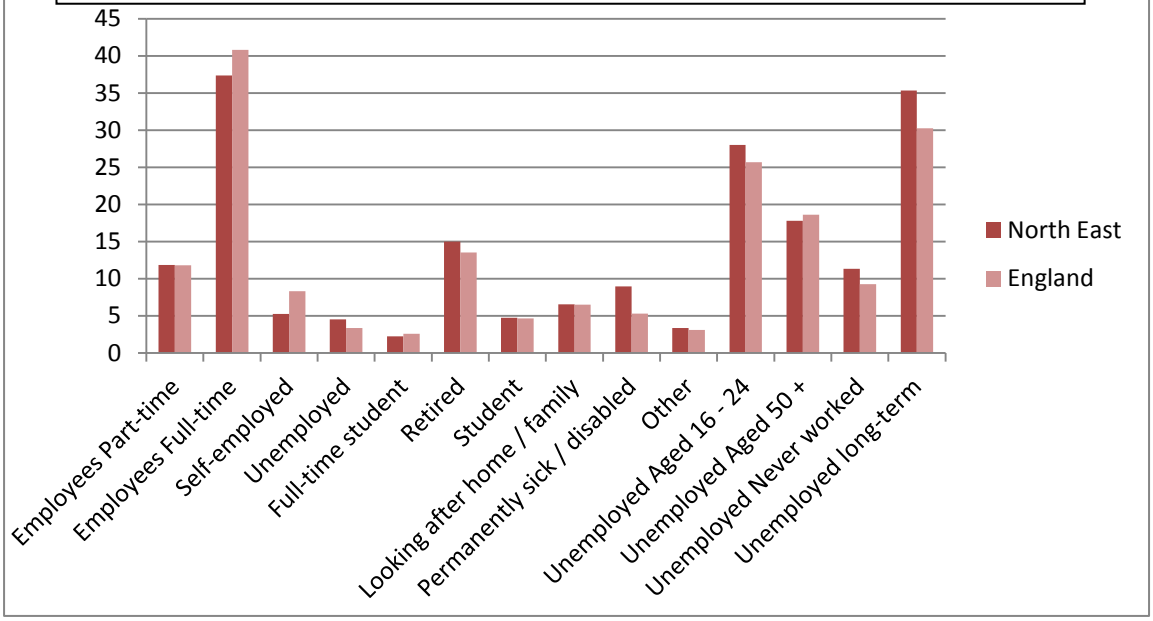


Figure 1.4: Economic Activity in the North East compared with England
Source: anon (2010) Neighbourhood Statistics- based on 2001 census



Review of data comparing Economic Activity for the North East compared with England (figure 1.4 above) show the key difference to be that the North East has an unemployment rate of 35% compared with 30% for England as a whole, which certainly reflects some of the deprivation indices mentioned above.

1.4 Research Problem

In the face of stiff competition from within driven by growth of out-of-town shopping centres, dominance of chain retailers leading to homogenisation of shopping centres, effects of the global economic slump and from the increasing popularity of internet retailing, spurred by improved digital connectivity at home and on the go, bricks-and-mortar retailers need to better understand their consumers, and how those consumers go about making their choices, not just of products, brands, and even store, which have received attention in research circles, but of shopping centre too. Evidence suggests that penetration of internet shopping is likely to continue to be a dominant threat to shopping centres for a long time, with the situation for store-based retailing likely to get worse, not better, in the next few years.

One of the major difficulties shopping centres in the UK face at the present is the difficulty in distinguishing themselves from their competitors in terms of their tenant mix. The growth and prevalence of the chain store means that many high streets and shopping centres around the country house the same retail stores as their main competitors. With stores such as Marks and Spencer's, HMV and Starbucks

Retailers are now able to successfully segment their markets on the basis of basic geo-demographic and socio-economic characteristics (Kotler, Keller et al. 2009) to identify suitable customers to target. Academic research has examined shopping behaviours (Bloch, Ridgway et al. 1994) and shopping approaches (Reynolds, Ganesh et al. 2002), which, has shown great potential to better explain consumer choice. Enjoyment or dislike of shopping cannot be predicted on the basis of the customers age, sex, income or employment status, or by where an individual lives, yet these are likely to affect frequency and way in which shopping is approached, and in so doing, the type of shopping centre a consumer will prefer. For a shopping centre to make itself more attractive to its potential customers and to be competitive in the market, it must work to understand its present and potential customers, as well as its competitors.

Consumer choice of retailer has received attention from the fields of retail geography, psychology and sociology, in attempts to understand consumer choice of retail store (some of which will be discussed in chapter 2), with different approaches each showing merit in their own way.

This study shall seek to examine identify a suitable theoretical framework to enhance understanding of consumer choice of shopping centre. The research objectives of this thesis are thus:

- To review the extant literature to determine a suitable approach to examine shopping centre choice.
- To explore whether an existing 'purchase' level theoretical model of consumer behaviour can be adapted to examine consumer behaviour at the level of shopping centre choice.
- To identify the most salient forces affecting patronage behaviour at the shopping centre level.
- To make recommendations to retailers based on the most salient forces affecting patronage and representing potential to act as source of differentiation.

Satisfaction of these objectives should have value in both theoretical and practical domains. It will further knowledge in the academic domain about whether models of consumer behaviour usually applied to product or brand choice can be applied to retail choice also, and start to explore which models are most suitable. Identification of forces most salient to consumers in their patronage behaviour should be of benefit to academics in identifying directions of future research and to retail managers in identifying areas to focus on at strategic and operational levels.

1.5 Thesis Structure

To explore these research objectives, the thesis will be split up into six chapters. After the **introduction** chapter, will be chapter two.

Chapter two will present a review of the extant **literature** surrounding retail geography considerations of shopping retail choice, and psychological theories of both store choice and wider consumer behaviour. This chapter goes on to present the theoretical underpinning of the thesis, presenting two theoretical models from a field of psychology widely applied to explain retail and consumer behaviour which are adapted to form conceptual models. Hypotheses will be presented in the context of previous research, with which these conceptual models may be examined.

The **methodology** is presented in chapter three, starting with a brief account of the philosophical approach to research taken, before moving on to a consideration and justification of the research approach and specific method employed across the two studies involved in this thesis. Discussion of how research was conducted in a rigorous and meaningful way, with metrics developed to ensure accurate measures are discussed.

Chapter four presents the **results** of the empirical investigations conducted for the thesis. Broken into two parts, each section will present the results of one of the two studies considered. The chapter presents the results of hypothesis testing, synthesising the most meaningful figures from the relevant tests, and presents them along with analysis and what this means for the support of hypotheses.

The results presented in chapter four will be picked up for more detailed discussion in chapter five. The intention of the **discussion** chapter is to present a reflection on the findings of the empirical research with respect to previous studies, and to discuss the key implications of these findings for retail managers in shopping centres, and for theoreticians in the area.

The final chapter provides **conclusions** to the thesis. The chapter intends to present a summary of the thesis, discuss the limitations of the research, discuss the contributions to theory and to practitioners, with recommendations for retailers, and recommendations for future research considered.

2. Literature Review

The following chapter presents discussion of extant research in the fields of retail patronage and consumer behaviour. The first major section will introduce and present a critical review of existing models of retail choice, many of which have focussed at the store, rather than shopping centre level. Once the gap in the research has been established, the next section shall go on to present two alternative psychological perspectives which have previously been used to examine and explain choice behaviours of individuals, before discussing their application with respect to consumers and the choices they make. The models presented from these fields have most commonly focussed on choice of product, rather than choice of retailer, so some discussion of their application in this area will also be offered. In the final section of this chapter, conceptual models will be presented, based on the theories and models discussed in the earlier sections.

2.1 Existing models of shopping centre choice

This section looks at two competing disciplinary fields that have often been used to explain and predict the patronage behaviour of individuals in environments: retail geography and environmental psychology. Retail geography predominantly focuses on the macro level, and is used by retailers to select optimal locations for new units, as well as to explain patronage probabilities for existing stores. Environmental psychology, sometimes known as behavioural geography by contrast looks more often at the interaction of the individual with the environment, covering numerous behaviours including patronage.

2.1.1 Retail Geography

Spatial consumer behaviour can be seen as a subset of decision making, where individuals seek to optimise individual utility or welfare, through choosing a single option out of a set of alternative choices (Timmermans 1982; Timmermans, Van der Heijden et al. 1982; Garling and Golledge 1993). In this instance, the emphasis is on choosing a shopping centre from a set of alternatives, which optimises the consumer's welfare or utility. Each alternative has a set of attributes that the consumer evaluates, and attaches some value to, given his/her task, motivation and previous experience. The following section shall outline some of the key spatial

models of retail choice that have developed over the years. Examination of consumer behaviour with respect to choice of retailer saw the development of two parallel strands of research (Golledge and Stimson 1997), retail gravity models, drawing on geographical and physics disciplines, and behavioural models of consumer choice and decision making (McGoldrick 2002); two approaches which, for the large part, have developed in isolation of each other.

Retail gravity models developed as a means for explaining consumer choice of a retail location-store or shopping centre, when there are two or more options available to the consumer. These models developed in an attempt to use location, and the pull of shopping centres as the principal components in explaining shopping centre choice. These models were also used by retailers facing strategic decisions, relating to whether and where they should expand (Davies and Rogers 1984).

Retail gravitation theory was born in 1929, when William J. Reilly thought to look to the discipline of Physics, adopt and adapt Newton's theory of gravitation and apply it to the retail context to understand store patronage behaviour (Reilley 1929), so developing Reilly's Law of Retail Gravitation, which posited that "all things being equal, two cities attract retail trade in direct proportion to some power of their populations, and in inverse proportion to some distance of each of the two cities from an intermediate city" (Bottum 1989).

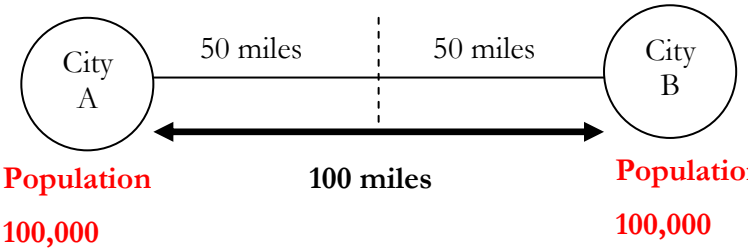
This law was developed at a time when the out-of-town shopping centre did not exist, when retail trade areas existed exclusively in town and city centres, so much so that attraction does not come down to any attribute of the retailer or retailers, but to the size of the city, and the number of people living within it. On the basis of this, the Law of Retail Gravitation, the following deterministic model was developed by Converse, for use in inter-urban applications (Converse 1949):

$$\text{Break Point (BP)} = \frac{\text{Distance Between Centre A and B}}{1 + \sqrt{(\text{Population of centre A} / \text{Population of Centre B})}}$$

This deterministic model returned the centre a consumer would choose, on the basis of where they lived with respect to the two shopping centres, and the population of those two centres. The model was used to determine a point at which consumers would choose one shopping centre or the other. Two cities of equal sizes would have an equal pull. In figure 2.1 below, the

examples show cities 100 miles apart. In the first example, the two cities are of equal size. As a result, they each attract people within a radius of 50 miles. In the second example, city B has a larger population than city A, and so attracts consumers from a much greater distance than City A (illustrated in figure 2.1).

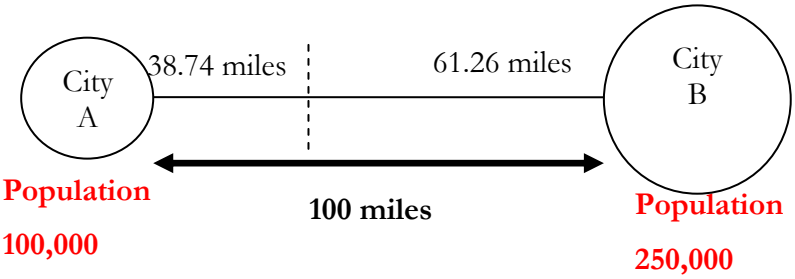
Scenario 1



$$M_{AB} = \frac{D_{AB}}{1 + \sqrt{(P_A / P_B)}} \qquad M_{AB} = \frac{100}{1 + \sqrt{(100{,}000 / 100{,}000)}}$$

$$M_{AB} = 50$$

Scenario 2



$$M_{AB} = \frac{D_{AB}}{1 + \sqrt{(P_A / P_B)}} \qquad M_{AB} = \frac{100}{1 + \sqrt{(100{,}000 / 250{,}000)}}$$

$$M_{AB} = 61.25741$$

Figure 2.1: Representation of Converse's Breaking Point

Clearly, the use of a city population as a proxy measure of attractive force, with no consideration of retail characteristics, was not an infallible measure. Even before the retail mall became commonplace, research sought to come up with new, better models of retail gravitation. By 1963, David L. Huff had taken the principals outlined by Reilly's Law of retail gravitation, and developed a new, more flexible and relevant model of retail gravitation, moving away from the deterministic model to develop a probability model (Huff 1963). This model, first and foremost

moved away from the consideration of centres as cities, as Reilly's model had, moving instead towards a consideration of shopping centres. Already, Huff's model reflected the changes in the retail landscape that had only begun five years previously, with the opening of Southdale. It also moved beyond the constraints of considering two centres only, allowing for many centres to be considered. This model sought to be able to establish the probability that a consumer would choose where to shop, on the basis of the attraction of that shopping centre and the distance (straight line) from the shopping centre, compared to all other shopping complexes in the area, hence the probabilistic nature of the model. Interaction is easier when objects of interest are closer together. When faced with the alternatives of two shopping centres of the same distance, a consumer would show preference for the more attractive centre. Similarly, when faced with two equally attractive shopping centres, a consumer should prefer the centre located nearer to them (Birkin, Clarke et al. 2002).

The probability that a consumer living at location *i* would visit a shopping centre at location *j* is calculated as follows:

$$P_j^i = \frac{\frac{S_j}{D_{ij}^{\beta}}}{\sum_{j=1}^{n} \frac{S_j}{D_{ij}^{\beta}}}$$

Where:

P_{ij} =	Probability of customer living at site *i* shopping at store *j*
S_j =	Size of store *j* in square feet
D_{ij} =	Distance from site *i* to store *j*
β =	Parameter reflecting sensitivity of customers to distance.
i =	Customer origination sites ($i = 1, \ldots, m$)
j =	Stores ($j = 1, \ldots, n$)

Location factors were usually considered by aggregate area, rather than specific location, as this would be unfeasible to compute for all potential consumers living in an area. Instead, aggregate areas, such as postcode sector or ward would be considered, to constrain the number of calculations required to make the model worthwhile, with the boundary centre adopted and used to represent location *i* (Carter 1993). Though this made the model more easily applicable, it did mean that the model, and others like it, suffer from 'spatial aggregation bias', which is difficult to account for (Okabe and Okunuki 2001). Distance at that time was most easily measured in simple straight-line measures. While it was possible for Huff to simplify and adopt proxy measures of location and distance, (specific, objective phenomena), the model contains more subjective phenomena. This includes consumer's sensitivity to distance, which is more difficult to determine and control for. Though the model at the time had clear limitations, development of computers and tools have enabled some of the more objective factors to be more

convincingly and accurately measured. No longer must distance be considered as a straight line, but now, through geographical information systems (GIS), they can be considered in terms of travel distance- how far along road networks consumers must travel, or if cost of journey is considered, in terms of time taken and the costs incurred to travel. Sensitivity to distance is so subjective, so dependent upon the individual, that it seems impossible to consider this model as complete, unless each individual can be examined and queried about their individual sensitivity. Huff's model was also limited in that it considered stores alone, rather than shopping centres, which are perhaps more useful units to consider, given the retail landscape in the UK today, and many other countries.

Soon after Huff developed his model, a competing model was proposed, which instead attempted to derive a retail expenditure model to estimate aggregate sales at a shopping centre (Lakshmanan and Hansen 1965). Like Huff's model, Lakshmanan and Hansens' model drew on the dimensions of distance and attraction first suggested by Reilly, though the model had more clear applications for retailers wishing to judge the fiscal potential of geographical markets. For shopping centre *j*, the sales potential of customers living in an area *i* was calculated as follows:

$$R_{i,j} = Y_i * \frac{\left(\frac{M_j^a}{D_{i,j}^g}\right)}{\sum_{k=1}^{n} \left(\frac{M_k^a}{D_{i,k}^b}\right)}$$

Where:

R_{ij} = aggregate retail sales in retail market *I* for shopping centre *j;*

M_j = size (in square foot) of the j^{th} shopping centre;

$D_{i,k}$ = distance between the i^{th} consumer & the k^{th} competing centre

Y_i = total retail expenditures in the trade area

α, β, and γ are friction parameters ("low α indicates low importance of shopping centre size, low β and γ means that distance is not inhibiting when selecting a shopping centre"

Birkin's Spatial Interaction Model (Birkin, Clarke et al. 2002) tried to further enhance spatial examination of consumer choice, and advocated moving away from labelling such models as 'retail gravity models', which suggests an out-dated approach. The model starts at an aggregate level, considering people living within a boundary zone, such as postcode sector or enumeration district. The model looks to calculate the flow of people from residential area *i* to shopping centre *j* (Birkin, Clarke et al. 2002) is $S_{ij} = A_i \times O_i \times W_j \times F(C_{ij})$

S_{ij} = flow of consumers from residential area *i* to shopping centre *j*

O_i = demand in area *i*

W_j = attractiveness of shopping centre *j*

$F(C_{ij})$ = cost of travel or distance between *i* and *j*

A_i balance factor that attempts to account for competition and that demand is allocated across all centres in the area.

$$A_i = \frac{1}{\Sigma_i W_j \times f(C_{ij})}.$$

To summarise the discussion above, table 2.1 contains a timeline summary of key models developed in the area of retail gravitation, though this timeline is by no means exhaustive:

Table 2.1: Timeline of Retail Gravity Model Development

Year	Author	Description
1929	Hotelling	In considering two competing stores, price is the main driver of utility, set off by the costs incurred in travelling the distance to store. Suggests breaking point when consumers favour one store above the other.
1931	Reilly	Greater shopping centre mass (size) increases consumer utility, thus increasing the gravitational pull of a centre while distance to the centre decreases consumer utility, which exponentially decreases the gravitational pull of a centre.
1943	Converse	The Breaking Point Formula denotes the point at which consumers are more likely to visit one shopping centre over another, based on the relative pull (population) of the two cities and the distance that separates them.
1964	Huff	A more flexible model- allows for a less steep distance-decay function and multiple competing shopping centres. Considers possibility of having an unlimited number of competing centres as well as allowing for a varying distance-decay parameter. The model suggests that the market capture rate of a shopping centre is directly related to its mass and inversely related to distance from.
1965	Lakshmanan & Hansen	The Retail Expenditure Model estimates aggregate sales in shopping centres based on mall size, distance to consumer compared to the size and distance of all other shopping centres in the area. Model permits the ultimate flexibility in considering the consumer utility trade-off between size and distance when choosing which shopping centre to visit. Simpler and more accessible than many that followed.
1971	Bucklin	Considers probability that a customer at a particular location will visit a shopping centre at a particular location based on competing shopping centres in the area.
1974	Nakanishi & Cooper	The Multiplicative Competitive Interaction (MCI) attempts to build on earlier models taking competitive interaction (estimated market shares) into account.
1996	Eppli & Shilling	Based on Lakshmanan & Hansen's retail expenditure model, considers consumer utility trade-off between retail agglomeration and distance to shopping centre.
2002	Birkin	Spatial Interaction Model considers flow of consumers to shopping centre based on demand of the area, multiplied by attractiveness of shopping centre, multiplied by cost of travel between consumer and shopping centre, and a consideration of competitors (taking into account their attractiveness and cost of travel) in the area.
2005	McGarvey & Cavalier	The gravity-based utility model considers elastic gravity-based demand and facility capacity, budget and forbidden regions constraints for developing new facilities.

Essentially, the developments experienced in the area of retail geography in explaining consumer choice of retailer (intended to inform retailers of how good existing locations are, and where to locate new retail units) have provided new and increasingly complex models, yet all fail to consider one of the most basic points raised as early as 1929 in the first major article on such models. Hotelling raised the point that all things being equal (in his debate in terms of price) some consumers choose one retailer over another (Hotelling 1929).

Consumers do not act in a particular way, purely because they live (or work) within a particular boundary, or live at a particular postcode. Nor do they always choose to go to the closest shopping centre for a shopping trip. Retail gravity models of retail choice tend to be bound to examining aggregate consumer behaviour rather than individual consumer behaviour (Benoit and Clarke 1997), an approach which masks the variety of relationships and influences that may be present at the individual level (Cadwallader 1979). Clearly, a dominant and significant flaw with these models is that in trying to predict patterns of retail choice at an aggregate level, they lose much of their meaning as to why an individual chooses a particular retail location.

These models serve a twofold purpose- for existing retailers, to assess the store, and evaluate how it is performing- and where possible to identify geographical barriers, which may be preventing access to certain customers. For retailers thinking to open a new store or shopping centre, the retail gravity model/ spatial interaction model provides a useful tool to assess the potential of a new location. Store location research is an important step for retailers trying to assess the ideal location to open a new store (Davies and Rogers 1984).

Attraction has been suggested to relate in part to the mix of convenience and service outlets (Reynolds and Wood, 1990), though few models have made convincing steps to integrate this assertion. From Reilly's Law of retail gravitation, to Huff's probabilistic model, and Lakshmanan and Hansens' model of aggregate sales potential (Lakshmanan and Hansen 1965), many of the retail gravity models that followed used 'size' to measure attraction, though most have at least improved upon Reilly's proxy measure of population, to consider floor space instead (Benoit and Clarke 1997). It seems reasonable to deduce that retail locations, stores and shopping centres will be more attractive if they are larger in size. This is somewhat limited however. Though one might infer factors like range and variety of products from store size, parking availability, cheaper prices and greater potential for comparison (Birkin, Clarke et al. 2002), this is not explicit. It overlooks the changing formats of shopping centre, the evolution of ambient

retail attributes, and expansion of retail environments to include non-retail facilities also. Later models did suggest that other factors should be considered for measures of attraction, such as number of items, etc. (Okabe and Okunuki 2001), and the measures of attractiveness improved (Birkin, Clarke et al. 2002). These models have failed to adequately account for 'cumulative attraction', the principal that retailers, particularly those which deal in the same types of product, clustered adjacent or near to each other will do more trade than if they were more widely scattered (Nelson 1958).

The models were developed in a time when out-of-town shopping centres were growing in popularity, but before the explosion of new retail formats, which placed greater emphasis on the mix of retail and non-retail functionality. This brings into focus the question as to whether these models, developed with the town centre/ out-of-town shopping centre dichotomy, are still relevant in the more complex retail landscape. Retail gravity models in general concentrate on size and accessibility, and fail to consider retail factors such as image, price, and ambient attributes, certainly limiting its applicability to landscapes with speciality retail properties (Bottum 1989). Floor space becomes far too inadequate a measure of attraction, especially when considering shopping centres that offer places to eat and drink, bowling alleys, multiplex cinemas and arcades, and the individual desires of the consumer. While desire to make a purchase is a strong contributor to the decision to choose to visit a shopping centre, it is not necessarily a pre-requisite to choice of shopping centre (Tauber 1972; Bloch and Richins 1983), and the assumption that purchase of goods is prerequisite to shopping centre choice is another failing of the retail gravitation models. Tauber was one of the first to suggest that consumers don't necessarily shop to make a purchase, which was a critical limitation to consumer behaviour theories of the time (Tauber 1972).

However, it might be limiting to consider the varied nature of a retail space in objective terms. Looking at the number, magnitude and variety of entertainment and retail facilities may be a limited view in itself, as there are those consumers who would choose to use many of these facilities in a shopping trip, and those who would go with one purpose in mind- to purchase a good, or to visit a cinema, etc. Issues specific to the individual must be considered to understand the importance those individuals place on different types of functionality in shopping centres, as all individuals are different. Not only are measures of attraction inadequate in these models of shopping centre choice, but there are issues with the measures of distance also.

Even where models utilise drive time or drive distance instead of Euclidean (straight line) distance, they still assume equal pulling force in all directions (Birkin, Clarke et al. 2002), and assume distance has equal importance to all consumers living within a set drive-time. For a buffer of 5 mile drive time, distance is expected to have the same importance for consumers living 4.9 miles away from the centre as it is for consumers living ¼ mile away. Some studies attempted to move away from objective measures of distance, to a more subjective consideration- cognitive distance (Callwallader 1979).

Retail gravity models are also limited in that they always assume that all consumers are equal, not only in their motivation behind a shopping trip, but also in their character and the resources available to them. The models have been criticised in that they assume consumer sensitivity to attraction and distance parameters are the same for all consumers (Suárez, Rodrguez del Bosque et al. 2004), never taking consumer heterogeneity into account (Severin, Louviere et al. 2001). These models also assume consumers have equal access, typically assuming that all consumers in the area have equal means of visiting a shopping centre, usually in a straight line, which again, undermines to validity of these models. The models fail to take into account whether a car is available, or the fact that many consumers have to rely on public transport. To a limited extent, techniques have been suggested to use geographical information systems (GIS) to map public transport networks (O'Sullivan, Morrison et al. 2000), using isochrones accessibility analysis. Still, these techniques yield limited results, merely highlighting areas where public transport service is inadequate, still failing to consider on an individual basis where private or public transport has an impact on accessibility. Overall, studies indicate that it is surprising how little importance distance is in explaining retail sales (Eppli and Shilling 1996).

A further, considerable limitation of these models is an assumption that all make, that consumers make separate shopping trips for each type of item they need (Carter 1993), and fail to consider the relative suitability (or how this impacts on attraction) of a shopping centre to enable the purchase of different types of items. This fails to take into account the fact that, as shopping centres hold many and varied types of retail unit, a consumer may have many purposes in mind for a single shopping trip. Shoppers will often attempt to optimise total travel effort, so that rather than minimise travel cost for an individual item, they will combine shopping for several items into one trip (Shepherd and Thomas 1980). Most visits to shopping centres today are for multipurpose shopping trips, with consumers making multiple purchases from single shops, and visits to multiple shops in a single visit (Birkin, Clarke et al. 2002).

Consumers in part will seek to optimise their consumption behaviour, and maximise their efficiency by buying as many things they need, in one place at one time. However, with few exceptions (Arentze and Timmermans 2001; Arentze, Oppewal et al. 2005), retail gravity models have never allowed for these types of multipurpose shopping trip to be accounted for, and accounts of shopping centre patronage have received far less attention than accounts of retail store patronage (Hart, Farrell et al. 2007). Academic studies into store location and market analysis have failed to develop a model of consumer behaviour that adequately accounts for multipurpose shopping behaviours at malls (Carter 1993). Though Carter expressed this concern in the early 1990s, this area still needs work today, though the work of Arentze and others (Arentze, Oppewal et al. 2005) has advanced this field, as the retail environment continues to change. While there may be value in knowing the principal purpose of a consumer's shopping trip, it is also important to capture all aspects of their potentially multipurpose visit. This means finding out about all activities they plan to do, and impulsively engage in during their shopping trip.

As already stated, distance, or rather, sensitivity to distance where it is measured is a limited concept, as it is very difficult to measure, and it is clear that not all consumers have the same sensitivity to distance as others. The models also made the unspoken assumption that for a shopping trip, a consumer would prefer to visit a shopping centre that is close to where they live. Indeed, shoppers will usually choose to make shopping trips to shopping centres relatively close to where they live (or work), and will rarely make weekly trips to shopping centres much further afield. However, this does not take into account the purpose of the shopping trip, or the fact that nearby shopping centres may be inadequately suited to meeting the needs of the consumer for a given shopping trip. Existing models fail to take into consideration the amount of resources and time a consumer would be willing to put into making a journey to a shopping centre, given the main and secondary purposes of the shopping trip, and the amount of resources available to them. With increased choice and increased levels of mobility, and willingness to travel for leisure (shopping being increasingly seen as a leisure activity in its own right), consumers are likely to now travel many miles to go shopping, and not just to visit the nearest shopping centre (Guy 1999). Consumers might be prepared to travel further distances to reach 'better' shopping centres, but again, 'better' must be taken in the context of the consumer's needs of the shopping trip. Consumers may be prepared to make longer journeys, spend more time and money to visit a shopping centre that better fits the needs of the consumer for that trip. Some researchers suppose distance might again become an important factor to

some consumers, who are now financially better off, but increasingly poor in free time as they work longer hours, and that shopping centres that fail in convenience terms will lose out to shopping centres located near to customers (Reimers and Clulow 2009). Attraction cannot therefore be adequately measured by a simple size based function, but must in some way reflect the purpose of the shopping trip itself. It becomes apparent that it is a near impossible challenge for spatial models to adequately conceptualise and measure shopping centre attraction on a consumer by consumer, shopping trip by shopping trip basis. It seems like spatial models of retail will always struggle to adequately take into account the specificity of individual consumer motivation and experience, and shopping trip context. This is such a major limitation, that it brings into question the relevance of these models as a means of interpreting and explaining consumer choice.

Having explored the limitations of existing models of spatial retail choice, from the limited use of floor space as measures of attractiveness, to distance decay as measures of impedance, etc., this study seeks to examine whether taking the alternative approach- the behavioural perspective, can better explain why consumers choose to visit a particular shopping centre, and account for consumer behaviour at a micro level, rather than at the macro level. The interactions between spatial consumer behaviour and attributes of retail environments has led to researchers realising the need to examine and "explain relationships between locational and non-locational attributes of stores or shopping centres and consumer choice behaviour" (Timmermans 1993, p342), which is an important step to enable retailers to better understand how their strategic plans and implementations may impact on consumer choice. Purely locational models of consumer choice behaviour have clear limitations, while the non-locational attributes of stores, and individual features of the consumers seem to have greater potential for explaining choice at an individual level.

As the specific context of the shopping trip, the purpose and primary needs of the consumer, and the propensity of the consumer to utilise various functions is likely to affect their decision to choose to visit a shopping centre, it seems apparent that it is important to find out more about the individual consumers, to look at a consumer level, at individual characteristics and experiences, as well as components of the retail environment. A Behavioural approach shall therefore be taken in this study, specifically drawing on behavioural learning theory to examine the influence of stimuli and consequences on consumer choice of shopping centre.

Retail gravitation models have for several years been a widely accepted method of determining the spatial movement of consumers throughout an area on a macro level, and predicting the probability of a consumer in a particular area choosing to patronise particular stores, with successive models attempting to refine and perfect explanations of choice of shopping centre. Analysis of existing models in the extant literature, discussed in the preceding section, suggest that there are still limitations within the models, even the most recent incarnations, with inadequate measures of attractiveness, simplified measures of distance, and no account taken of the emergent grades of shopping centre that now pervade the UK. While the theory behind these models may be sound, in the changing retail climate, further variables must be taken into account, and research by Belk (Belk 1975) and Foxall (Foxall 1975; Foxall 1995; Foxall 1998) suggests that consumer behaviour can be significantly explained at a micro level, by the situational variables and learning history, as well as socio-economic factors. From this changing retail climate it is clear that retail in Britain has been moving for some time away from the strict dichotomy of town-centres and out-of-town shopping centre, towards a broader taxonomy containing various intermediate grades of shopping centre.

A fairly critical limitation of retail gravity models is the inability to explain why consumers choose to visit different shopping centres at different times. This may be linked to the discussion above, that choice will come down in part to the needs of the consumer on a given shopping trip. However, consumers are not always this rational. Personal circumstances and experiences will determine shopping habits, with consumers developing a repertoire of shopping centres they will grow to favour, and for each of these centres, their own inventory of different types of shops within the centre that are likely to best meet the consumer's needs (Collins 1992). Even though humans may be creatures of habit, given the same purpose and requirements of a shopping trip, a consumer may not always choose to visit the same shopping centre (Birkin, Clarke et al. 2002), and the retail gravity models cannot account for the seemingly irrational behaviour of consumers. Consumers have been shown, time and again, to be anything but rational in their behaviours (Ariely 2008). These models assume that shopping centre choice is an economically rational decision (Shepherd and Thomas 1980). As we have seen, consumers don't always tend to exercise rational thinking in the choices they make, sometimes travelling to a distant centre for sales items, where savings made on purchase exceed transportation costs (Shepherd and Thomas 1980).

Some have suggested that in a behavioural investigation, these models, which suggest the three key determinants of shopping behaviour are centre attraction, the disincentive associated with distance, and the competitive influence of alternative centres, lack a sound basis (Jensen-Butler 1972).

Spatial interaction models, along with other, once popular models of location- central place theory (Christaller 1933), Bid Rent Theory (Haig, McCrea et al. 1927) and Principals of Minimum Differentiation (Hotelling 1929) are all based on the assumptions made through a positivist stance, namely, that humans are rational, decisions are always made to maximise utility, and that the material world can be ordered in some clear, recognisable fashion (Brown 1993). Positivism advocates the use of scientific methods, with researchers adopting an objective epistemology. Methodologically, the positivist approach is experimental and manipulative, with hypotheses grounded in realism.

Spatial Interaction Models have received attention in the past, and have managed to give at least a partial account for why people choose to visit particular shopping centres. However, there are clear limitations both theoretically and philosophically. In terms of understanding the forces that drive consumers at an individual level, it seems that the disciplinarily geographically bounded models of shopping centre choice are quite often lacking, overlooking the subtleties of individual factors in choices, by principally reducing consumer behaviour to the aggregate level. However, geographical approaches to explaining consumer choices do not necessarily have to be viewed as aggregate behaviour. Predicted in 1962 (Kuhn 1962), geography experienced what some have described as a revolution 'behavioural revolution'. Behaviourism's aim is to "replace simplistic and mechanistic conceptions that previously characterised much man-environment theory with new versions that explicitly recognise the complexities of behaviour" (Gold 1980 p3). New approaches to human geography developed, in the wake of the behavioural revolution, which were more scientific and quantifiable than previous approaches (Gold 1980). Behavioural geography is one such branch of human geography that utilises location theory and spatial science to examine decision making and choice at a disaggregated, individual level (Aitken 1991) bridging the gap between the aggregate level explanations of behaviour offered by gravity and spatial interaction models, and disaggregate behavioural models looking at the choice of the individual. Behavioural geography seeks to offer explanations for the spatial activities of individuals, by examining psychological and other characteristics of the individual (Rieser 2006). This approach has gained favour, partly out of growing dissatisfaction with aggregate models. As

well as this, commentary on uses of traditional economic geography and locational theory like the models described above have suggested the concept of the perfectly rational 'economic man', a basic assumption of these models, does not fit with reality (Rieser 2006).

This move of geographical approaches towards a more scientific view, and 'reorientation towards the individual' is one that was shared across other social sciences, dissatisfied with explanations of choice at an aggregate level, and interested in gaining greater insight from the perspective of individual psychological factors and processes (Rieser 2006).

In attempting to understand the relationship behaviour has with the environment through the examinations of psychological factors such as cognition, perception and decision making (Gärling and Golledge 1993), behavioural geography has been likened to environmental psychology, which also focuses on how the individual interacts with the environment. Given the suggestion that assumptions of the 'rational' consumer made by many aggregate models of consumer choice are unrealistic, and that examination of the individual has the potential to reveal much about the choices they make, this study turns to the discipline of Psychology, to gain a different, and hopefully enhanced understanding of why a consumer chooses to visit a shopping centre, and why they tend to prefer particular shopping centres.

Gaps in existing knowledge

In researching a new format of shopping centre, the 'lifestyle centre' (open-air centres around 50,000 square feet in size and located in affluent neighbourhoods), Yan and Eckman (2009), discuss the key limitations of existing 'spatial interaction models' and suggest that these existing models fail to adequately take into account this new format of shopping centre, though they do acknowledge the importance of location accessibility in store choice decisions. In many of the previous studies, data has been analysed at an aggregate level only, after data was collected from one or several shopping centres (de Jaun 2004 cited in Yan and Eckman (2009)). Models did not account for different types of shopping centre found in different locations. As data for many of these tends to come from one or two shopping centres, it is impossible to generalise beyond to the wide variety of shopping centre types. It has been recognised that there was a considerable lack of research into how individual characteristics effect patronage decisions (Yan and Eckman 2009). Indeed, a key limitation of the spatial interaction models is their inability to take shopping centre format into account, as different types of shopping centre have unique characteristics

which are not captured in existing models, and which attract different customers in different ways. Without taking the shopping centre type into consideration, Yan and Eckman (2009) question whether these models are generalisable. Other studies have attempted to look into factors additional to the traditional utility and distance focussed spatial interaction models, by also considering forces such as store image attributes and merchandise assortment (de Jaun 2004) in Yan and Eckman (2009), but again, many of these models failed to consider the impact of the individual (Yan and Eckman 2009).

As others have pointed out (Kowinski 1985), customers "typically shop malls, rather than stores" (Kaytko & Baker 2004 p68), yet much research on retail patronage has focussed on the level of the store, rather than of the shopping centre, thus limiting the direct relevance of some of the psychological (as well as geographical) perspectives on patronage behaviour to the present study. Shopping centre research is more complicated than research at a store level, because the variability of products and services is much greater at the level of the shopping centre (Wee 1986 in Yan & Eckman 2008).

A key gap in existing knowledge comes from the failure to consider that individual consumers will perceive attributes of shopping centres differently. Spatial interaction models include objective quantification of shopping centre attributes, while failing to take into account that different customers will perceive different shopping centre attributes in different ways, and also that they will perceive them differently in terms of utility (Yan and Eckman 2009), and even that this will vary for a consumer depending on the context of the shopping trip. Previously studies have focused on factors such as distance to store, assortment and variety of merchandise and store image. De Juan (2004), for example, looked at factors like parking, store hours, and comfort of the environment without considering that these forces will vary in salience for different consumers.

Several researchers have highlighted the need to consider both internal and external forces. Yan & Eckman (2008) call for the need to consider individual characteristics and how these effect selections of retail location, as store attributes will vary in importance. Yan & Eckman (2008) suggested a cognitive decision-making approach to explore internal forces (Mowen and Minor 2001 in Yan & Eckman 2008).

2.1.2 Decision-making Accounts of Patronage

The literal interpretation of the word 'Psychology' is the study (*logos*) of the mind (*psyche*). Some psychologists would refine this definition to 'the scientific study of behaviour' (Clark and Miller 1970; Zimbardo and Gerrig 1992). Psychology as a discipline can be approached from several different perspectives, each of which make a distinctive set of assumptions, and place emphasis on certain aspects of individuals they deem worthy of study (Gross 2001). Following Psychology as the 'scientific study of behaviour', this investigation adopts a behaviourist approach, the philosophy of the science of behaviour analysis (Baum 2005), adopting specifically the radical behaviourist philosophy, which at its heart is a scientific approach- considering principally those aspects of behaviour that are observable, and therefore measurable. The Behaviourist perspective shall be discussed in greater depth in the following chapter.

There are clear limitations to retail geography in its explanations of shopping centre choice, that fields such as psychology may help to overcome. If a major limitation of retail geography is its inability to account for individual differences, then psychological theories can perhaps be used to explain these differences.

While cognition in explaining consumer behaviour has been used a great deal, for the most part research in this area has focused on consumer cognitive processes, and in terms of outward behaviour on decisions like choice of product and brand. However, there has been some attempt to bring cognitive psychological theories to bear to explain behaviours with respect to store and shopping centre. Studies have focussed on the effect of the retail environment on satisfaction (Bitner 1990; Taylor et al., 1997 in Laroche, et al (2005)), product evaluation (Bitner 1992; Chebat & Michon in Laroche, et al (2005)), evaluation of product and service quality (Baker et al 2002; Mazursky & Jacoby 1986 in Laroche, et al (2005)) emotional response and purchase behaviour (Bagozzi et al 1999; Chebat & Michon 2003; Spangenberg et al 1996 in Laroche, et al (2005)), and shopping centre choice (Yan and Eckman 2009). This section will focus on some of the key research in this area, with particular attention to shopping centre choice behaviour.

Laroche, et al (2005) suggest that the cognition-emotion-behaviour (C-E-B) paradigm can form a backbone for research into shopper behaviours. This may form some basis for studying behaviours such as shopping centre choice. Studies have suggested that cognitions are

antecedents of emotion, and use this to form a basis for explaining things such as purchase intention. In exploring purchase intention Laroche, et al (2005) examined product and mall perception. In this way they attempted to take behavioural constructs- stimulus, and conceptualise them in terms of cognitive concepts, i.e. perception. This is valid from the perspective that consumers will perceive stimuli differently.

Previous research has sought to use cognitive theories to explain patronage behaviour at the shopping centre level.

Yan and Eckman (2009) attempted to examine and integrate two streams of theory, shopping orientation (shopping-specific psychographics) and store image (consumer's learned objective and subjective perceptions of stores) to examine patronage behaviour across three types of shopping centre (central business districts, traditional enclosed malls and lifestyle centres), as illustrated in figure 2.2.

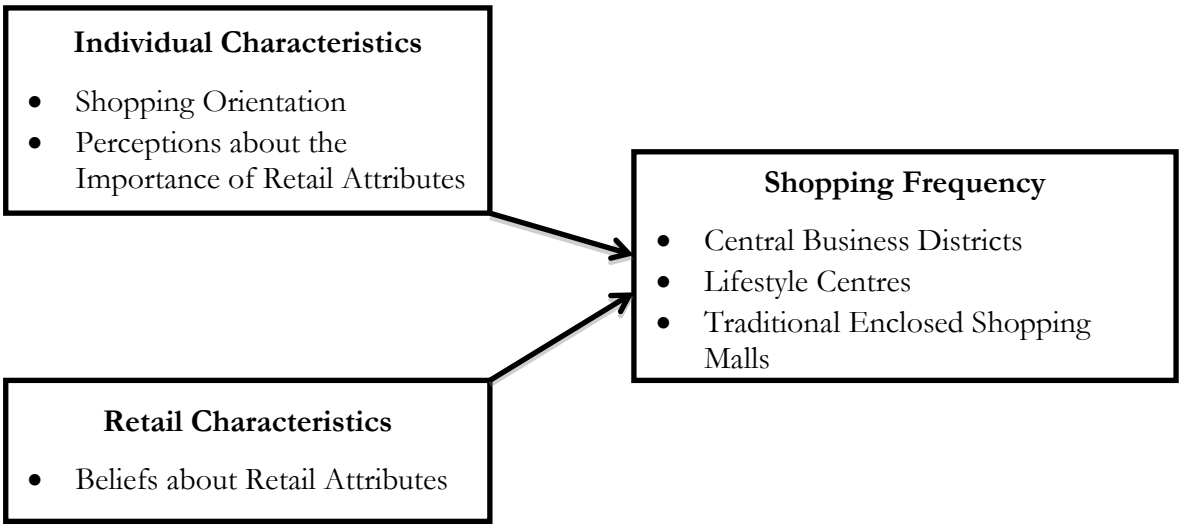


Figure 2.2 Yan & Eckman's model of shopping centre choice
Source: Yan & Eckman (2009) p27

Their study looked at how both retail and individual characteristics affect choice of shopping centre, in particular examining shopping orientation and store image (perception of store). Their conceptual model was quite simple- that shopping centre patronage, denoted by frequency of visit, is attributed to shopping orientation, perception of importance of retail attributes and belief of retail attribute of difference shopping centre type.

Consumers can be segmented on the basis of their shopping orientation. Shopping orientation has been found to influence preference for type of shopping centre (Korgaonkar & Smith 1985) in Yan and Eckman (2009) as well as behaviours such as purchase frequency.

As we have previously seen, consumers perceive products as holding different attributes. Just as they do for products (Fishbein 1967 in Yan and Eckman (2009)), consumers are likely to "establish beliefs about retail stores based on a set of preferred attributes and further evaluate stores according to their attribute preferences" (Yan and Eckman 2009, p30), with these beliefs about tangible and intangible retail attributes comprising the 'store image'. Store image is of upmost importance to the success of retail ventures and has received much attention in academic literature over the years (Lindquist 1974; Pessimier 1980; and Osman 1993 in Wong & Yu 2003 Monroe & Guiltinan 1975) since it was first described as the way the store is defined in the mind of the consumer (Martineau 1958). Martineau's work (1958) proposed that store image is comprised of four dimensions: symbols and colour, layout and architecture, sales personnel and advertising, and subsequent researchers continued to add to and revise these dimensions.

Store image research was put forward by Lindquist (1974) who suggested it be conceptualised as multifaceted, comprised of merchandise, physical facilities, promotion, store ambience, institutional factors, convenience, service, clientele and also post-transaction satisfaction. Wong et al (2001) looked at shopping centre attributes and their impact on shopping centre 'attractiveness', an important concept in moving away from the limited perspectives on attractiveness posited in spatial interaction models, namely square footage. This 'attractiveness' was posited to impact on patronage behaviour. Considering spatial interaction models attempted to measure 'attractiveness' in terms of basic utility, Wong et al (2001) reacted by attempting to measure retail attractiveness in terms of consumers' perceptions of retail attributes with an instrument dubbed 'SCATTR' (shopping centre's attractiveness). Perceptions of retail attributes and the importance consumers place on these attributes are seen to have a significant impact on their decision of where to shop (Wong et al 2001).

More recently, Wong et al developed their 'joint venture shopping centre image model', which categorised retail attributes on six dimensions: location, merchandise, service, popularity, facilities and sales and incentives (2003). Subsequent research suggested different numbers of dimensions, reducing down existing factors, while adding new ones to capture the facets of the more dynamic retail formats that emerged. With new types of shopping centre, image now

needs to consider attributes like entertainment facilities and venues (Sirpal & Peng 1995 in Wong & Yu 2003).

Table 2.2: Taxonomies of retail attributes in previous research	
Author	**Retail Attribute Dimensions**
Lindquist (1974)	Clientele, convenience, institutional factors, merchandise, physical facilities, post-transaction satisfaction, promotion, service, store ambience
Bearden (1977)	Friendliness of salesperson, location, merchandise selection, parking facilities, price level, quality of merchandise, store ambience
Bellenger et al (1977)	Economic convenience, presence of related services, quality of the centre, variety under one roof
Nevin & Houston (1980)	Assortment (great place to spend a few hours, merchandise quality, product selection, quality of stores, special events/exhibits, special sales/promotions, variety of stores), facilities (layout of area, parking facilities, availability of lunch/refreshments, comfort areas), market posture (genera price level, store personnel, a conservative centre)
Wong et al (2001) *SCATTR*	Facilities (adequate and well designed entrances, vertical transportation, parking facilities, resting seats, store atmosphere, layout), location (convenient location, located at retailing belt), merchandise (owner's reputation, merchandise quality, merchandise variety, general price), popularity (fashion, uniqueness), sales incentives (availability of supermarket, food courts, special events/exhibit, late closing hours, sales promotion), service (service variety, service quality)
Newberry (2003)	Accessibility, appearance, atmosphere, cleanliness, décor, food quality, food quantity
Wong & (2003)	Facilities, location, merchandise, popularity, sales and incentives, service
Wilhelm & Mottner (2005)	Mall design, number of cool mall stores, number of different kinds of mall stores, number of entertainment options, number of sports/play options, teen friendliness
Visser, Preez & van Noordwyk (2006)	Clientele, convenience, institutional factors, merchandise, physical facilities, post-transaction satisfaction, promotion, service, store atmosphere
El-Adly (2007)	Comfort, convenience, diversity, entertainment, luxury, mall essence
Yan & Eckman (2009)	Neighbourhood, retail attractions, shopping incentive, shopping pleasure, site design

More studies have attempted to classify retail dimensions than are within the scope of this literature review to mention. However, table 2.2 above summarises some of the key studies that pushed forward research in this area, and the dimensions they identified to classify key retail attributes salient to retail 'attractiveness'.

Understanding how consumers evaluate their shopping centres on key retail attributes can help shopping centre managers to develop their strategies in order to gain competitive advantage (Yan and Eckman 2009). Yan and Eckman (2009) examined whether individual characteristics and retail characteristics explain patronage behaviour, from the perspective of shopping frequency. To measure shopping frequency they asked respondents how often they had visited

the three types of shopping centre in the last 12 months, on a scale of 1 to 7 from never to ten times or more. There are clear issues to consider with this particular approach. The most obvious are the issues of recall and accuracy. Expecting respondents to be able to recall the number if times they have visited any shopping centre in the last 12 months is unlikely to yield accurate results (Cuesta and Bohórquez 2011). The seven point scale, even if recall can be guaranteed, is unlikely to capture fully the patronage frequency over a 12 month period, further undermining the accuracy of the measure, and validity of analyses.

Yan and Eckman (2009) found that shopping patronage could be attributed to shopping orientation, to the importance of retail attributes, which they defined as the following discrete factors: retail attractions, shopping pleasure, site design, shopping incentive and neighbourhood and to beliefs about these retail attributes, building and adapting the measures put forward by Bearden (1977) and Wong et al (2001). Within shopping orientation, they found specific links between patronage and shopping orientation dimensions such as fashion leadership, brand consciousness. Further, they found that shopping orientation, importance of retail attributes and beliefs about retail attributes have a differential impact, depending on the type of shopping centre in question. Brand conscious consumers for example, are most likely to choose traditional shopping malls.

While psychological explanations of shopping centre choice have been shown to have some level of success, some of these studies still see validity in the capability of existing models (Yan & Eckman 2009). Distance from home may well be salient to some consumers when choosing shopping centre, with consumers who believe a shopping centre to be located close to home reporting higher levels of patronage frequency.

Other cognitively based research on shopping centres have looked at consumer attitudes, motives and values, and how these impact on purchase and consumption behaviours (Westbrook & Black (1985); Hirschman & Holbrook (1982); Babin et al (1994) in Khare (2011)). The impact of 'retail attributes' on retail image has been suggested to affect store choice though its impact on attitude towards store, which affects in-store information processing which then affects product and brand choice (Visser, et al 2006).

Limitations of existing environmental psychology perspectives on retail patronage

More recently research has suggested that the prevalence of patronage research at the attribute level might actually be of limited use to marketing managers, leading to inadequate actionable information that may in fact produce disingenuous strategic recommendations (Yavas & Babakus 2009).

Store image may be examined by measuring consumers' perceptions of store attributes (Bearden 1977; Carpenter & Moore 2006; Martineau 1958; McDonald 1991 in Yan and Eckman (2009)). Research into store image has, unsurprisingly focussed predominantly at the level of the store, for grocery stores (Carpenter & Moore 2006; Morschett et al 2005 in Yan and Eckman (2009)) and apparel stores (Paulins & Geistfeld 2003 in Yan and Eckman (2009)), though some have also examined the impact of store image on patronage at the level of the shopping centre too (Sit et al 2003; Wong et al 2001 in Yan and Eckman (2009)). In many cases it is unclear how research delineates between 'store' attributes and 'shopping centre' attributes, and whether 'store' based models can be accurately applied to 'shopping centre' research. Wee (1986) suggested that retail image is more complicated when considering shopping centre than it is when considering store, due to the complexities when considering the various product and service offerings

One of the other critiques of the dominant retail attribution theory is the lack of consistency in classification of attributes (Yavas & Babakus 2009). Across multiple studies, attributes like 'atmosphere' are classified as 'quality of centre' (Bellenger et al 1977 in Yavas & Babakus (2009)) and in others classified as 'facilities' (Wong et al 2001). This further complicates the task of identifying salient retail attributes to focus on.

The models still do not account for all individual and potentially 'irrational' behaviour. Consumers who strongly wish to be unique may react against the choice of a local shopping centre with similar tenant and product mix as others nearby, by choosing to visit a shopping centre much further away to express their uniqueness (Burns & Warren 1995 in Wong & Yu 2003).

2.2 Psychological Perspectives of Consumer Behaviour

Both retail geography and environmental psychology studies have shown their potential in explaining patronage behaviour and driving forces behind it. Bettman, Johnson et al (1990) considered the economists view of consumer as rationally behaving creatures as rather unrealistic. As we have previously seen, retail geographical models tend to ascribe to the idea that individuals behave rationally as some function of utility against cost. This perspective suggests that when faced with a choice, the consumer has access to and obtains complete information about the alternatives, computes the utility of each alternative to identify and select the alternative that maximises utility. By comparison, the 'bounded rationality' perspective (Bettman, Johnson et al 1990) argues that consumers have limited ability to process information when faced with a decision, and are not the perfectly rational beings described by economists. Others suggest that a consumer's behaviour is rational within the constraints of his cognitive and learning capacities and the information that is available (Howard and Sheth 1969). A way of better understanding the individual (i.e. consumer) highlights the need to consider psychological perspectives.

Much of the research taken from a psychological perspective has been cognitively founded. Key theories from cognitive psychology shall now be presented, along with ways in which the theories have been used in consumer research.

2.2.1 Cognitive Theories

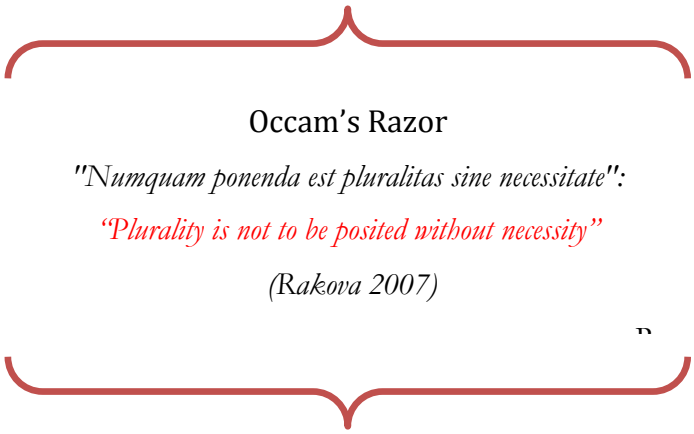
Cognitive approaches to consumer behaviour research has remained one of the most prolific in the discipline for a great many years (Howard & Sheth 1969), and continues to dominate to this day. Traditionally, consumer decision making refers to purchase of product, but selection of shopping centre could also be viewed as a transaction of sorts.

Cognitive psychology as a significant academic discipline can supposedly trace its origins back to 1956 (Eysenck & Keane 1996), when notable academics, Avram Noam Chomsky, George Miller, Allen Newell and Herbert Simon met at MIT to discuss their research on language, short-term memory and a computer programme known as the General Problem Solver (Chomsky, 1956; Miller, 1956; Newell, 1956, Simon, 1956). It is believed that the term 'cognitive

psychology' was first used in 1967 by Ulric Neisser, an American psychologist (Neisser 1967), who adopted it as the title of his book on the area.

At the heart of cognitive psychology as an approach is the assumption that there exists an abstract entity labelled 'the mind', which encompasses mental states and processes. Cognitive psychology has been described as the 'scientific study of the mind' (Eysenck and Keane 1996), through the exploration of these mental states and mental processes through scientific testing. Cognitive psychologists put forward abstract entities on the assumption that scientific testing of predictions regarding these entities is possible.

Cognitive psychology is also build upon the principle of Occam's Razor, which advocates simplicity over complexity- the best hypothesis is that which makes fewest new assumptions. It discourages unnecessary complexity.



As such, cognitive psychologists are encouraged to wield Occam's Razor in circumstances where the behaviour of the subject can be explained by simple principles- in such situations, complex hypotheses with abstract entities should be avoided.

Cognitive psychology shares some of the key principles of the preceding behavioural approach, namely rejecting introspection and promoting scientific methods. By contrast, it attempts to look at human behaviour, and move beyond simplistic behavioural accounts, to investigate whether something more abstract can better explain behaviour. Cognitive Psychology, as a discipline has yielded numerous theoretical models, some of which have been adopted for the examination of consumer behaviour.

Cognitive Psychology of Consumers

Cognitive theory has been applied to several aspects of consumer behaviour, some of which are interconnected. Cognitive theoretical frameworks widely utilised in consumer research include Perception, Attention, Memory, Information Processing, Decision Making, etc. Some of these models will be presented and critiqued for their ability to explain consumer choice of shopping centre.
One of the most popular uses of cognitive psychology in consumer research is the Decision Making model. Consumer decision-making is described as the mental processes involved in a consumer's transactions, before, during and after the decision is made.

In marketing research, attention is examined for the influence it plays on recall of adverts, suggesting that factors such as intensity, repetition, emotional content and novelty have a role to play in affecting whether an individual will pay attention to an advert or not.

Information Processing

Information processing in humans is seen by cognitivists as a string of activities involved in taking in information, transforming it and storing it so that it may be later retrieved. "Cognitive science and artificial intelligence stand together in taking information processing as the central activity involved in intelligent behaviour" (Estest et al 1983 (p21) in Skinner 1985). Figure 2.3 is a typical representation of information processing for consumer decision-making.

Bettman, Johnson and Payne suggest that one of the most important theoretical postulates of the psychology discipline of the time was the description of behaviour (in this instance consumer choice of product or service) in terms of a small number of memories and processes involved in the 'acquisition, storage, retrieval and utilisation of information (Bettman, Johnson et al. 1990). These can be separated into three major subsystems: perceptual (the senses and associated buffer memories), motor (translating action from thought) and cognitive (Bettman 1979).

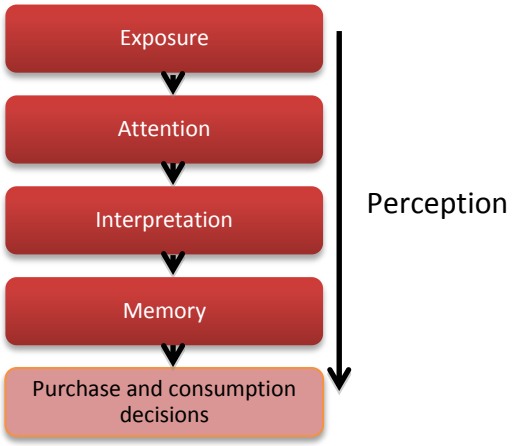


Figure 2.3 Information Processing for Consumer Decision Making
Source: adapted from (Hawkins, Mothersbaugh et al. 2012)

Cognitive scientists attribute 'perception' to the taking in (exposure) of information through the senses, with the 'perceiver' acting upon the world, and the outcome of that process being some representation of the physical stimulus observed (Skinner 1985). 'Attention' occurs when the stimulus is observed. The assignment of meaning to the sensations occurs with 'interpretation. The way the current representation is formed is in part due to the organism's stored knowledge. Retrieval of this not only affects what is seen, but also how likely it is to be seen- 'expected' phenomena are more likely to be observed and 'unexpected'. Use of the meaning in immediate decision-making and long-term retention of meaning occurs with 'memory'. 'Information processing' as the cognitive psychologist views it, is therefore irrevocably linked with memory and learning.

By contrast, from the behavioural perspective, it is the physical stimuli which alters the probability of the organism's behaviour. As with many cognitive constructs, many models have been put forward to represent 'information processing'. The idea of recording something when it happens, storing it, retrieving it and responding has been around a great deal longer than cognitive science. Skinner (1985) contends that cognitive scientists have taken this practice as a theoretical model, and questions whether they are justified in doing so.

Memory

Memory is a key part of learning, with cognitive learning described by some (Mitchell, 1983) as change in the content or structure of long-term memory. Models have been presented which suggest that information processing, memory and learning are all connected, with different

stages of information processing related to different types of cognitive system, including memory. Information gathered through exposure and attention goes into the perceptual system (see figure 2.4). This information is then stored in the short-term memory, while it is being interpreted and potentially prepared for transfer into long-term memory. This 'interpreted' information is then stored in long term-memory, from which it may be retrieved in the future. Processing of information into long-term memory is partly attributed to levels of involvement. High involvement learning situations occur when consumers are highly motivated to process or learn, and information in short-term memory is likely to transfer into long-term memory. In low involvement situations where there is little motivation to process or learn information (e.g. low price, low risk purchases or fast moving consumer goods), information in short-term memory is unlikely to be processed to long-term memory.

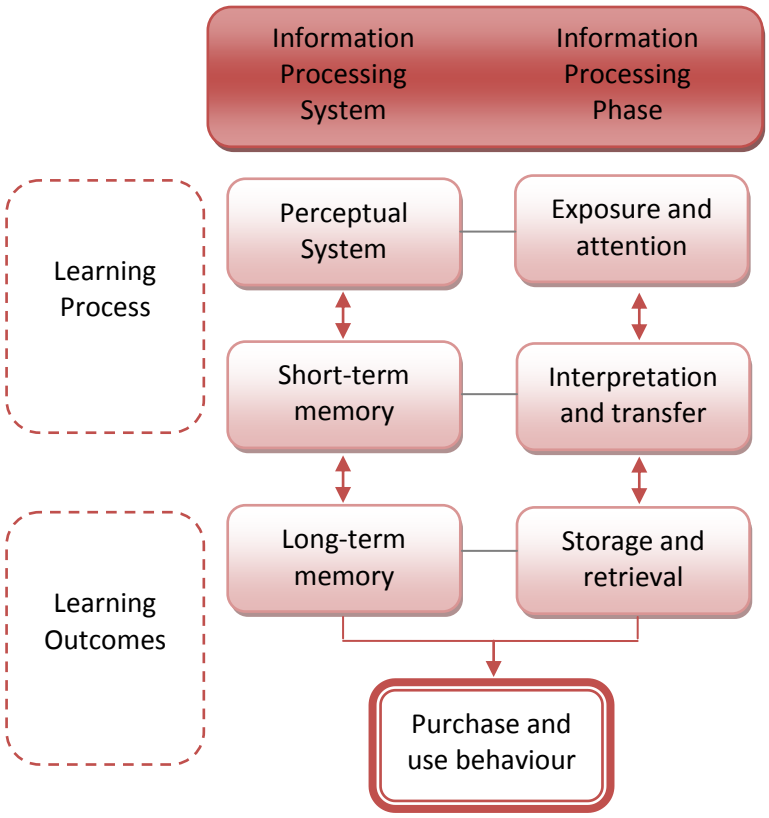


Figure 2.4: Information Processing, Learning & Memory
Source: adapted from (Hawkins, Mothersbaugh et al. 2012)

Memory is important for forming a consideration set, product recall (cue-based, measured by brand awareness, etc.), product recognition (familiarity, measured by name recognition, brand id, etc.).

Cognitive Learning and Knowledge

Cognitive learning has also been described as the change in structure and content of long-term memory or behaviour, resulting from information processing (Mirchell, 1983; Hawkins, 2013). When new information is acquired from the environment and interpreted, new knowledge or meaning emerges, which may modify existing structures of knowledge in memory (Peters & Olsen 2010). It is suggested that for consumers, information is usually acquired through direct personal use, vicarious product experience and interpretation of product-related information. Marketers stimulate direct personal use by aiding the purchase, often using free samples or in-store trials. Consumers can also acquire knowledge indirectly by observing how others use the product with vicarious product experience, which marketers may encourage through in-store demonstrations, celebrity endorsements, etc. Product-related information comes from mass media communications like advertising and product placement, and from personal sources such as family, friends and sales personnel (Peters & Olson 2010).

Decision Making

Cognitive psychology suggests that when presented with a finite set of alternative options, certain mental processes affect the individual's choice of a course of action, based on some pertinent evaluative criteria (Busemeyer & Townsend 1993). When faced with a difficult decision, an individual attempts to anticipate and evaluate all potential course of action available to them, and all possible consequences potentially associated with them.

Consumer Decision Making

Research on consumer decision-making suggests that the choices consumers make relate to the selection, purchase and consumption of 'products and services' (Bettman, Johnson and Payne, 1991). Cognitive research on buying behaviours is by no means focussed solely on the purchase decision. It also considers "attitude towards a brand, comprehension of the brand, [and] attention to impinging stimuli" (Howard and Sheth, 1969, p5). A number of models on consumer decision making have been put forward, with the main contributions coming from Howard and Sheth (1969), Nicosia (1966) and Engel et al (1978) cited in Mitchell (1992). Though all models vary in detail, it can be argued that there are five stages which regularly occur in the models: problem recognition, information search, evaluation of alternatives, purchase decision and post-purchase behaviour (Mitchell 1992), a representation of which can be found in figure 2.5. Consumers must successfully pass through each stage in the decision making

process before successfully making a decision, and there are various factors involved which affect and may impede the ease with which the decision is made.

Figure 2.5: Generic model of the consumer decision process
Source: adapted from Blackwell et al (2005)

Bettman, Johnson and Payne (1991) suggest that the 'consumer decision task' should be broken down into different stages, starting with an examination of all factors potentially contributing to a choice- the alternative opinions, value attributes (what attributes are salient to a given purchase) and uncertainties.

The level of difficulty a consumer decision has partially depends upon the number of alternatives and attributes, the level of knowledge about specific attributes, level of uncertainty around attributes and number of attributes shared by alternatives. Consumers draw upon an 'evoked set' of alternatives (Howard and Sheth 1969). Though consumers may be aware of a greater number of alternatives, they only tend to call on a fraction of these when planning to make a choice. This is arguably as true for consumers choosing where to shop as it is for purchasing an everyday product.

Howard and Sheth make a powerful distinction that the alternatives a consumer faces are not necessarily bound by industry standard product categories (Howard and Sheth, 1969), and misunderstanding this can be dangerous. In a supermarket, a consumer may see Maxwell House coffee, Ovaltine and PG Tips tea as three alternatives that would satisfy his motivation. Alternatives must therefore be considered on the basis of the individual consumer and the motivations underlying the need recognition. In a similar fashion, shopping centre managers must realise that the alternatives potential consumers face are not always necessarily going to be shopping centres. For consumers with a desire to buy or to shop, this is true. For those consumers seeking an avenue for distraction or entertainment for an afternoon, shopping centres are competing with many other leisure pursuits.

Research suggests that the information a consumer can use to aid a decision can classified as either internal (inside the consumer) or external (outside of the consumer) (Bettman, Johnson and Payne, 1991; Howard and Sheth, 1969). Internal information is information within the consumer's memory, derived from his or her own experiences. External information is information that may come from anywhere outside of the consumer- from friends and family, sales people, and from information found in magazines and other marketing communications.

Decisions themselves may be classified on the basis of the types of information available to a consumer for any given decision, as stimulus-based, memory-based, or mixed (Lynch & Srull (1982) cited by Bettman, Johnson and Payne, 1991). Stimulus-based decision-making takes place where there is an absence of internal information. When a consumer has no personal experience of a related decision object, they must seek out sufficient external information to make a suitable decision. Memory-based decision-making takes place when there is no external information readily available to balance out the internal information. The consumer must then base their decision on their own experiences only. The most prevalent scenario however, is when both internal and external information are available, allowing mixed decision making to take place. The consumer may base their decision on a mixture of their own experience, and the advice of others. The growth in popularity of price comparison sites indicate a move towards stimulus-based and mixed decision making for many types of products and services, namely electronic goods, financial products, insurance, etc. Consumers can now identify and evaluate multiple attributes across multiple alternatives in a fast and convenient fashion.

Consumer decisions may also be characterised by their importance to the consumer. Bettman, Johnson and Payne (1991) suggest that, some consumer decisions are more important to consumers than others. The decision process may also be classified as simple habitual, moderate, or extensive. Simple habitual decision processes are used for choices such as the purchase of fast moving consumer goods. Selecting cereal in a supermarket is an example of a simple habitual decision process. The purchase of reasonably important goods, such as apparel or small electrical goods, is likely to be a result of a moderate decision process. Extensive decision processing is called for when making important decisions, such as the purchase of a car or a house.

However, models like the generic model of consumer decision process and Information Processing for consumer decision-making are rather descriptive, and not necessarily considered as 'decision models' at all. Rather, they describe the stages consumers usually go through when considering purchases. Concepts within the 'model' do not link to one another in the way typical of consumer behaviour models (like the theory of planned behaviour, or three term contingency for example), and consumers do not necessarily pass through all of these stages.

Other Models of Consumer Decision Making

There is certainly no shortage of cognitive models of consumer behaviour presented in both academic articles and textbooks on the subject. Many different authors have suggested bringing together the various cognitive theories discussed above in various ways, to examine consumer decision-making, though for several of the well reported ones, the models were originally put forward in textbooks, rather than academic journals, such as Peter & Olson's 'cognitive processing model of consumer decision making' (1987) in figure 2.6, which suggests that the environment acts upon the consumer, and through a series of interconnecting cognitive processes, that consumer's behaviour is affected, along with the direct impact of the environment. Peter & Olson (2010) suggest that processes involved in comprehending and

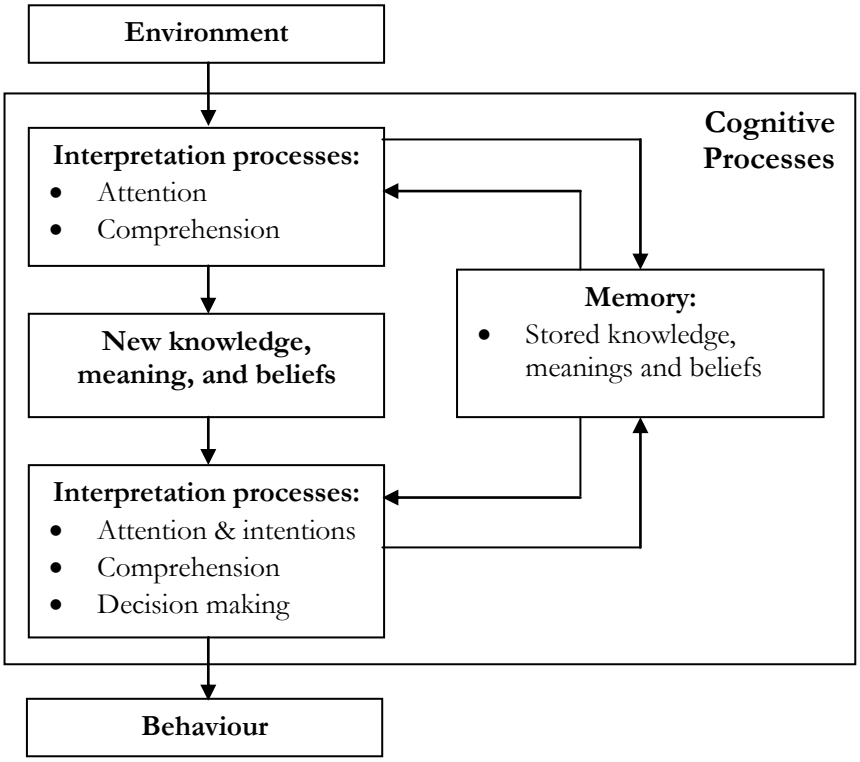


Figure 2.6: Cognitive Processing Model of Consumer Decision Making

Source: adapted from Peter and Olson (2010)

interpreting information from the environment interacts with knowledge, beliefs and meanings activated from memory to form new knowledge, beliefs and meanings, which then influence the formation of attitudes and intentions and decision making (evaluation of alternatives). These attitudes, intentions and ultimate decision, combined with the environment, then influence the behaviour of the consumer.

Like many such presentations of models of cognitive consumer decision-making, the model is not empirically supported, though it does link back to the 'generic' model of decision making put forward by Blackwell et al (1974; 2005). One of the key difficulties presented by cognitive psychology in consumer behaviour, is the inconsistency in terminology when presenting models. Peter & Olson (2010), for example, go on to present Blackwell et al's model of the consumer decision-making process as a consumer problem-solving model. As we will see below, 'information processing' models are presented to explain behaviour.

Cognitive theory such as central state identity theory attempts to connect the abstract entity 'mind' with the physical entity, the brain (Gobet, Chassy et al. 2012). Some studies have sought to firmly map mental states to neurological events- for example, particular thoughts to the firing of specific neural cells (Quinlan and Dyson 2008). This particular theory goes so far as to say that abstract and physical entities are actually one and the same (Quinlan and Dyson 2008). Skinner goes on to suggest that 'knowledge', as defined by cognitive psychologists, is merely a surrogate of 'the history of reinforcement' (Skinner 1985).

Other problems arise with attempts to map particular thoughts to particular neural cells. Particular neural cells may be observed to fire in a particular pattern in a test subject's brain when they think about shopping, different neural cells will fire in a different test subject when thinking about shopping. Mapping mental states and processes to neural activity in one subject will not allow for an understanding about others. Generalisations of findings in this area are therefore questionable.

A key difference between cognitive science and behaviourism concerns where behaviour comes from. Central to cognitive science is the assumption that individuals think before they act, that behaviour is initiated from within the organism (Skinner 1985). The Behavioural perspective, in contrast, looks at "antecedent events in the environment and the environmental histories of both the species and the individual" (Skinner 1985, p291). The next section shall go on to

presenting the development of behavioural theories before exploring their previous applications to explain and explore consumer behaviour.

Attitude Theories

Attitude is one of the more widely examined cognitive constructs, particularly in consumer research, representing an enduring (favourable or unfavourable) evaluation of appraisal of the behaviour of interest (Ajzen 1991). Over the years, models of attitude-behaviour interactions have been presented and refined. The first such instance of attitude being used to predict behaviour seems to have been in 1934, when LaPiere identified attitude-behaviour links and inconsistencies (LaPiere 1934). One of the most widely cited and developed attitude-behaviour models was first put forward more than thirty years ago (Fishbein and Ajzen 1975), out of dissatisfaction with prevailing attitude-behaviour studies, which often reported very low or insignificant associations between attitude and behaviours (Ajzen and Fishbein 1977) proposed that behaviour is driven by intention, and "a person's intention is in turn a function of his attitude towards performing the behaviour and of his subjective norm" with subjective norm referring to perceptions about social pressure towards the behaviour (p888), though this, the 'theory of reasoned action' (TRA) was formally presented later (Fishbein 1979). Ajzen went further to develop TRA into a model which endures in its use today, the theory of planned behaviour (TPB), which extends the TRA to additionally consider perceived behavioural control (PBC) which refers to the perceived ease with which consumer views their ability to perform the behaviour, based on past experience (Ajzen 1991).

One of the key limitations of attitude-behaviour models is the concept of the 'attitude-behaviour' gap, where there is inconsistency between an individual's attitude towards a behaviour, and the behaviour itself. Wicker suggested that attitude-behaviour inconsistency is endemic within research in the area (Wicker 1969), but was first observed by LaPiere in his study, showing restaurant managers to report a attitude towards a particular behaviour contrary to previously observed behaviour (LaPiere 1934), but continues to be observed to this day in consumption related research (Moan 2011). Despite this enduring limitation, attitude-behaviour studies continue to prevail, and do so in consumer research to this day.

Various studies have attempted to examine store patronage behaviour using the theory of planned behaviour, though findings have been generally quite poor. In a study in the US, for

example, Ogle, Hylleggard et al (2004) used the theory of reasoned action to examine the effects of attitude and subjective norm on different patronage intentions towards a particular recreational equipment store in Denver, Colorado, looking at intention to shop, intention to make a purchase, intention to shop at flagship store, intention to purchase at flagship store and intention to tell friends about flagship store (Ogle, Hyllegard et al. 2004). All five regressions from this study produced adjusted R-square scores of between .05 and 0.12. In a study again predicting the effects of attitude and subjective norm on consumer behaviour, but this time on fast food chain patronage in Cairo, Egypt, Ibrahim and Vignali (2005) reported a healthier R-square value of .58 (Ibrahim and Vignali 2005), though this figure was improved with the inclusion of factors like atmosphere. Yan, Hyllegard et al (2010) suggested the theory of reasoned action predicted 28% of patronage intention in their study, though inclusion of other variables improved this to 38% (Yan, Hyllegard et al. 2010). A further point to be made it that previous studies have focussed on the impact of attitude, subjective norm and miscellaneous variables upon patronage intention, not actual patronage itself. A further limitation of the theory of planned behaviour is that on top of the attitude-behaviour gap already mentioned, it also has what has been described as the 'intention-behaviour' gap: inconsistency between reported intention towards a behaviour and the behaviour itself (Bodin 2005).

It appears that the theory of reasoned action, and to a lesser extent the theory of planned behaviour have demonstrated some ability to predict intention towards patronage behaviour, but has been explored quite a bit already, and the explanatory capacity of the models appear quite limited on their own. As a result of enduring criticisms, and the amount of research that has already gone before to examine the effects of the theory of planned behaviour on patronage, it will not be considered in this study.

2.2.2 Behavioural Theories

Behaviourism is used within a branch of psychology that seeks to measure behaviour scientifically, without trying to use thought or feeling as a way of explanation, as it is argued that neither thoughts nor feelings can be scientifically measured and validated (Watson 1913). From its origins in the 19th Century as a branch of philosophy, behaviourism evolved to promote psychology as a natural science discipline (Cattell 1890; Watson 1913; Watson 1920), moving away from the prevailing stance of Structuralist theory which advocates breaking down mental processes into its component parts at the most basic level (Titchener 1898; Titchener 1899;

Wundt 1910) which pervaded psychological research at that time. Behaviourism formed as a viewpoint which proposed that the most appropriate methods for psychology are based in the natural sciences, focusing on observable, measurable phenomena (Skinner 1950).

Structuralism was the first school of psychology, focusing on analysing mental processes, breaking them down into their fundamental components, and determining how these component parts work together to form more complex mental structures (Titchener 1898). Wilhelm Wundt (1832-1920) formed the Structuralist movement, seeking to uncover what 'elements' comprise mental states, using introspective means, whereby subjects would look within themselves, to examine their mental processes when engaged in a particular mental activity, such as forming a perception, or making a choice or judgment (Wundt 1910; Gross 2001). Later, one of his students, Edward Titchener (1867-1927) formally named the discipline as Structuralism (Titchener 1898; Titchener 1899), as it aimed to uncover mental structures.

Functionalism emerged in the wake of Structuralism's decline in popularity, influenced heavily by the works of William James (1842-1910), proposing to take a more practical approach (Fancher 1979), yet shared many aspects of the Structuralist approach (Calkins 1906). Using introspection to measure mental events, it took, as its name suggests, a more 'functional' or practical approach, relating mental experiences to everyday life (Fancher 1979). It also integrated introspection with experimentation to validate its approach scientifically. Functionalism sought to understand 'how' and 'why' mental events occurred rather than simply to describe 'what' occurred, as the Structuralists had. Even so, Functionalism was prey to many of the criticisms that had befallen Structuralism, most notably the same criticisms of the introspective methodology (Dodge 1912). Introspection cannot be systematically replicated between subjects. It lacks generalisability, as it inhibits inductive reasoning, and at the time of its use, introspective subjects were usually educated highly trained adults, and not representative of the wider population. Introspection is also subject to bias on many levels, from socially desirable responding, to the observational bias introduced by extensive training of introspective subjects. Additionally, memory cannot be explained by introspective reports, and not all behaviour is consciously driven, so introspective techniques leave sizable gaps in explaining behaviour. Behaviourism aimed to overcome the uncertainties associated with Structuralism and Functionalism, and by adopting an objective epistemology, grounded the theory firmly in the natural sciences (Watson 1913).

At the time of its inception, behaviourism went against the once popular methodology of using introspective means to measure mental/subjective/conscious experience (Titchener 1912). Before behaviourism emerged, psychological study was mostly based on consciousness and subjective experiences, which elicited concern from some scholars at the time (Dunlap 1912), who noted that such an approach would lack in academic rigour and accountability. These scholars suggested looking to the natural sciences for a more grounded and less ambiguous methodology (Watson 1913). Scientific study promotes empirical investigations of physical subject matters (Gross 2001); something that is publicly, and therefore objectively observable, which can then be counted, measured or recorded, which is very different from the Structuralist and Functionalist approaches that had previously prevailed (Titchener 1898; Titchener 1899; Calkins 1906).

In the wake of the criticisms on introspective reporting as a methodology for analysis in psychological research, new, more rigorous methods were adopted from other disciplines to enable the scientific study of organisms. Separate fields of study, embracing systematic measures of behaviour and behavioural development, and strong practical focus, would converge to form the behavioural branch of psychological research. It was the unlikely field of comparative/animal psychology that would change the path of human psychology (Yerkes and Morgulis 1909; Tolman 1922). Since animals are unable to provide introspective reports, studies of animal psychology had instead developed means by which to measure observable behaviour, by identifying instinctive animal responses (Tolman 1938), and then observing how these changed over time, when other variables were manipulated (Thorndike 1911; Pavlov 1927; Skinner 1948; Skinner 1981). Some studies attempted to apply theories from studies of animal behaviour to studies on humans (Pavlov 1927; Tolman 1948). Eventually, research with humans would start to employ the same techniques which had been previously used only on animals, to study behaviour and behavioural variance over time (Watson and Rayner 1920).

The move toward a rigorous measure of behaviour began in the animal laboratory with studies on reflexes (Pavlov 1927). The notion of reflex was not new to psychologists as theories of behaviourism developed. Work in the late 16th and early to mid 17th century by Rene Descartes (1596-1650) uncovered inborn involuntary responses to certain stimuli, such as an eye blink as a natural reflex to a puff of air. This 'cause and effect' mechanism was attractive to psychologists who viewed psychology as a scientific discipline (Watson 1931). Initially, concepts of learning were somewhat troublesome to scientific psychologists considering inborn 'hardwired' reflexes,

as organisms could learn to respond to stimuli that had previously elicited no such reaction. Work by Ivan Petrovich Pavlov on conditioned reflexes in dogs indicated that reflexes could indeed be learnt (Pavlov 1927).

The modification and progression of behaviour comes about as a process of learning. An adult may display avoidance behaviour in the presence of even small dogs, because as a child they were bitten by such a dog, and learned to be wary of them as a result. In looking at consumer behaviour, consumers make product choices largely as a result of learning. Dissatisfaction with a particular brand may mean that brand is avoided in the future, while brands which are felt beneficial may be repeatedly purchased. Consumer behaviour with respect to store choice can also be scrutinised with the behaviourist paradigm. A consumer may choose to visit a particular type of store because they have had satisfactory experiences there in the past. Conversely, stores which consumers feel uncomfortable in may be avoided in the future (Tauber 1972). At the level of shopping centre, consumers may develop a personal preference for visiting particular types of shopping centre for particular types of shopping experience.

Behaviourism "is not the science of human behaviour, it is the philosophy of that science" (Skinner 1976, p3). Over the years, behaviourist theory has evolved, undergoing many significant changes. Although behaviourism is one psychological approach, it has many different faces, each of which owe their character to just a handful of influential researchers from the fields of psychology, philosophy and physiology (Watson 1913; Watson 1916; Watson and Rayner 1920; Pavlov 1927; Skinner 1981). Applications of behavioural theory have been wide ranging, including applications in clinical psychology, education and marketing studies.

Three perspectives exist in clinical psychology, two of these perspectives, cognitive behavioural and humanistic, draw on behaviourism, while the third, psychodynamic theory developed from the Psychoanalytic work of Freud (Freud 1920). Cognitive Behavioural Therapy (CBT) developed in the 50s and 60 by Albert Ellis and Aaron T Beck, and combines two branches of psychology; cognitive psychology and behaviourism, and centres on the idea that there is interaction between how we think (cognition), feel (emotion) and act (behaviour). In education, operant conditioning, which will be discussed later, can be used to expedite learning in the classroom (Skinner 1984). In consumer research, behaviourism has been applied to analyse numerous consumer behaviours, including purchase and consumption of products (Leek,

Maddock et al. 2000), to the impact of environmental stimuli (Foxall 1997; Foxall and Greenley 2000; Foxall and Yani-de-Soriano 2005), and to choice of store and shopping centre (Foxall 1990; Meoli, Feinberg et al. 1991). The present investigation is concerned with how a particular behavioural model of consumer decision-making can be applied to studies of shopping centre format.

Behaviourism is far from the prominent paradigm in consumer behaviour research, although there are existing models (e.g. the three-term contingency) and it has seen a revival in popularity in recent years, with the emergence of the behavioural perspective model (BPM), an explanatory framework which seeks to ground explanations and predictions of consumer behaviour squarely in the context in which it takes place. For the past 35 years, the prominent paradigm in consumer research has been cognitivist, which has enjoyed its dominant position despite the emergence of alternative disciplines. The unyielding monopoly Cognition has held over consumer research has been criticised by some academics as impeding the intellectual enrichment of knowledge about consumer behaviour (Foxall 1999).

While the social cognitivist paradigm is sophisticated, it frequently reduces the consumer to a rational information processor, and does not take into consideration the context in which the consumer finds himself/herself. It is argued that to adequately understand why consumers come to the decisions they make, and behave accordingly, the components of the environment the consumer inhabits must also be understood (Belk 1975). Although the call for analysis of environmental impacts on consumer choice has long been called for, with its use in research notable in its absence, research is still slow to emerge for the many levels at which consumer choice comes to bear (Feinberg 1986). Situating consumer research in the context in which it takes place is still frequently neglected in studies of consumer decision-making, favouring instead the straightforward non-situation specific cognitive stance that prevails in consumer research. The consumer cognitive stance is criticised for its inability to validate its propositions with scientific testing, and results of what testing does take place indicates low correlations between pre-behavioural determinants of choice derived from cognitive research (beliefs, attitudes, intentions) and the actual choices made by consumers (Skinner 1985).

By taking a behavioural stance, it is possible to examine human behaviour in any real world situation. While such research has been used in the field of consumer behaviour, it is surprising just how little of consumer behaviour research, and how few of the many textbooks bearing the

name 'Consumer Behaviour' have used the behaviourist framework (Foxall 1997). The consumer behaviour research carried out from the behavioural perspective is varied, ranging from studies of purchase and pre-purchase behaviour of many different products and some services (Foxall 2001; Foxall and James 2003; Foxall and Schrezenmaier 2003), to choice of channel mode (Nicholson 2003), and to store choice (Foxall 1990). In fact, it has even been proposed that "the whole field of consumer behaviour in the context of marketing is potentially amenable to this behavioural perspective" (Foxall 1999, p151).

2.2.2.1 Associative Learning: The Stimulus-Response model

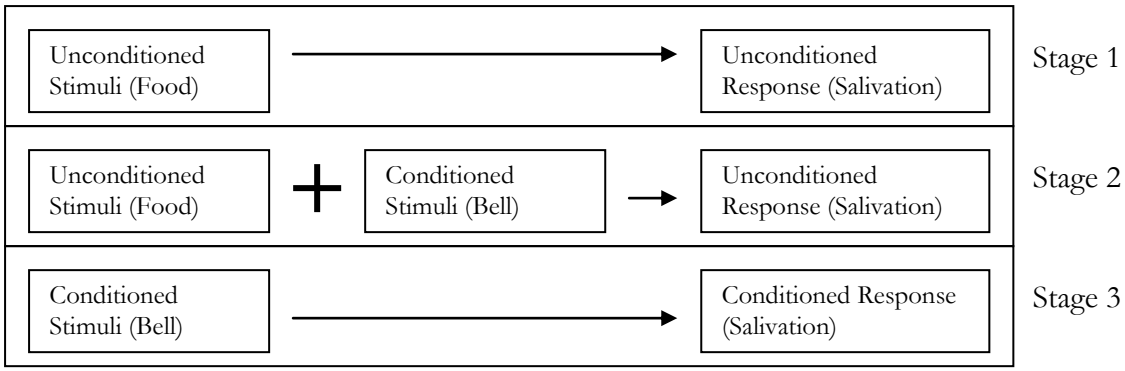
Behaviourism, as a theoretical discipline, can trace its origins back to the theory of classical conditioning, also known, and from now on referred to as associative learning, based largely on the works of Ivan Petrovich Pavlov and John Broadus Watson in the late 19th and early 20th century.

Pavlov's Associative Learning of Salivation in Dogs

Ivan Petrovich Pavlov (1849-1936) started the move of psychology away from its philosophical roots, to a more scientifically grounded subject, in his studies of what came to be known as associative learning (classical conditioning). As a physiologist, Pavlov's interest lay in the digestive processes of dogs. He noted that dogs salivated in the presence of food as an instinctive mechanism for preparing the digestive system for food, a process which he dubbed 'psychic secretion' (Pavlov 1927; Roth 1990). He noticed that the dogs would start salivating as the feeders approached with their food, before the food was even given to them. Both the sight of the feeding buckets, and the sound of the lab assistant carrying the food, became sufficient to prompt salivation in the dogs.

In the laboratory setting, Pavlov went on to study the effects of various stimuli on the dogs. The salivation of the dogs was classified as an unconditioned response, i.e., an automatic reflexive response, brought about by food, which Pavlov classified as unconditioned stimuli (US). Dogs automatically salivate in response to food, as a biological mechanism, and this is an 'unconditioned response' (UR). Based on this, Pavlov identified that 'conditioning' takes place in three stages, outlined in figure 2.7 below; the first, before learning takes place, the second as learning is happening, and finally after the learning has occurred.

Figure 2.7: Stages in the Process of Associative Learning



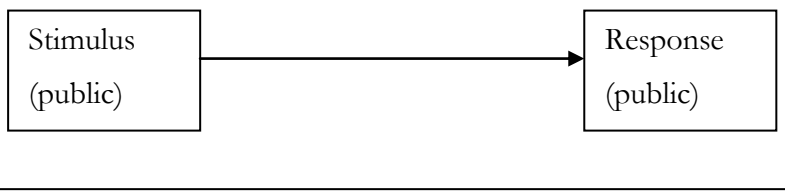
In the first stage, before learning has begun, the dog experiences a natural 'unconditioned response' (salivation) to an 'unconditioned stimuli' (food). During the second stage, the learning process, a new unrelated and neutral stimulus is introduced (in this case a bell), in tandem with the unconditioned stimulus. This neutral stimulus is classified as the 'conditioned stimulus' (CS). During learning, the unconditioned stimulus (food) and the conditioned stimulus (bell) were repeatedly presented together to produce the unconditioned response. Finally the dog will start to respond to the conditioned stimuli without the presence of the unconditioned stimuli. When this happens, learning has taken place, and the dog has been 'conditioned' to respond to the conditioned stimuli by salivating. The salivation is now what Pavlov classified as a 'conditioned response' (CR), when the conditioned stimulus is sufficient to provoke a reaction on its own. When conditioned stimulus has provoked a conditioned response, the relationship between the two is described as a conditioned (or conditional) reflex (Roth 1990). This type of conditioning is dubbed 'classical', and has sometimes been described as stimulus-response. Figure 2.7 above, the Stimulus-Response model, outlines the three stages of conditioning, and the interactions between different stimuli (unconditioned and conditioned) and the responses (unconditioned, finally becoming conditioned).

Watson's Associative Learning of Human Behaviour

While Pavlov's work was restricted to modifying a basic animal reflex through 'associative learning', John Broadus Watson's (1878-1958) work dealt with the associative learning of emotional responses in humans. In his 'behavioural manifesto' (Watson 1913), Watson outlined his proposal for the future of psychology, through an approach that came to be known as

classical stimulus-response behaviourism. This model was restricted to consider only publicly observable phenomena in attempts to account for behaviour, and is outlined in the figure below:

Figure 2.8- Stimulus - Response Model



Watson's work has, with time, gained a somewhat infamous reputation, although at the time it was conducted, it was not viewed as ethically dubious. In perhaps Watson's most famous and notorious experiment, an eleven month old boy, who came to be known as 'Little Albert', was conditioned to develop a fear of a white rat and similar objects (Watson and Rayner 1920).

To condition an emotional fear response to a neutral stimulus, Watson hypothesised that by simultaneously presenting this stimulus with a stimulus that naturally causes a fear response, the child would learn to fear the neutral stimulus. Watson first tested the child at nine months of age to determine whether he was afraid of the certain objects, including a white rat, a rabbit, a dog, a monkey, and masks with and without hair, cotton wool, and burning newspaper. Little Albert was described by Watson as a 'stolid and unemotional' child, and when presented with these items, showed no initial fear response. Watson then examined Little Albert to test for responses to loud noise, and discovered that he reacted violently- recoiling and crying to the loud noise generated by banging a hammer against a suspended four foot long steel bar behind the child's head.

Watson's experiment was designed to use the unconditioned stimulus (the noise produced by the hammer on the steel bar) to eventually provoke a conditioned response (fear) to the conditioned stimulus (initially, a white rat). Over a series of weeks, Watson conducted the experiment, striking the steel bar whenever Little Albert reached for the white rat. Quickly, little Albert stopped reaching for the white rat as he had when first presented with it, and not long after, he began to recoil and cry when presented with the white rat. Watson successfully demonstrated that through the procedure of associative learning proposed by Pavlov, the emotional responses of humans could be modified. Watson's experiments with little Albert went on to see whether the fear of the white rat was transferable to other similar objects. When presented with a rabbit, a fur coat, and Watson's grey hair, for example, fear responses were

elicited from little Albert, showing fear of the white rat had been 'generalised' to other similar objects.

Little Albert was presented with building blocks to play with between experiments, and he was happy to play with them, showing none of the fear responses he had during the experiments, while presented with conditioning stimulus. In fact, the blocks were used on a number of occasions to calm him. This indicated that Little Albert did not associate his fears with the laboratory setting. As a check, Watson took Little Albert to a different setting, and presented him again with the white rat. Although Little Albert displayed fear responses to the white rat and rabbit when they were presented, the reactions were described as 'slight'. This was the first hint that conditioning can be specific to the environment in which it occurs.

After his academic career ended, Watson took up a position with J. Walter Thompson advertising agency, where he used his associative learning techniques to advertise products. By associating an otherwise mundane, everyday product (Conditioned Stimulus) with something the customer would find appealing (Unconditioned Stimulus), and hence produce a positive response (Unconditioned Response) customers would eventually also view the product in a favourable light (Conditioned Response). Watson's advertising techniques are still widely used in advertisements to this day, attempting to persuade the customer to think approvingly of a product by associating it with appropriate stimulus. In the confectionary industry, companies such as Mars Inc. have employed these sorts of techniques in the sale of some of their products.

One such product is the ever popular Bounty™, a chocolate bar filled with coconut, and currently distributed throughout Europe and the Middle East. In the past, they employed strong advertising strategies in the UK, which ran the product under the tagline 'A Taste of Paradise', with adverts featuring an exotic backdrop of a tropical beach with white sand, palm trees, and crystal clear skies, with semi-naked bronzed men and women enjoying the chocolate. These adverts aimed to invoke a sense of the exotic and exclusive, even though the product being sold was a mass-produced, comparably priced chocolate bar. The image of this exotic setting, and its perfect inhabitants (Unconditioned Stimulus) were paired with an everyday non-exclusive chocolate bar (Conditioned Stimulus) to evoke feelings of desire, and a sense of escapism in the consumer, so they would be more likely to purchase the bar when confronted with it in a store. Impulse purchases make up a significant amount of confectionary sales (Mintel 2006), and by

associating Bounty with powerful imagery, they were trying to make their product more memorable and desirable to the customer.

Essentially, associative learning involves presenting a stimulus which provokes an inborn, automatic reflex in an organism, with a neutral stimulus- one which does not provoke a response. Eventually, the organism will start to associate the neutral stimulus with the other stimulus, and the automatic reflex will eventually be elicited by the neutral stimulus when presented alone.

2.2.2.2 Operant Conditioning: the Response-Consequences model

Following on from the theory of associative learning, a new stream of behavioural learning emerged which suggested that learning occurred as a result of the consequences following behaviour, rather than merely the stimulus that precedes it. Much of the operant conditioning theory is based around the animal experiments of Edward L. Thorndike and Burrhus Frederic Skinner.

Thorndike's Puzzle Box & Law of Effect

Associative learning involves the presentation of a pair of stimuli to the subject. The outcome is not contingent upon the response of the subject. Work by Edward L. Thorndike (1874-1949) took a different approach to understanding learning, one that centred on the actions of the subject. In Thorndike's experiments on 'Instrumental Learning', the response of the subject is instrumental to the outcome (Thorndike 1911). Edward L. Thorndike's experiments involved the examination of hungry cats placed in puzzle-boxes with food left outside. The cat had to operate a latch to open the door, to allow them to escape and access the food. The escape was contingent on the correct response by the cat (operating the latch). Upon escape, the cat gained access to a piece of fish, which it would have seen from inside the box. Initially, the cat would act frenetically, meowing and struggling, and have difficulty escaping. The first escape would occur seemingly by accident. Once the fish was consumed, the cat would be immediately placed back in the box and the process began anew. Thorndike recorded the length of time between the cat being placed in the box and its escape, as an index of learning. Eventually, after the cat was repeatedly returned to the box after their treat, Thorndike observed that the escape time

reduced significantly to around five seconds. Thorndike suggested that the shorter the escape time the stronger the learning.

Thorndike suggested that learning was not an indication of insight in animals, rather, a matter of trial and error, with a gradual reduction in the number of errors made over time. The association itself between the stimulus situation (puzzle box) and the response was gradually being learned. This stimulus-response (S-R) association is strengthened gradually over time, as indicated by the gradual reduction in escape time. Thorndike argued that if the learned association was not an indication of the cat anticipating the consequence of their actions, then this would have been indicated by one significant reduction in escape time, rather than the gradual reduction over time that was observed. Instead, he asserted that the consequences of a response either weaken or strengthen the stimulus-response associations, and as such, the inclination to perform the response again; strengthened ('stamped in') when the response leads to reward, and weakened ('stamped out') when the consequences were unpleasant, such as the removal of reward or presentation of punishment (Thorndike 1911; Gleitman 1986). This process of strengthening or weakening of behavioural tendencies was known as the 'Law of Effect'. As the experiments progressed, correct responses were 'stamped in', and incorrect responses 'stamped out'. Later, the process of fortifying a stimulus-response association would be called 'reinforcement', with the means of this reinforcement called the reinforcer. This notion of reinforcement became key in future developments of Behaviourism, especially the works of Burrhus Frederic Skinner and the emergence of Operant Conditioning.

Skinner's 'Operant Behaviour'

Compared with associative learning, where behaviour is triggered by antecedents, and instrumental learning, and where learning is asserted to relate to the strengthening of stimulus-response associations, operant learning is concerned with how behaviour is affected by its consequences. Skinner suggested that in associative learning, the behaviour of the subject was elicited by the external conditioning stimuli, while with instrumental conditioning behaviour is emitted from within the organism, and called these instrumental responses, 'operants'. Thorndike's 'Law of Effect' suggested that the fortification of stimulus-response associations result in the strengthening of learning (Thorndike 1911), and Skinner agreed that it was the consequences of a behaviour that 'shaped and maintained' it (Skinner 1963; Skinner 1971).

Through reinforcement and punishment consequences, subjects learn to behave in different ways (Skinner 1958; Azrin and Holz 1966; Axelrod and Apsche 1983; Patterson, Kosson et al. 1987; Meoli, Feinberg et al. 1991). Skinner's seminal work with rats proposed that, through learning, behaviour becomes a function of (contingent upon) its consequences. If we behave in a certain way, and are positively rewarded for that behaviour, then we are more likely to repeat that behaviour in the future. On the other hand, if we are punished for our behaviour, we are less likely to repeat that behaviour in the future. Skinner's rats were placed in boxes, described as operant chambers, which simulated a closed environment. At the beginning of an experiment, a hungry rat would be placed in a box for several days, with food delivered occasionally by an automatic food dispenser to a tray inside the box. The rat soon came to associate the sound of the dispenser with the food, and upon hearing it, would approach the food tray. A lever inside the box, which had previously been locked in its lower position was then raised, and programmed to dispense food whenever the rat touched it. The tests showed that once the rat had discovered that touching the lever would produce food, it would start to press the lever repeatedly, indicating that the reinforcement was modifying behaviour (lever pressing).

Schedules of Reinforcement

Skinner's studies indicated that the schedule with which the reinforcement takes place is vital to the strength of the behaviour modification. Frequency and regularity (or predictability) of the presentation of reinforcement affect the pattern and frequency of behavioural responses (Ferster and Skinner 1957). When predictable or frequent reinforcements are withdrawn, frequency of responses begin to decline fairly quickly, while responses will take longer to fade, if reinforcements withdrawn were previously unpredictable or infrequent. Table 2.3 below outlines the different types of reinforcement schedule identified by Skinner and Ferster (Ferster and Skinner 1957), including examples of reinforcement schedules and their impact on consumers.

Table 2.3: Schedules of Reinforcement

Reinforcement Schedule	Description	Pattern & rate of response
Continuous Reinforcement (CRF)	Each response is reinforced	Slow and steady response rate.
Fixed Interval (FI)	Reinforcement after *X* seconds, provided response occurs during that time.	Response rate increases as next reinforcement becomes available

Variable Interval (VI)	Reinforcement every *X* seconds, but at a different interval in subsequent trials	Stable response rates over time, with moderate response growth
Fixed Ratio (FR)	Reinforcement given after fixed number of responses, e.g. five responses for one Reinforcement	Higher rate of responding as next reinforcement approaches.
Variable Ratio (VR)	Reinforcement after *X* responses, but after a different amount of responses in subsequent trials	Very steady and very high response rate.

Reinforcement and Punishment

Reinforcement and Punishment are the outcomes contingent on the behaviour that occurs. When a behaviour is increased as a consequence of the outcome, it is said to have been subject to reinforcement. When the consequence of the behaviour leads to a decrease in that behaviour, it has been subject to punishment. Marketers have many reasons to change their customer/ potential customer's behaviour, and like with many other disciplines, marketing makes use of the different forms of reinforcement and punishment to maximise desirable behaviour. Figure 2.9 below outlines the four grades of reinforcement and punishment, and how the presentation or removal of stimuli impact on future behaviour.

Reinforcement always strengthens behaviour, such as increasing its intensity, or frequency. A behaviour will be repeated with greater frequency in the future, if the outcome of a behaviour is favourable. This outcome may be pleasing with the presentation of pleasant or 'appetitive' stimulus (positive reinforcement) or the removal of a disagreeable or 'aversive' stimulus (negative reinforcement). Many aspects of consumer choice, including store choice, can be explained in this way (Foxall 1990).

Figure 2.9: Positive and Negative Reinforcement and Punishment

		Consequence of the Behaviour	
		Stimulus is presented	Stimulus is removed
Outcome	Behaviour is strengthened	Positive reinforcement	Negative reinforcement
	Behaviour is weakened	Positive punishment	Negative punishment

Source: Miltenberger 2004 p120

In Skinner's experiments, the food (appetitive stimuli) was the positive reinforcement of the lever pressing behaviour, leading to an increase in that behaviour. The example of Bounty™ chocolate bars, provided above includes positive reinforcement, and allowed Mars Inc. to draw upon the uniqueness of the product to reinforce the feelings that the adverts aimed to elicit from customers. Customers eating the product are reinforced by the appetitive stimulus of tasting the coconut centre. They are reminded by the wrapper that they are eating 'A Taste of Paradise', and again reminded of the exotic beach on which the Bounty™ advert was set, and the feelings this evoked. This feedback loop is a crucial component in the development of customer loyalty to the brand, increasing its purchasing frequency in the future. In choice of shopping centre, if a customer has previously had an agreeable shopping trip to a particular shopping centre, he/she may be more inclined to patronise that shopping centre or a similar one in the future.

Another form of positive reinforcement identified in behavioural research is known as the Premark principle (Premark 1959). Researchers discovered that presenting the opportunity to engage in a preferred activity (high probability behaviour) as a reward for engaging in a less-preferred activity (low probability behaviour) can increase the low-probability behaviour (Premark 1959; Mitchell and Stoffelmayr 1973). An example of this is when parents allow their child to go out and play once they have completed their homework. Alternatively a shopper may treat themselves to a visit to a favoured shop (high probability behaviour) after completing the weekly family grocery shop (low-probability behaviour).

In some of Skinner's experiments, loud irritating noises (aversive stimuli) were used as negative reinforcers. They would be played into the box, until the rat pressed the lever, then the noise would cease. This resulted in increase in lever pressing behaviour. Certain products can be sold by utilising negative reinforcement in advertisements. Government initiatives have used negative reinforcement successfully, to persuade people to purchase and to maintain smoke alarms, by highlighting the potentially fatal consequences (presenting adverse stimuli) of failing to do so. Commercially, similar techniques have been used to sell products such as bathroom air fresheners, where the adverse stimuli is the embarrassment caused by an unpleasant toilet, or washing up liquid, by showing the downside of buying inferior products from competitors, and washing detergent, by comparing the brand on offer with reportedly inferior products that are unable to remove stubborn stains. For store choice, an example of negative reinforcement would be when a customer avoids a particular store, in which they had past experience of abusive sales people, and choose to shop elsewhere (Foxall 1990). This is similarly applicable in choice of a particular type of shopping centre. For example, a shopper may choose to avoid shopping in city centre shopping areas, because of a previous experience of having great difficulty getting parked in one such shopping centre in the past. Because of this experience in one city centre shopping centre, a consumer may expect similar consequences at all such shopping centres (generalisation), and avoid all such shopping centres in favour of alternatives. A consumer who has a dissatisfactory experience at a particular outlet, whatever the reason, may come to view alternative outlets more favourably, and be inclined to patronise those outlets more in the future. For example, a consumer may visit a shopping centre with the desire to purchase everything they need at that shopping centre. It has been established that consumer shopping trips tend to be for several items, and are often multipurpose, and early models of shopping centre choice were criticised for their inability to account for multipurpose (Carter 1993). Should the consumer fail to purchase all of the items on their shopping list at the shopping centre visited, they may be more inclined to go to larger, more diverse shopping centres in the future.

While reinforcement, both positive and negative leads to strengthening of behaviour, punishment outcomes lead to suppression of behaviour. Punishment is not to be confused with negative reinforcement, which is associated with increases in response rates (Catania and Harnad 1988). A particular consequence is only deemed punishing if it results in a decrease in the related behaviour in the future (Miltenberger 2004). Certain consequences will act as punishers for some, resulting in a decrease in behaviour, but not necessarily for other people. It is also

important to consider whether consequences are truly reducing a behaviour, or merely ensuring an immediate escape from the consequence. A truly punishing consequence will ensure avoidance behaviour in the future, reducing behavioural occurrence over time, rather than merely terminating the behaviour in the short term.

Some consequences may be mislabelled as punishing if they cause a behaviour to cease immediately, but not a decrease in the behaviour over time (Miltenberger 2004). Smacking a child is an example of this. While a parent smacking a child may force the child to cease its unwanted activity, a child craving attention may indeed increase their unwanted behaviour in the future to elicit attention from their parents. Behaviour tends to be reduced in the future, if a behaviour results in an unfavourable outcome for the subject. The outcome of a behaviour may be unfavourable with the presentation of aversive stimulus, or the removal of an appetitive stimulus. An example of positive punishment can be draw from some of Skinner's experiments, where lever pressing by rats would administer an electric shock to the cage floor (aversive stimuli). As a result of this aversive stimulus, future lever pressing behaviour by the rats would reduce. Solomon and Wynne's experiments also indicated that dogs would cease certain behaviour to avoid aversive consequences such as an electric shock (Solomon and Wynne 1953).

In practice, marketing activity tends to try to increase behaviour, rather than decrease it, but there are certain instances where marketers use positive punishment to reduce an undesirable behaviour (Nord and Peter 1980). The government has also made powerful use of positive punishment in drink driving prevention initiatives, by showing the graphic and harrowing consequences of doing so, to persuade people to avoid such behaviour in the future (Macpherson and Lewis 1998). Similarly, cigarette companies now have to put warning labels and graphic stomach-turning pictures of smoking related diseases on cigarette packets, as evidence of the harmful consequences of smoking, to reduce take-up of the habit, and in the hopes that it might help people stop (Watson 2001).

Should a consumer face an unsatisfactory trip to shopping centre, they may reduce their patronage frequency to such a place in the future. For example, a shopping centre which has inadequate parking provision may lead to a frustrating experience for a consumer, and reduce their desire to visit that shopping centre, and other similar shopping centres (through generalisation) again. Shopping centres have even employed techniques to specifically reduce certain behaviour and remove undesirable elements from the shopping centre. Many shopping

centres all over the world, have faced problems caused by teenagers who use them as places to meet and 'hang out'. This segment of shopping centre patron is deemed undesirable in that they make use of the amenities, but have little disposable income and so make very few purchases in stores. They can also be intimidating to other paying customers, and shopping centre owners often feel they can be detrimental to the overall appeal of a centre. Recently, several shopping centres have tried to move the teenagers on by piping in 'big band' and classical music in the favoured spots where teenagers congregate, frequently by mall entrances (anon 2005; anon 2005). These types of music serve as aversive stimuli to teenagers, and as a result they are likely to leave the vicinity, and less likely to return. The 'mosquito alarm' is another tool used by retailers to punish undesirable individuals to discourage loitering behaviour nearby (BBC_News 2008), as it is pitched at a frequency that only teenagers can hear, and has no impact on most people over the age of 25.

Negative punishment involves the removal of an appetitive stimulus to decrease behaviour. For example, if a rat consistently receives food at regular intervals when not pressing a lever, but food is withheld when it does press the lever, the rat's lever pressing behaviour will lessen over time. Negative punishment is popular in child rearing, as a means for reducing misbehaviour (Miltenberger 2004). The increasingly popular 'timeout' involves the removal of all attention and stimuli from the child, to reduce disruptive or naughty behaviour (Clark, Rowbury et al. 1973). Also, taking a child's toys away when they misbehave sometimes stops future misbehaviour.

While some advertising is aimed to sell a product to a wide target market, many advertising campaigns aim to target very narrow segments of the market (Dolich 1969; Park, Jaworski et al. 1986). Certain companies may desire a young trendy audience for their product, but be fearful of a wider appeal, as this may damage a brand image. Peer pressure may mean that visiting a particular shopping centre will result in loss of approval from peers, and so such places are avoided in the future. Negative reinforcement is also important in suppressing certain antisocial behaviour in shopping centres. Customers deciding whether to shoplift will be discouraged from doing so, for fear of being removed from the shopping centre, which may have further consequences in the future.

Generalisation and Discrimination

When the reinforcement of one response also strengthens other similar responses, then generalisation has occurred (Foxall 1990). When the response to one stimulus transfers to another stimulus, the response has been generalised (Foxall 1990). However, when reinforcement of a response does not strengthen other responses it has been differentially reinforced, i.e. discrimination has taken place (Foxall 1990).

In their study of Little Albert, Watson and Rayner investigated whether Little Albert's conditioned fear of white rats could be transferred onto other animals or objects (Watson and Rayner 1920). When presented with a rabbit and a dog, it was noted that Little Albert's fear response seemed to have transferred to both, but that he did not react as violently to the dog as he did with the rabbit. Fear was also transferred to a fur coat (seal), cotton wool Santa Claus mask, and Watson's hair, indicating generalisation of the fear response, although the fear response did not transfer to the hair of other observers. Also, playing blocks had been used to calm Little Albert between experiments, indicating discrimination. Furthermore, when Watson moved the experiments to a very different environment, he observed that emotional transfers between situations can occur.

To illustrate generalisation in a consumption setting, an earlier example shall be revisited. Where a child has learned that throwing a tantrum (R) on a shopping trip (S^D) can result in the purchase of sweets (S^R) he may also realise that the tantrums can be used to persuade a parent to purchase other desired items (S^R) such as toys.

In marketing, generalisation is utilised in branding strategies by companies (Engel, Blackwell et al. 1993). Should one product elicit a favourable response, then this may be generalised to other products under the same brand name. As such, there has been a growing trend towards the launch of new products under an existing parent brand. However, this is not without risk, as unfavourable responses to a new product may generalise to reflect unfavourable on the parent brand also.

Store choice may be explained by discriminatory learning based on differential reinforcement across shops (Foxall 1990). For shopping centre choice, a positive experience in a shopping centre may mean that a customer is more likely to visit that shopping centre again. That

customer may also become more inclined to visit other similar shopping centres in future. If the positive experience of one shopping centre increased the chance a customer would visit other shopping centres of the same type, then generalisation has occurred.

2.2.2.3 The Three-Term Contingency Model

Essentially, in a given situation, an organism's behaviour is controlled by the setting through the contingencies of reinforcement associated with the behaviour in the past. Individuals will have a unique collection of experiences of behaviours and their subsequent outcomes (consequences) in a given situation. This will form the basis for determining the effect of stimuli present in the situation (discriminative stimuli). This process, the three-term contingency (figure 2.10), is based on Skinner's operant conditioning (Staddon 2001) where:

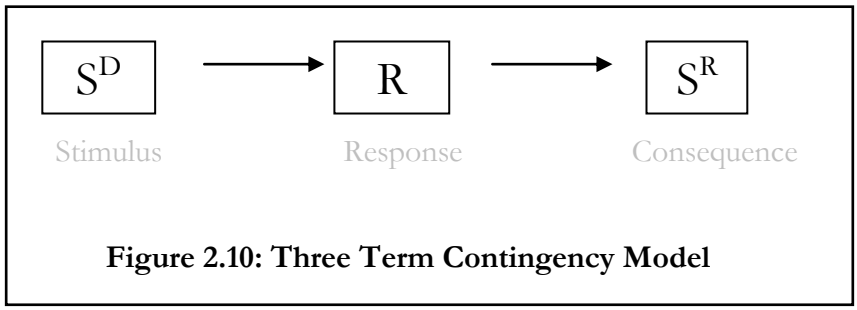


Figure 2.10: Three Term Contingency Model

In this interpretive model, S^D refers to the discriminative (or Antecedent) stimuli, R to the organism's response (Behaviour), and S^R to the outcome (Consequences). The three-term contingency, forms the basis of interpreting the data in part of this investigation, and shall be revisited later in this chapter. These components of the three-term contingency, sometimes referred to as the ABCs of behaviour analysis, are interdependent, or contingent upon each other. The discriminative stimuli are the environmental conditions or cues present prior to a behaviour. The discriminative stimuli are not responsible for eliciting the behaviour, but act as signals that a particular consequence is dependent on a particular behavioural response in that environment. Behavioural responses are based on the contingencies of reinforcement, which comprise the building blocks of experience. The consequence of a behaviour, either punishing or reinforcing, will determine the likelihood of that behaviour occurring again in the future. If the consequence is contingent on a particular response, then that consequence will only happen again if the behaviour occurs. For desirable consequences, this means the response will most likely be emitted again in the future. If the consequence is undesirable, the response is less likely to be emitted again.

The three-term contingency can be used to interpret any behaviour, and the effects of the discriminative and reinforcing stimuli on that behaviour. For example, the three-term contingency could be used to interpret the behaviour of sunbathers. When faced with a hot, sunny day (S^D), an individual may decide to sit out in the sun (R), and as a result gain a healthy tan, which they are complemented on (S^R). This reinforcing consequence acts upon the individual, and means the probability of this behaviour occurring again will increase. Conversely, if the main consequence of the behaviour is a painful sunburn, this punishing consequence might decrease frequencies of this behaviour again in the future.

The three-term contingency is equally as useful in interpreting the various behaviours that consumers engage in, at many levels. Pester power behaviour could be analysed using the three-term contingency. A young child accompanying his/her parent on a shopping trip may start to make a fuss for sweets (S^D), with the parent purchasing the sweets for the child (R), resulting in the child quietening down (S^R). The parent will be likely to respond in a similar fashion in the future. Similarly, the child will be more likely to use tantrums (R) to get the parent to buy sweets (S^R).

An example of the three-term contingency will be illustrated briefly by revisiting the example of the sale of Bounty chocolate bars. The seductive advertising represents the discriminative stimuli (S^D) which brings about purchase of the products (R), and the consumption of the product provides reinforcement (S^R) to the consumer, rewarding them if they enjoy the purchase and it makes them wish to buy the product again, or punishing if they dislike the taste. A customer may be prompted to visit a particular shopping centre (R) because of a particular purchase need (S^D) and one reinforcing outcome of this behaviour will be a level of satisfaction gained from visiting the shopping centre (S^R). The three-term contingency model forms a basis on which behaviour in consumption settings may be analysed and interpreted.

The three-term contingency, wherein behaviour is shaped by its anticipated outcomes, may form a suitable basis for the interpretation of the choice of shopping centre type. The behaviour (R) of interest is the choice of shopping centre. It is anticipated that numerous situational factors (S^D) and different types of consequence (R) will impact upon this choice. Starting with the impact of reinforcement stimuli on behaviour, the components of the three-term contingency with respect to the study of choice of shopping centre type, will now be discussed.

However, the three term contingency model is not the most recent, nor the most popular model when applied to consumer research. The behavioural perspective model (BPM), which is based upon the three term contingency model, is perhaps the single most accepted behavioural model for applications in the consumer and wider marketing domain. Study 2 will explore whether the BPM can help further illuminate the choices made by consumers relating to shopping centres. The choices that consumers make are far from simple and straightforward. Even for choices relating to the purchase of a single item, there are a great many factors, each weighted differently for each purchase, that affect the choice (Brody and Cunningham 1968).

The key strengths and weaknesses in the three term contingency model are its simplicity. With this in mind the second study will investigate whether a more complicated and therefore detailed model provides better explanation of shopping centre choice than one which is as simple as the three term contingency. The second study attempts to utilise and extend the BPM in the area of retail patronage. The following sections shall discuss the BPM.

2.2.2.4 The Behavioural Perspective Model

The Behavioural Perspective Model (BPM) offers an alternative non-intentional model of behaviour to the widely used cognitivist approach, and forms the basis for the second study in the thesis. It builds upon and greatly extends the three-term contingency, and firmly grounds it in a consumer context to explain consumer choices. Instead of relying solely on internal information processing activities, the BPM instead looks at how the context derives the process, incorporating explicitly situational influences, therefore "explicitly incorporate[ing] the situational influences on behaviour that recent cognitive theories of attitude have implicitly included to increase the accuracy of their predictions" (Foxall & Yani-de-Soriano 2005, p519). The consumer's evaluation and decision-making depend on previous experience, on the consumption learning history relevant to the specific behaviour setting. Depending on this learning history, the consumer will be attentive to relevant discriminative stimuli and tune out stimuli which had previously proved redundant in other such situations. In most consumption situations, the consumer can draw on their previous experience of reinforcing consequences. Where the behaviour setting is new to the consumer, they may draw on experience from

alternative behaviour settings, or follow the advice of other people, or widely accepted social rules of engagement in a particular behaviour setting.

Humans are unique in their ability to verbally communicate advice and rules to other people, and verbal stimuli are recognised to be important prompts in directing behaviour. The BPM does not overlook the contribution of proximal or internal factors. Instead, it looks at both proximal and distal effects on reinforcement contingencies (Foxall 1994).

The BPM follows Skinner's assertions that behaviour analysis is very much subject to the interpretation of the behavioural analyst. The BPM "derives from a research program that has sought to fix the scope and limits of the contribution of behaviour analysis (Skinner 1953) to consumer research", thus moving forward and bridging the gap between extant behaviourist theory and consumer research (Foxall 1992).

Proponents of the BPM suggest that there are many instances when consumer behaviour is driven by environmental, rather than psychological factors (Foxall 1998). It would be remiss for a researcher of consumer behaviour to neglect the potential influence of the situation on consumer behaviour. In the BPM, behaviour is under the control of the learning history, which records the rewards and punishment consequences of previous behaviour in a similar environment, and it is only by understanding the learning history and the environmental context, that behaviour can be explained and predicted. The BPM emerged to attempt to present behaviourism as an alternative theoretical stance to the social cognitivist stance in consumer research, specifically with an aim to enrich and expand research on consumer decision-making.

At the level of consumer decision-making, be it in the choice of product, brand, store, channel mode or shopping centre, the consumer's behaviour will depend on factors present in the particular situation, and their influence on the consumer, and the consumer's previous experience of similar situations and their associated consequences. The BPM works on the principle that individual organisms will have faced situations in the past, where certain reinforcement contingencies occurred in response to a particular behaviour, or set of behaviours, and depending on the nature of that reinforcement, the likelihood or frequency of that behaviour occurring in the future will change. Humans will learn over time how to optimise behaviour to gain the desired consequences, and this is their learning history. A person's learning history is constantly being updated in response to the various reinforcement

contingencies elicited from certain behaviours in a particular situation. In any given situation, the organism will be driven to behave according to the reinforcement contingencies elicited by discriminatory stimuli in any similar situation in the past.

The Behavioural Perspective Model offers a framework with which to further understanding of the influences of a particular context, and a consumer's learning history on consumption based behaviours. The consumer's learning history (composed of their history of reinforcement and punishment) and the setting in which the behaviour occurs (the context) come together in 'the behaviour-milieu interface', sometimes regarded as the synomorph or synomorphic consumer situation (Barker and Wright 1955; Barker 1968; Foxall 1995). The BPM framework builds upon the three-term contingency model, which itself was based on Skinner's operant conditioning (Staddon 2001), where behaviour is shaped by its anticipated outcome. As a more complete account of the 'contingency of reinforcement' (Foxall 1999), the three-term contingency model also takes into account that antecedent stimuli are also of importance in shaping behavioural responses, and the BPM takes this further by considering the influence of reinforcing stimuli on antecedents of behaviour, in a consumer application.

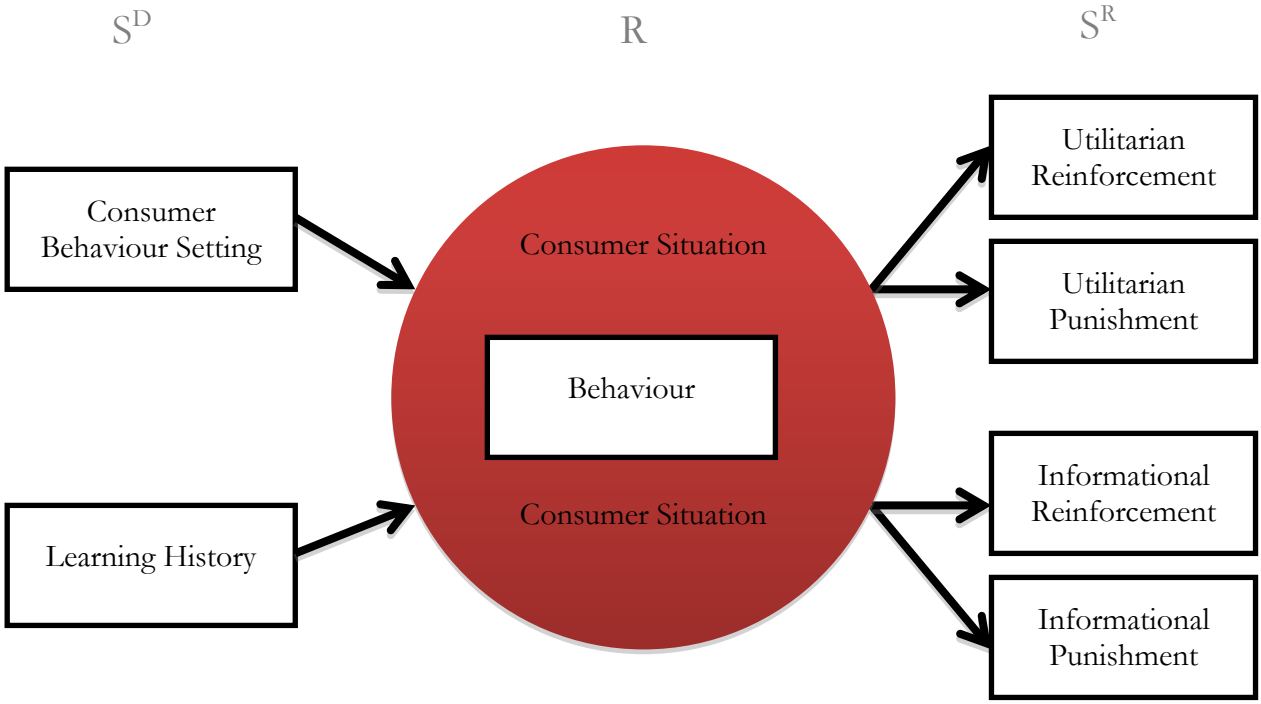


Figure 2.11: The Behavioural Perspective Model

Source: adapted from Foxall and Yani-de-Soriano (2011)

Figure 2.11 above presents the most recent iteration of Foxall's BPM (Foxall 1993; Foxall 1998; Foxall 1999; Yani-de-Soriano, Foxall et al. 2002), and displays its foundation in the three-term contingency model.

The study was originally conceived before the newest evolution of the BPM, with consequences (S^R) taking the more traditional BPM dimensions of utilitarian reinforcement, informational reinforcement, and aversive consequences (which was split into utilitarian punishment and informational punishment in the most recent BPM.

To explain consumer behaviour, the BPM looks at behaviour spatially (in the specific situation) and temporally (at a given point in a consumer's learning history) (Foxall 1998). The BPM can be applied to numerous consumer behaviours, and each BPM is specific to the type of behaviour being studied. The BPM offers up a framework to further understanding of consumer choice at the level of shopping centre format. This study seeks to identify which components of the BPM have the greatest impact on choice of shopping centre format, and how shopping centres might use this information in their marketing strategies. The main components of the BPM, and their interactions in the shaping of consumer behaviour shall now be discussed.
In retail outlets around the country, 'atmospherics' as well as product layout are employed to maximise browsing and buying behaviour. Artificial scents are pumped through air conditioning systems to make the store smell of fresh baked bread (S^D). This particular aspect of atmospheric engineering works on many levels, each of which can be described in terms of the three-term contingency. Consumers who have enjoyed freshly baked bread in the past (S^R) are likely to take this olfactory stimulus as a prelude to the delicious, reinforcing taste, and therefore purchase something from the bakery (R). The scent of fresh baked bread also works on the consumer to elicit hunger, a stimulus in itself which is recognised by some to affect purchasing when shopping for food (Mela, Aaron et al. 1996; Lozano, Crites et al. 1999), to obtain satiety (S^R). The scent of fresh baked bread and the location of the bakery at the back of a supermarket works to lure consumers through the supermarket, past other items, and can therefore enhance browsing behaviour. Pleasant scents can also be used by retailers to increase positive evaluations of a brand (Morrin and Ratneshwar 2000) or store (Spangenberg, Crowley et al. 1996). This has clear implications for the potential to increase loyalty and increase repeat custom. Shopping centres also employ environmental engineering to present the customer with discriminative stimuli to enhance their shopping experience, and ensure return visits.

Strength of response to discriminative stimuli will depend largely on the reinforcement associated with the response. The frequency and schedule with which reinforcement occurs will be a primary determinant of response magnitude. Different types of reinforcement will also determine the strength and direction of future responses.

The BPM can be conceptualised as an on-going and cyclical feedback loop, with the consequences of the behaviour affecting individual's responses, and their attention to discriminative stimuli in the situation. Over time, experience of the consequences affect the anticipation of future consequences, given a particular set of discriminative stimuli. However, this study shares a limitation that other such studies also have (Elliot and Fowell 2000), that rather than tackle tricky task of measuring changes to consumers expectations as they experience various consequences over time, it takes a snapshot of the respondents preferences, responses and stimuli influences at a single point in time.

The Behaviour (Response)

The behavioural response refers to the key behaviour of interest. Given that much of previous consumer research has been focussed upon purchase, it is true that for many studies, purchase is the behaviour of interest, often in terms of the product itself or brand. In putting forward the BPM as a model of purchase and consumption, Foxall suggested that purchasing as a choice, may be seen in terms of approach or avoidance behaviour with potentially reinforcing or punishing consequences.

The behavioural response (R) that this study is concerned with, is the shopping centre respondents reported having visited. Behavioural studies are usually interested in how reinforcement contingencies affect magnitude, or frequency of responses.

However, several scholars, including Foxall and Greenley(1999), Mehrabian and Russell (1974) and Bitner (1992) have discussed behaviour in terms of approach-avoidance behaviour (Foxall and Greenley 1999). This will facilitate the consideration of an extension to the BPM in the conceptual model, taking on board another model that has been popularly used to explain consumer behaviours in a retail context. Behaviour in study 2 is therefore examined twofold, in terms of:

- The shopping centre visited

- The willingness to approach versus avoid the shopping centre (this will be discussed in a later section).

Reinforcement Stimuli (Consequences)

The three-term contingency can be conceptualised as a continuously on-going and cyclical framework. The consequences of behaviour, the reinforcement or the punishment, lead to an increase or decrease in future behaviour. These contingencies feed back to the consumer's future attention to discriminative stimuli. Depending on the consumer's experiences of reinforcement/punishment in similar situations in the past, they are likely to be more attentive to certain discriminative stimuli.

Research has suggested that, in the context of consumer behaviour, reinforcement can be of two varieties- utilitarian (sometimes also described as hedonic) or informational (Foxall 1990; Foxall 1995). Though these studies came after the three term contingency, they have looked specifically at consumers, and so it is relevant to look at them here. Utilitarian reinforcement is the functional, pleasurable or emotional consequences of a behaviour, such as the inherent pleasure a consumer may derive from the act of shopping. Informational reinforcement provides a feedback process on the performance of the consumer, such as when they are rewarded with reaffirmation from others regarding a particular purchase. As consumers future decisions are at least partly based upon the consequences of previous similar behaviours, with reinforcement expected to increase behaviour magnitude or frequency (Foxall 1990; Foxall 1995):

The BPM builds on the three-term contingency model, but splits the reinforcement consequences into utilitarian reinforcement, informational reinforcement and adverse reinforcement (cost) (Foxall 1993).

Utilitarian reinforcement relates not only to the functional value of owning or consuming something, but also to the pleasant or affective consequences of purchasing or consuming that product or service (Foxall 1995). Utilitarian reinforcements are the fun, amusing, stimulating, emotional or enjoyable aspects inherent in consumption (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982; Hirschman 1984; Holbrook 1986). It is associated with all the positive benefits derived from purchasing/consuming a product or service, or visiting a shopping centre.

Informational reinforcement relates to the behavioural consequences that provide feedback about the behaviour. It is mediated by the reaction of others to the behavioural response. It is a verbal feedback on performance judged by others through speaking and body language and judged by others through speaking and body language, and judged by the consumer by private thoughts (Foxall 1995). Informational reinforcement relates, for example, to when someone is complimented by another person on a purchase they have made, or on their savvy at finding a good bargain. Informational reinforcement is a status rewarded to someone for their success in an act of consumption.

Aversive consequences encompass those consequences, sometimes described as punishers (both positive and negative), that are likely to reduce the strength or frequency of a behavioural response in a similar behaviour setting in the future. They are usually associated with the costs of performing a behaviour, such as the time it takes to complete the behaviour, energy expended as a result of the behaviour and obstacles that must be dealt with along the way, such as crowds in a shopping centre or a queue at a store checkout. Price of an item is an aversive consequence that must be outweighed by the utility or enjoyment the product or service consumed present as utilitarian reinforcement. While reinforcement is associated with utilitarian and informational consequences and tend to lead to approach behaviour, aversive consequences are potentially punishing contingencies which may lead to avoidance behaviour. Aversive consequences also cover the loss of access to reinforcement (negative punishment). Aversive consequences may have a smaller role in shaping consumer behaviour than reinforcing consequences as, as research suggests, reinforcements tend to happen simultaneously, like the pleasure a consumer derives from using a new purchase, while aversive consequences are often subject to a delay (Foxall 1995), such as the punishing consequence of a credit card statement weeks after a purchase is made. As a result, consumers disassociate the behaviour from the aversive consequences, a phenomena known as temporal contiguity (Feinberg 1986). In more recent studies considering the BPM, aversive consequences have been further refined to be considered in terms of negative utilitarian consequences (utilitarian punishment) and negative informational consequences (informational punishment), though the more general dimension 'aversive consequences' has been considered for far longer, and will be adopted for this research.

As with earlier operant models of behaviour, the consequences of behaviour, whether utilitarian or informational reinforcement or aversive consequences, leads to an increase or decrease in

future behaviour. Utilitarian and informational reinforcement are expected to increase the frequency and magnitude of behaviour, and aversive consequences are expected to decrease it.

As seen in figure 2.11 above, these contingencies also feed back to comprise part of the consumer's learning history. Depending on the consumer's experiences of reinforcement/punishment in similar situations in the past, they are likely to behave in a particular manner. Each new experience adds to the consumer's learning history, and means it will continue to change over time. This also means a complete picture of a learning history is incredibly difficult to come by.

Operant Classes of Consumer Behaviour

When a behaviour is reinforced, that behaviour is likely to increase, and when a behaviour is punished, that behaviour is likely to decrease (Umbreit, Ferro et al. 2007). A subject's behaviour will adjust with experience, to maximise reinforcement, and minimise punishment. The same is true of consumers. Based on the BPM, consumer behaviour is the quest for reinforcement, while minimising punishment.

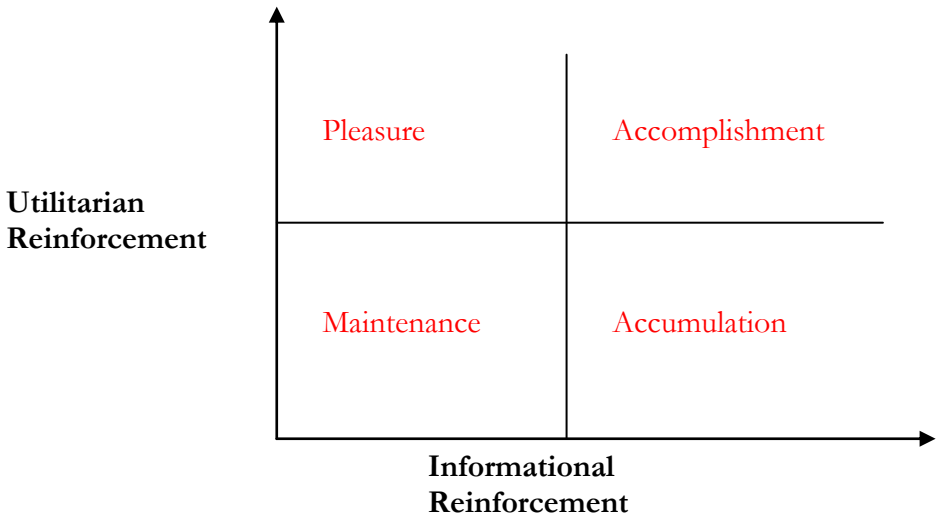
The drive for reinforcement can result in varying levels of reinforcement as consumer reinforcement can come in two different forms; one where reinforcement is derived from the inherent value and pleasure of owning and consumer a product or service (utilitarian), and the other from the associated feedback on performance derived from the act (informational). It is possible to classify different types of consumer behaviour based on the relative impact of utilitarian and informational reinforcement associated with the behaviour. For example, some types of consumer behaviour are contingent on the acquisition of a higher level of informational feedback than utilitarian reinforcement. Therefore, the following hypotheses are proposed for study 2:

H4: Shopping centre response is affected by consequences of the visit

Whether the utilitarian and informational reinforcement feature as relatively high or low as a consequence of the behavioural response, there are four classes of operant consumer behaviour, illustrated in the figure 2.12 below: Both utilitarian and informational reinforcement do indeed act to strengthen/increase behaviour (Foxall 1990). Reinforcements classed as low are still

classified as positive reinforcements, and strength of reinforcement (low and high) must be considered a continuum.

Figure 2.12: Four Operant Classes of Consumer Behaviour



Source: Adapted from (Foxall 1990; Foxall 1998; Yani-de-Soriano, Foxall et al. 2002)

The Accomplishment class of consumer behaviour is comprised of high levels of both utilitarian and informational reinforcement. For accomplishment shopping, reinforcement is derived from the pleasure of buying and/or consuming a good or service, but also from the feedback afforded by a purchase. As such, accomplishment shopping is often associated with the public acquisition or consumption of status symbols, or high levels of esteem, such as the purchase of a premium brand car. Status itself can perhaps be considered as contextual. While premium brands are easily recognisable as status products, products associated with hobbies can perhaps also be considered as status goods. Certainly, people who purchase hobby-related items derive pleasure from the consumption of the product, but there is also a high level of informational reinforcement to be derived from the purchase of these items, from other people in store who share the hobby. Feedback may derive from being seen using the product or service, and from being seen to buy the product or service. Patronising shops perceived to have a high status in their own right also forms a part of Accomplishment shopping. Accomplishment behaviour will occur more in those shopping centres contain high status stores and goods, and which themselves have a perceived high status image. The more expensive department stores like Debenhams, Fenwick's and House of Frasier offer many high-end fashion labels as well as their own labels, and shopping centres with such department stores among their tenant mix offer greater opportunity for Accomplishment shopping.

Pleasure is the class of consumer behaviour maintained by utilitarian reinforcement, but where informational reinforcement features as less important. Behaviours to maximise pleasure or to remove unpleasant affects fall under the Pleasure class of consumer behaviour. Enjoyment of the process of shopping in its own right might also fall under this category (Babin, Darden et al. 1994). Purchase and consumption of entertainment products and services feature strongly in Pleasure behaviour. Products associated with Pleasure consumption include CDs, DVDs, magazines, and video games, while services include gift shops, amusement arcades, sports events, bars, restaurants, theatres and cinemas. Consumer's engaging in pleasure shopping may visit a cinema for entertainment, or a restaurant to enjoy a meal. Some Pleasure behaviours are also associated with the removal of unpleasant affects. Paracetamol taken to relieve the symptoms of a cold is included in this (Foxall 1990). For example, in the shopping centre, a visit to the amusement arcade may be used to relieve boredom, or a consumer may choose to visit the food court less from the desire to enjoy a meal, but more for the removal of hunger. Shopping centres that differentiate themselves from others by offering a variety of leisure/entertainment facilities to increase utilitarian reinforcement offer greater capacity for Pleasure shopping.

The Accumulation consumer behaviour classification is maintained primarily through high informational reinforcement, with utilitarian reinforcement being of relatively less importance. Accumulation behaviour is associated with collecting and saving behaviours that result in informational reinforcement. Saving up loyalty points, at stores and restaurants, tokens, or air miles, etc. are engaging in Accumulation behaviour. Mandatory consumption behaviours such as the paying of bills, taxes or TV licence, and financial services such as the purchase of insurance, are accumulation behaviours. Banks, building societies and post-offices are stores most often associated with accumulation behaviour, as well as stores and facilities which offer loyalty cards schemes. Boots is one such store which has successfully used its 'advantage card' scheme to build up customer loyalty in exchange for points to be spent in store. Some shopping centres are better able to satisfy the need for accumulation shopping than others, depending on their tenant mix.

Behaviours characterised where both utilitarian and informational reinforcement feature relatively low are classified as Maintenance behaviours. Neither utilitarian nor informational reinforcement are lacking in maintenance behaviour, they a merely sustained at relatively low levels. Maintenance behaviours are frequently related to activities which contribute to physical

survival and wellbeing, the most basic needs, such as convenience grocery shopping for food and the fulfilment of wider social obligations, which may include maintenance of acquaintances. Repeat purchases of necessities, such as shampoo, washing up liquid, light bulbs, etc. form maintenance shopping. Maintenance shopping has been described as multi-brand, multi-store purchasing, with low levels of consumer loyalty to brand or store (Foxall 1990). Maintenance shopping takes place in stores selling necessities, such as the local corner market, or supermarket. Some shopping centres prefer supermarkets as anchor stores compared with others, and have the greatest potential to satisfy maintenance behaviour reinforcement.

Clearly, depending on the type of shopping centre, and the tenant mix, some shopping centres are more likely to fulfil differential combinations of reinforcement than others. As such, it is proposed that different types of shopping centres are suitable to different class of shopping, in terms of the reinforcement associated with that category of shopping. Those shopping centres that differentiate themselves with a wide array of entertainment facilities will perhaps be associated more with Pleasure behaviours. Those shopping centres with department stores as anchors and other high end stores will perhaps be able to better facilitate Accomplishment shopping. Those shopping centres which have a wide array of financial and functional services may attain many Accumulation shoppers. Supermarkets used as anchors will afford shopping centres more scope for encouraging Maintenance activity. Consumer choice of one type of shopping centre over another will depend in part upon the primary category (operant class) of shopping behaviour they are engaging with, and the potential for that type of shopping centre to fulfil the associated reinforcements (utilitarian and informational). Similarly, different shopping centres are likely to yield different levels of aversive consequences.

H5: Different shopping centres yield different levels of consequences

Behaviour Setting

The behaviour setting is made up of discriminative stimuli that affect the consumer. Among these stimuli are the physical setting, temporal constraints, social surroundings (Foxall 1994) and the effects of the consumer's shopping context (task) (Belk 1975). The behavioural setting is also the environment in which the reinforcing and punishing consequences of behaviour take place. The behaviour setting is comprised of physical attributes, social surrounding, temporal factors and regulatory (self-imposed and general rules). It is the consumer's experience of these

otherwise neutral stimuli which develops into discriminative stimuli, which may alter behaviours in the future (as a result of a modified learning history) (Foxall 1999). In this study, the behavioural setting is described as being made up of those stimuli present in the environment which affect consumer behaviour. Belk's taxonomy of what he called 'situational variables' is to be used in this investigation. However, to clarify, these 'situational variables' are, in study 1, referred to as 'situational variables' while in study 2, they are referred to as variables in the Behavioural Setting. This was done so as to ensure consistency with theory favouring each taxonomy.

Many studies have uncovered hundreds of discriminative stimuli present in the behaviour setting, and many of these studies have sought to reduce the discriminative stimuli into categories based on their characteristics and the nature of their impact on consumers. Such as task is inevitably complicated by the sheet number of stimuli to be found in any environmental setting (Donovan & Rossiter 1982). Belk's taxonomy of situational variables is used in study 1, as it draws upon previous taxonomies to create a comprehensive view of environmental components (Belk 1975). In addition, many of the components identified by Belk are amenable to use within the BPM, as there is a degree of correspondence between these variables, and those identified by Foxall. Foxall's slightly different taxonomy of variables in the 'behaviour setting' is used in study 2. The categories of environmental stimuli identified by Foxall and Belk are outlined together below (with differences also highlighted), to avoid repetition, with information on findings in research across these taxonomies considered.

Research into the effect of environmental stimuli on consumers has been divided. Most studies have looked at specific stimuli in isolation- few studies attempt to consider how stimuli combine to affect consumers. The Mehrabian-Russell model (1974) that will be discussed in further detail later provides details on the alternative approach to considering environmental stimuli: that of 'load' or 'information rate' (Donovan and Rossiter 1982). Drawing upon information theory, instead of considering the influence of one factor, like lighting in detail, Mehrabian and Russell (1974) propose considering environmental stimuli more generally, in terms of 'load', which they suggested relates to the 'complexity' and 'novelty' of the situation- how all of the separate stimuli within an environment works together to inform the consumer. Complexity refers to how many aspects comprise the setting- the number of elements or features and the changeability of the environment both spatially and temporally. Novelty considers the

surprising, unexpected, new and unfamiliar aspects of the environment (Donovan & Rossiter 1982). Spaciousness is a third, lesser considered dimension of 'load'.

Though details of specific stimuli will now be discussed, for each of the classifications in Belk's and Foxall's taxonomies, it is this over encompassing 'information rate', in particular 'complexity' in which these stimuli come together that is considered in this study. To look at stimuli in a complex environment like a shopping centre in isolation will miss out much of what makes shopping centres.

2.8.3.1a Physical Surroundings

Of all aspects of the shopping situation, the physical aspects are perhaps the most widely researched, covering attributes of the physical surroundings spanning across geographical location, weather and climate effects, shopping centre design and store layout, which comprise of décor, music, lighting, aromas, configuration of merchandise, etc. As well as in content, physical surroundings, as a type of discriminative stimuli present in the consumer situation can be considered as much a part of the classical conditioning domain as they are of operant conditioning. While they are discussed in the context of a recent adaptation of an operant model, this model starts to bring together reinforcement with preceding stimuli, in a similar vein to classical conditioning. Many of the physical attributes specific to a given retail space, be it store or shopping centre, are amenable to manipulation by retailers, more so than other variables in the behaviour setting. Retailers use promotions, merchandising, store design and atmospherics to attract potential customers, and induce certain behaviour, such as browsing and buying (Babin, Darden et al. 1994).

Much of the research on the physical aspects of the shopping situation has focused on 'atmospherics', which is described by Kotler (Kotler 1973) as the purposeful design of shopping spaces to enhance the probability of consumer purchasing through the enhancing of specific emotional effects. Many studies have examined the overriding influence of atmospherics on consumer behaviour, though several have investigated individual atmospheric components.

While research in the wider field of environmental psychology has examined the impact of various individual ambient stimuli, such as lighting, colour, noise, temperature and scent on the physiological responses of humans in a variety of situations, several of these areas have received

attention with respect to consumer behaviour under the banner of 'atmospheric' affects, describable in many ways by their affect on the senses, specifically, visual, aural, olfactory and haptic (tactile) stimulation.

The influence of aural stimuli on consumer behaviour, especially music, is perhaps one of the most researched areas in atmospheric study. The earliest studies focused mostly on attitudes and beliefs towards music, and how these influence purchase intent, perception of time passed, actual time passed (flow), and evaluations of product and store (Linsen 1975; Milliman 1982; Dube and Morin 2001).

Fast tempo music in supermarkets seems to speed up flow in a store (time spent) and reduce number of purchases, while slow tempo music results in a significantly slowed flow, individuals taking longer to shop, and subsequently a higher sales volume (Milliman 1982).

Tempo also affects the behaviour of restaurant patrons, with faster tempo resulting in customer eating and leaving faster than in the slow tempo condition (Milliman 1982), which may be of benefit to restaurants wishing a fast turn-around during a busy lunch hour. However, slow tempo music was most likely to elicit purchase of alcoholic beverages, a substantial area of trade for restaurants, as the slow music acts as a signal to the customers that they are not being rushed.

Studies suggest that music volume appears to alter perceptions of waiting time in checkout queues, with louder volumes yielding overestimates of time passed, and softer music yielding underestimates (Kellaris and Altsech 1992). Modality, the configuration of the music scale in terms of the intervals between pitches, also seems to affect estimates of time passed, with modality associated with less pleasing music eliciting the shorted time estimates (Kellaris and Kent 1992).

Familiar music appears to reduce perceptions of time spent in store, by reducing attention to the environment, which unfamiliar music can elicit (Yalch and Spangenberg 1990). However, there appears to be little real relation between perceptions of shopping time and actual shopping time, a small relationship reported to be around 0.2 (Yalch and Spangenberg 2000). It appears that, in part, it is the influence of the various components of music; tempo, tonality, texture, etc., that

affect a consumer's behaviour indirectly, as discussed later in this chapter (Kellaris and Kent 1994).

Studies suggest that, besides the composition of the music, the music should be tailored to be congruent with the target market and the mood of the product (Yalch and Spangenberg 1990; North, Hargreaves et al. 1999), and above all, palatable to the audience (Caldwell and Hibbert 2002). Music can in some situations affect product choice; German background music increasing purchases of German wine, French wine outselling German wine when French music is played (North, Hargreaves et al. 1999). Music also appears to alter the amount customers are willing to spend on a product. Classical music for example, elicits more expensive purchases of wine than popular music (Areni and Kim 1993), many customers associate wine purchases with prestige and sophistication, which classical music is better able to communicate. While classical music leads to perceptions of the environment as upmarket and elegant, pop music promotes upbeat and assertive perceptions of an environment (North and Hargreaves 1998). Poorly fitting music can promote unbalance and discord for customers, distorting customers perceptions, attitudes and ultimately behaviour (Chebat, Chebat et al. 2001).

The effects of visual stimuli on consumer behaviour have received some attention, focusing primarily on the effects of colour and lighting, and to a lesser extent, the arrangement of merchandise displays. Colour can create a specific atmosphere or project a store's image (Bellizzi, Crowley et al. 1983).

Certain colours (blues) elicit more favourable responses towards purchase intention than others (reds), with customers perceiving greater purchase associated benefits with items in the blue condition (Middlestadt 1990). On average, consumers spend more by selecting more expensive items in the blue condition (Bellizzi and Hite 1992), and react more favourably to low prices (Babin, Hardesty et al. 2003). Bright colourful, tense environments were most likely to encourage impulse purchases, but result in customers putting off decisions for high involvement products (Bellizzi, Crowley et al. 1983; Bellizzi and Hite 1992).

Retailers manipulate lighting to communicate store image, attract visitors, persuade browsing and interaction with items, and increase purchase intention (Summers and Hebert 2001). Stores with inappropriate or inadequate lighting tend to suffer, as customers are reluctant to enter such

environments. Supplementing displays with additional lighting has a positive effect on consumer approach, exploration and interaction behaviour.

Displays are used partly to create in-store excitement (Chevalier 1975), and focus customers' attention on certain products to increase sales. The amount of space devoted to a single display affects sales considerably, with increases in display size resulting in inordinately increased sales (East, Eftichiadou et al. 2003). Space devoted to each product tends to be allocated on the basis of the proportion of sales that product obtains, with those items making up the larger proportions of sales given larger spaces (Davies and Tilley 2004). The height at which items are placed also seems to impact on sales, with items around head high selling best. Placement of different products with relation to each other also has a significant impact on sales, with high-profit impulse items placed next to everyday goods to increase sales volume (Davies and Tilley 2004).

Olfaction has received some attention in studies into the influence of discriminative stimuli on consumer behaviour. For many years, scent has been used in retail settings as a means of eliciting purchases, the natural scent of products sold in bakeries, coffee bars and tobacconists used to attract customers (Spangenberg, Crowley et al. 1996). Later, retailers and academics realised that scent could even influence the purchase of scentless products, and a new wave of research emerged to examine the influence of 'ambient scent', odours present in the setting not directly related to the products there. By 1996, it was estimated that the artificial environmental fragrance industry, responsible for introducing ambient scents into retail atmospheres, was worth around $1 billion (Morrin and Ratneshwar 2000).

Early studies associate the smell sense to emotional recall, via scent receptors linked to the emotional centre (amygdala) and memory centre (hippocampus) of the brain (Aggleton and Waskett 1999; Halloway 1999). Such studies believe that scent has the potential role in marketing to elicit specific moods in customers (Baron 1990; Mitchell, Kahn et al. 1995), on the basis that positive moods are more likely to result in favourable consumption (i.e. browsing, purchase and loyalty) behaviour, and ultimately a means of securing competitive advantage (Spangenberg, Crowley et al. 1996; Davies, Kooijman et al. 2003).

Though many studies suggest that scent impacts on consumer behaviour through moods, other theories on the impact of scent on behaviour suggest that scent can increase customer attention,

and that, over time, individuals learn to recognise cues to behave in a particular manner (Morrin and Ratneshwar 2000). With experience, individuals learn to associate pleasant smells with positive outcomes, for example, pleasant smelling food usually results in pleasant taste, so the individual is more likely to eat (respond) pleasant smelling food to achieve this outcome (reinforcement).

Studies of olfactory stimuli on consumer behaviour suggest that scent influences many aspects of behaviour, including perceptions of time passed in store (Spangenberg, Crowley et al. 1996) actual time spend in store (Knasko 1989), consumers' perceptions of a store and evaluations of a store's environment and products (Morrin and Ratneshwar 2000). Pleasant ambient scent appears to improve recall of unfamiliar brands, but not of familiar brands (Morrin and Ratneshwar 2000). It is perhaps through a scent's ability to increase attention to a product, that consumers become more likely to recall it. Scent congruence appears to be a main controlling factor on consumer behaviour. Pleasant scents seem to have a great potential to positively influence consumer behaviours such as purchase, store and product evaluation (price, quality, selection), etc., but congruency of scent with the setting or product must be ensured, as incongruent scents, pleasant though they may be, can confuse and inhibit decision making (Mitchell, Kahn et al. 1995). Evidence suggests stores with a single sex as its target market will do best by ensuring the scents used are congruent with that market; masculine scents for masculine audiences, and feminine scents for feminine audiences (Spangenberg, Sprott et al. 2006).

The influence of haptic (tactile) stimuli on consumer behaviour is a less explored area, and tends to focus on sales person interactions with individuals, exposing a possible overlap between physical discriminative stimuli and social discriminative stimuli. Touch appears to improve mood and heighten attentional arousal (Hornik 1992). The use of touch in a service encounter can build rapport, and affect consumer evaluations of sales staff and the retailer (Fisher, Rytting et al. 1976; Hornik 1992), as well as increase customer compliance to retail requests (Smith, Gier et al. 1982; Hornik 1992), in several studies reported to increase acquiescence to try a free sample, and also to purchase the item being sampled (Smith, Gier et al. 1982; Gueguen and Jacob 2006). In pubs, touch by female waitresses leads to increased purchases of alcoholic drinks (Kaufman and Mahoney 1999), and in restaurants, touch by female waitresses is reported to result in significantly larger tips (Stephen and Zweigenhaft 1985). Several studies have reported gender differences in responses to touch, with females generally responding more

favourably (Crusco and Wetzel 1984; Stephen and Zweigenhaft 1985; Gueguen and Jacob 2006), though some have made no such observations (Smith, Gier et al. 1982). Touch must be used cautiously however, as touch that is incongruent with the setting or culture might have a negative impact on customer responses (Gueguen and Jacob 2006), with some customers potentially being put off by over-eager sales staff.

The discriminative cues described above do no work in tandem. Several studies have examined the interaction of ambient cues, and reported their impact on consumer behaviour. Combinations of colour and lighting stimuli seem to impact on perceptions of a store (Babin, Hardesty et al. 2003), with considerable customer preference and subsequent increased shopping and purchase intention associated with blue environments over orange environments in bright fluorescent lighting conditions, reducing to marginal preferences in soft lighting conditions. So do combinations of lighting and music, with stores having soft incandescent lighting and classical music combinations perceived as classy and prestigious, and stores with bright fluorescent lighting and pop music perceived as discount outlets (Baker, Grewal et al. 1994).

The influence of the combined effect of display (visual) and scent (olfactory) was found to influence the price customers are willing to pay for items on a display as well as their purchase intention, with pleasant congruent scents increasing these behaviours compared with incongruent pleasant odours (Fiore, Yah et al. 2000). Displays alone only increased the price customers were willing to pay for products, not purchase intention.

In a study on the combined influence of music and fragrance on customer behaviour, Spangenberg found that consistency between ambient scent and music lead to higher evaluations of products and store environment, along with willingness to return to the store again in the future (Spangenberg, Grohmann et al. 2003), while bad combinations of aural and olfactory stimuli can ultimately lead to confusion in the decision making process.

Both Foxall and Belk agree that physical aspects of the behaviour setting can have a sizable impact on consumer behaviour. Attributes of the physical surroundings include geographical location, weather and climate, shopping centre design and tore layout, which comprise of décor, music, lighting, aromas, configuration of merchandise, etc. Many of the physical attributes specific to a given retail space, be it store or shopping centre, are amenable to manipulation by retailers, more so than other environmental variables. Retailers use promotions, merchandising,

store design and atmospherics to attract potential customers, and induce certain behaviour, such as browsing and buying (Babin, Darden et al. 1994). The physical attributes of the shopping centre are important to the pleasure a consumer can derive from a shopping trip, and can be manipulated by retailers to build up customer perceptions of shopping value and loyalty (Babin and Attaway 2000).

2.8.3.1b Social Surroundings

The category 'social surroundings' encompasses the direct and indirect influences of other people on a consumer, and has been described in similar terms by notable authors in the field of consumer research (Belk 1975; Foxall 1998). Early studies argued that the influence of other people in a situation is one of the most pervasive determinants of a subject's behaviour (Burnkrant and Cousineau 1975). Advice, opinions, and even other people's 'image', form important discriminative stimuli that can influence behaviour. The presence of others and their influence can affect many things, such as a consumer's mood, attention, and motivations. Depending on the consumer, other people will have different influences on their behaviour and the consequences of that behaviour. For example, a consumer may value their friends' opinions when buying a coat, but not that of the sales assistant, because in the past they had a bad experience of pushy sales staff. Similarly, a customer might value a sales assistant's advice over that of a friend's in the purchase of a computer, because they want expert advice and trust the sales assistant to be more qualified to deliver that advice.

There is a wide array of research on the effects of the social surroundings on consumer behaviour. Several studies have examined the underlying influence of susceptibility of a consumer to social surroundings and its subsequent impact on behaviour, while many more have chosen to study the social influence of other people on a consumer's behaviour, notably the influence of family members, peers and referent groups, sales-assistants' advertising, and even the influence of other shoppers present in the retail setting.

Social surroundings do not display uniform influence on all consumers. Consumers exposed to the same advertisement don't react the same way. Research has examined the variations in customer's attention to social surroundings (susceptibility) and the impact of this susceptibility on various behaviours (Lord, Lee et al. 2001; Mourali, Laroche et al. 2005; Clark and Goldsmith 2006). It is generally agreed in consumer research that social influence comes in two flavours;

normative and informational (Burnkrant and Cousineau 1975; Lord, Lee et al. 2001; Clark and Goldsmith 2006). Normative influence is evidenced in an individual's conformity to the expectations of their referent group, to maximise chance of reward and minimise punishment from that group. Informational influence is the provision of proof that a product/services is of good quality, by seeing credible others approve or use the product (Burnkrant and Cousineau 1975; Lord, Lee et al. 2001). Research indicates that informational influence plays a greater role than normative influence in the purchase decision with respect to high involvement purchases, while the reverse is true for low involvement purchases (Lord, Lee et al. 2001).

Social influence also relates to preference for information source when searching for information regarding a prospective purchase. Some individuals are more accepting of information from other people, believing them to be sufficient and precise, with highly susceptible consumers preferring to gather product information from social sources alone (Mourali, Laroche et al. 2005). However, in situations perceived as 'risky' even individuals highly susceptible to social influence are likely to look for additional information sources. Early studies of social surroundings even suggest that social influence and consumer attitudes were not separate, but related (Ryan 1982). The sensitivity of an individual to social cues relating to choice and use of a product partially mediates the role of interpersonal influence on a consumer's purchase decision (Bearden and Rose 1990).

Research indicates that most 'innovative' consumers are least susceptible to normative social influence, but are quite susceptible to informational influence, clearly preferring to find credible sources of information regarding the quality of newly emerging products, from those they recognise as having the appropriate technical expertise (Clark and Goldsmith 2006). Individuals who are highly involved in fashions seem highly susceptible to normative social influence, seeking to reinforce their purchase decision, but avoiding advice when they perceived their referent group to disapprove (Midgley, Dowling et al. 1989), thereby minimising punishment.

The influence of referent group on individuals has long been recognised (Schumpeter 1909, cited by Jonsson 1994). Consumers are also prone to influence by their reference group when making decisions about products or brands (Bearden and Etzel 1982; Brinberg and Plimpton 1986). Such normative influence is likely to also affect decisions involving consumption destination, which may in turn influence overall preference for a particular type of shopping centre. Informational social influence from referent group has less influence on brand decisions

regarding public necessities than those concerning private luxuries (Bearden and Etzel 1982). Sources suggest that social influence on brand choice may be less about projecting the right kind of image to one's peers, and more about trying to be liked/accepted by them, at least for adolescent consumers (Auty and Elliot 2001). Presence of peer group is also purported to have a sizeable positive impact on teenagers' consumer behaviour, with peer group presence seen to increase enjoyment and frequency of shopping, and in turn, sentiments towards retailing and spending tendencies (Mangleburg, Doney et al. 2004). The influence of one's peers on behaviour is seen to change through childhood, depending on the type of product under consideration. Peer influence increases with consumer age, with respect to conspicuous (visible) items such as public luxuries (for example, bottled water, coffee, footwear), but not for inconspicuous (non-visible) items like privately consumed necessities (Bachmann, John et al. 1993), for example, toothpaste, cereal, washing detergent.

Various family members can also influence purchase decisions. Most parents believe children to influence family purchase decisions of child-oriented products such as toys and food, and child-used services such as holidays and restaurants, and many parents believing their children to influence non child-oriented products such as cars, white goods and property (Swinyard and Sim 1987). In a study of purchase decisions in fine-dining in Singapore, the husband is noted to dominate the majority of the decisions made, including the idea to visit a restaurant, the amount to be spent, and the decision of where to dine. However, information gathering and the implementation decision is made jointly by husband and wife (Lalwani 2002). In terms of impulse purchases, it appears that shopping with a family tends to decrease impulse to purchase, while shopping with peers increases the urge to purchase, specifically when the consumer is highly susceptible to social influence (Luo 2005).

Retailers can themselves manipulate the social surroundings of their store or shopping centre to precipitate desirable consumer behaviours. The influence of sales staff and advertising campaigns can have a substantial impact on purchase decisions, customer emotions and perceptions of store image. Salespersons perceived as friendly, empathic, trustworthy or professional looking, seem to promote positive emotional responses in customers (Lee and Dubinsky 2003). Salesperson credibility has a significant impact on their ability of getting the sales message across to the customer so that it is processed deeply, and subsequently accepted by the customer (Sharma 1990). When a customer has little or no previous knowledge about a potential purchase, salesperson credibility can affect a customer's purchase intention and

product evaluation. Salesperson credibility has no impact on purchase intention or product evaluation when the customer has high expectations of the brand. Ensuring salesperson credibility is of greatest importance to marketers when they are attempting to launch a new brand. The salesperson's influence is greatest in situations where a customer perceives a potential product as ambiguous in terms of its quality. In such situations for mediocre products, customers are likely to rely more on their relationship with the salesperson. However, when a product is unambiguously weak or unambiguously strong, the customer-salesperson relationship yields little influence on product acceptance (Kaufman, Jayachandran et al. 2006).

Marketers also make use of advertising to exert social influence on customers. Advertisements have the potential to increase self-consciousness in high self-monitoring customers to generate more favourable customer responses (Chang 2006). Studies have found that brands are a means by which customers can construct their self-image, and advertisement images that are congruent with their referent group image enhance self-brand connections, while images in advertisements incongruent with reference group image impede this (Escalas and Bettman 2005). Recently, perceived shared experience was linked with enjoyment, with individuals exposed to congruent social information in the form of advertisements reporting higher levels of enjoyment (Raghunathan and Corfman 2006).

While much of social influence is overt, some aspects of the social surroundings operate in a more subtle way. The influence of non-interactive, or 'mere' presence of ancillary characters, such as other customers in a store, has been found to impact on consumers' emotions and self-presentation behaviours (Argo, Dahl et al. 2005; Argo, Dahl et al. 2005). The number of people present and immediacy (proximity) were found to influence consumers. While consumers don't appear to like being alone (experiencing negative emotions), they don't like being in overly crowded environments either, i.e. those environments with three or more people in close proximity.

2.8.3.1c Temporal Perspective

The temporal perspective of the behavioural setting contains many features, including the 'temporal constraints' Foxall contained within his definition of the physical surroundings. Generally speaking the temporal perspective specifies the temporal dimension of a behavioural setting, looking, among other things at time of day, day of month, and season of year. Time of

day can inform on how subsequent engagements can constrain behaviour. A worker dropping into their nearby town centre for essentials will be pressed for time, and may have to make hurried decisions, or leave without everything they need. Time since last mealtime can influence consumers in their purchase of food, as hunger can increase the desire to purchase food (Miltenberger 2004).

Time elapsed since last payday can also have a dramatic affect on a consumer's purchase behaviour (Belk 1975). For example, when a greater time has elapsed since the last payday, a consumer's purchases may decrease, but their browsing behaviour increases, or alternatively all shopping behaviour may decrease until after the next payday.

Time of year can have a significant impact on consumer behaviour, with festivals at various times of the year impacting on the likelihood that a customer will engage in particular tasks. There are obvious seasonal differences in consumer behaviour when considering gift buying behaviour. For example, in the UK, which is predominantly Christian, with the wider agnostic population also often celebrating Christmas, gift buying behaviour in the months leading up to Christmas sees a substantial increase in purchase behaviour, especially in gift buying behaviour. This time of year can also have an impact on the mental processes of a consumer in the form of mood. For example, a consumer may see the arrival of seasonal decorations as a positive thing. As a parent, they have enjoyed Christmas in the past because of the positive feedback they gained from their child (wider utilitarian reinforcement), and enjoy seeing the decorations, and are keen to buy gifts to ensure further reward this year. Another consumer, however, might have had a negative experience with Christmas shopping the previous year, when looking for a present for their child, they were faced with crowds and difficulty parking, and might view the arrival of Christmas decorations with dread. They will still purchase gifts for Christmas, but for these consumers, it is more about avoiding the aversive consequences of failing to buy a present for their child. Frequently, this latter consumer will try to get their Christmas shopping done in as few trips as possible. They are reducing their overall behaviour in terms of shopping trips to minimise aversive consequences. The former consumer, who enjoys Christmas, may be more inclined to make several shopping trips and savour the experience.

Time of year also impacts on consumer behaviour as a result of the changing physical landscape. Temperature and humidity change seasonally, and in countries which experience variations in weather from season to season, consumer behaviour similarly changes. Time of year can impact

on the time of day shopping takes place, with more customers in Cyprus shopping in the cooler morning in summer, and more in the warmer afternoon in winter (Roslow, Li et al. 2000). Products purchased also vary with season, as more adult clothing is bought in winter, but more food and beverages purchased in summer.

2.8.3.1d Regulatory Forces

Foxall (1999) described his fourth and final situational dimension as regulatory forces, which he described as self imposed and general rules such as social norms and national and regional laws (Foxall 1999). In the retail context, regulatory forces may also relate to the rules imposed by the retailer managers and other stakeholders- imposition of parking and road tariffs, number and force of security personnel, rules regarding dress and conduct, etc. Regulatory forces may act as a barrier to consumers- too many regulations mean for potentially difficult and costly parking. Regulatory forces are therefore anticipated to impede approach behaviour. However, regulatory forces also relate to forces that regulate the behaviours in the shopping centre. Some customers may value that they see security and cleaners as a positive thing.

The above discriminative stimuli are manipulated by shopping centres to the best of their ability and available resources, in an attempt to maximise the desired behaviours from their consumers- patronage, browsing, and of course, spending, with different stimuli eliciting different responses in consumers. The preceding discussion has encompassed the anticipated effect of stimuli on these behaviours, most notably that well designed physical surroundings, and good potential for social interactions are likely to increase approach responses, while temporal constraints are likely to reduce approach. Retailers vary in their ability to manipulate stimuli and leads to the following hypotheses:

H6: Shopping centre response is affected by variables in the behaviour setting.
H7: Variables in the behaviour setting vary in strength across shopping centres

2.8.3.1e Other Situational Forces: Belk's Task Definition and Antecedent States

By contrast with Foxall's Regulatory Forces, one of the most widely referenced taxonomies of shopping situation was devised by Belk, and rather than 'Regulatory Forces', for many years

'task definition' and 'antecedent states' prevailed. Task Definition relates to the goal of the trip (Thelen and Woodside 1997), and was shown to exert a framing influence on the consumer, ultimately deriving store-attribute saliences (Van Kenhove and De Wulf 2000) and driving their memory of stores and shopping centres, and informing their choice of store and shopping centre.. Researchers see shopping trip context as being either utilitarian, hedonic or gift driven (Hirschman and Holbrook 1982; Havlena and Holbrook 1986; Babin and Darden 1996; Babin and Babin 2001). Task definition sets the scene of the particular shopping situation, and determines the goals of the shopping trip, whether completely utilitarian, hedonic or gift oriented, or encompassing several of these activities.

Depending on the shopping goals (task definition), consumers will retrieve different sets of potential shopping centres from memory, relating to the benefits those centres afford in achieving their goals (Thelen and Woodside 1997). A customer preparing for a monthly grocery shop is engaging in a utilitarian task, and the salient attributes of the stores considered in this context may relate to price and range of items, while a customer preparing to pick up a few necessities is also engaging in a utilitarian task, with convenience and store location being the most salient points for this task, as the goals are more urgent (Van Kenhove and De Wulf 2000). In another context, a consumer may visit a shopping centre to meet a friend to browse through shops together, and go for a relaxing meal, which may be categorised as a hedonic task. To best achieve this task, they consider those shopping centres which will best enable the achievement of the task goals (Thelen and Woodside 1997). In other contexts, a shopper may be looking around to buy or get ideas about a gift for a family member's upcoming birthday. While the literature on hedonic and utilitarian shopping is quite broad, few of these studies have focused on how the task context specifically impacts on aspects of consumer behaviour.

Research on the effect of task orientation on shopping behaviour is not extensive, and the studies that exist do not always report similar results. In one of the earlier studies, examining purchase of an item for oneself, as a gift for a close friend, or as a wedding gift for a friend, it was discovered that there was little difference in time spent searching for information when searching for a gift for a close friend or for oneself. However, when comparing searching for a wedding gift with searching for oneself, research found that shoppers spent significantly less time searching for information about a product when looking for a wedding gift (Heeler, Francis et al. 1979).

However, in another study conducted at the same time, it was proposed that customers put more effort into gift purchases than for own-use purchases. This research suggested that for low involvement purchases, but not high involvement purchases, task importance relates positively with purchase effort, increasing the effort made for a purchase when the task importance is high. It was suggested that this was likely to be because otherwise private (non-visible) items a customer purchases for themselves, when considered as a gift, suddenly become publicly visible items, and that publicly visible items are usually afforded greater care and effort during the purchase decision stage than privately consumed items. Items that are otherwise low involvement purchases, when bought as gifts, become more important, and involvement increases, to such an extent that, during holiday gift-giving periods, otherwise low-involvement products (such as confectionary) are afforded a significantly higher amount of attention from customers (involvement increased as importance increases) and retailers (increased sales efforts) (Clarke and Belk 1979).

Research suggests that choice of store or shopping centre, as well as shopping activities, depends partly on whether a customer is shopping for themselves or for a gift, proposing that customers shopping for a gift are more likely to acquire less information and spend less time deliberating about a purchase, and to visit stores with a quality image (Mattson 1982).

Some task related research has sought to segment customers on the basis of their shopping type, defining the main forms of shopping as hedonic or utilitarian. 'Recreational' shoppers, those who are engaging in hedonic shopping, are seen to spend longer shopping and continue to shop after making a purchase, and more likely to make unnecessary or unplanned purchases (Bellenger and Korgaonkar 1980). They also pay more attention to wider retail attributes, such as atmospheric (physical) and social attributes of the environment (Arnold and Reynolds 2003), and merchandise quality, variety and display. Value derived from hedonic shopping relates to the experiential benefits offered by stores or shopping centres; excitement, enjoyment, escapism, etc., with actual purchase incidental to the experience (Babin, Darden et al. 1994). Hedonic shopping orientation, along with sensation-seeking tendency and shopping motives, affect perceived excitement of store and desire to stay in a store, by affecting a customer's perception of the store (Han and Koh 2000). The 'utilitarian' shopper, places greater importance on convenience, and spends longer considering a purchase (Bellenger and Korgaonkar 1980). Utilitarian value relates to time and effort expended shopping to achieve the intended outcome,

i.e. to find and purchase everything needed as expediently and painlessly as possible (Babin, Darden et al. 1994).

Belk's category 'antecedent states' is not represented in Foxall's behaviour setting stimuli (Foxall 1999). They are proximal attributes, momentary moods and conditions are factors a consumer carries with them, and mediate the affect of the behavioural setting on the consumer. Momentary moods included anxiety, pleasantness, hostility and excitement. Momentary states may include cash in hand, hunger, fatigue and illness. They are therefore to be viewed very cautiously, and difficult to classify as part of the situation. They can instead be considered as indirect evidence of the evoked emotional response of the consumer, and comprise part of the learning history. This links back with the associative learning work of Watson, examining the emotional as well as physical response to stimuli. They are also susceptible to the other variables in the behaviour setting outlined above, and can change within the span of a single synomorphic situation.

From the earlier sections regarding physical surroundings, social surroundings and temporal perspective, and the preceding section on task affect and antecedent states, the following hypotheses are proposed for Study 1, considering Belk's taxonomy.

H1: Shopping centre response is affected by situational variables

2.8.3.2 The Scope of the Behaviour Setting

Human behaviour is maintained and shaped by its physical and social settings. Regardless of individuals in a given behaviour setting, there are a set of rules that are to be adhered to. In the retail setting, the behaviour of the customer being maintained is the evaluation, selection and/or purchase of goods. A person entering a store may choose to browse, but should they decide to take a good, the rules governed by the setting, socially and lawfully, indicate that they must pay for it. Of course there are some who ignore these rules, such as those who shoplift, but for the majority, the setting ensures conformity in behaviour. Certain behaviour settings offer a wider scope for behaviour. Behaviour in an open behaviour setting is less constrained than in relatively close behaviour settings.

Research indicates that the setting in which consumer behaviour occurs can be either relatively open or relatively closed (Foxall 1990; Foxall and Schrezenmaier 2003; Newman and Foxall 2003). Minimal external control is exerted over open settings, while the most closed setting is that which exerts the greatest control over consumer responses. Laboratory experiments, for example, and in particular laboratory experiments on animal behaviour, take place in very closed behaviour settings, where possible behaviours are highly constrained, to ensure measurability of a single construct, by minimising interference from extraneous variables (Schwartz and Lacey 1988; Foxall 1999). With regard to consumer behaviour, in open behaviour settings, consumers experience freedom of choice, and can behave with a great deal of freedom. Closed behaviour settings, by contrast, are characteristic in that they present a limited number of options available to the consumer. Settings in which marketers have manipulated the environment to exert a high degree of control, are typically relatively closed behaviour settings. Shopping centres in general tend to be relatively open behaviour settings, enabling consumers to have freedom of choice of shops and other facilities. Some centres are more controlled than others, but this does not tend to impact on the overall open nature of the shopping centre as a behaviour setting.

Control over a setting is achievable by the marketer on a number of fronts. The physical surroundings can be manipulated by retail marketers to persuade browsing and shopping, so a behavioural setting may be fairly closed without customers necessarily being aware of it. Similarly, the setting may be manipulated to ensure only specific activities are carried out (Foxall 1998). Different consumer behaviour settings are engineered by marketers to exert a degree of control over the potential behaviours that take place in it, so some retail situations are more amenable to wide variations in behaviour than others. Banks, for example, are highly controlled settings in which the consumer has a limited number of options of what to do. Emphasis is placed on getting people through quickly, in a fair manner, so orderly queuing is used to constrain behaviour. As an activity which offers little intrinsic enjoyment, people go as a matter of necessity. Compared with a department store for example, people are unlikely to spend long in a bank.

The physical surroundings are the most easily manipulated by marketers. Atmospherics, are those aspects of the physical environment which retailers can manipulate to create specific responses in consumers, and have been widely employed across retail environments to make the consumer behaviour setting pleasant and attractive, in the hopes of persuading the customer that their store or shopping centre is a good place to engage in consumption activity and prevent

them from leaving without having made a purchase of consumed the service on offer (Kotler 1973; Donovan and Rossiter 1982; Fugate 1991; Foxall 1997; Babin and Attaway 2000). Marketers can manipulate a consumer's learning history, by managing the way reinforcers are made available to the consumer. For example, it has long been a practice in changing rooms in ladies apparel stores to use lighting which enhance the appearance of clothes, and some stores have received criticism for using distorted mirrors to enhance the look of the clothes when worn making the customer appear more slender, and feel more attractive. Other stores encourage sales staff to be friendly and chatty at the checkout, to enhance information reinforcement about the purchase, and utilitarian reinforcement about the store choice.

Considering the marketing model of supply and demand, it is apparent that supply driven economies are more closed to the consumer. They are faced with fewer choices, and will have to behave according to the options available. In a demand driven economy, which prevails in western countries, behaviour settings are more open. The consumer has the power to choose between many products or brands, and between many stores or shopping centres. In the UK today, most consumer behaviour settings are relatively open. In the present study, the study of shopping centre choice, the consumer has many options about the type of shopping centre they choose to visit. The behaviour setting is only closed to those consumers who have limited choice of where to shop, so factors such as income, mobility and the availability/location of the desired product can close down the options available to the consumer.

2.8.3.3 Consumer 'Synomorphic' Situation

The consumer situation is composed of a specific consumer behaviour setting and a learning history. The description of the situation has the potential to explain behaviour and predict its occurrence in similar situations in the future. The behaviour setting and the individual's learning history intersect in the specific discrete consumer situation, with the consumer's learning history mediating the effects of the discriminative stimuli in the behaviour setting, to form the consumer situation. At the same time, the learning history is activated by the behaviour setting and relevant consequences which occurred in previous similar behaviour settings stimulated.

The distinction between the situation and the behaviour setting scope is subtle. While the behavioural setting scope is a fairly broad construct, measurable as a continuum between open and closed settings, the situation is a specific instance in time and space with discriminative

stimuli relating to the utilitarian and informational reinforcement contingencies identified as the most important within the individual's learning history (Foxall 1998). The 'objective' situation, as it actually exists, is interpreted by an individual on the basis of their learning history.

Behaviourism allows researchers to understand at the individual level, how variables in the behaviour setting influence different consumers. Based on previous experience, and the strength of the consequences attached to those experiences, and the strength of the situational influences present, different consumers will naturally behave differently in a given situation. As a result of their experiences, consumers may develop predispositions which can, in part, mediate the influence of certain situational cues (discriminative stimuli). In some instances, certain antecedents in the BPM may override other antecedents. A strong situational cue may override the influence of a consumer's learning history in some instances, just as a learning history may render a particular discriminative stimulus redundant. It depends on the balance between the learning history and the situational cues which will ultimately lead the customer to make a decision, but where both are sufficiently strong, it can lead to some amount of inner conflict for an individual.

The consumer situation is the intersection of a behaviour setting, and a consumer's learning history; their previous experiences of reinforcement and punishment relevant to the specific behaviour. It is a specific moment in time in the behaviour setting, mediated by the consumer's learning history at that time. For a particular behaviour setting, there will never be two identical consumer situations, even for the same consumer, as the evolution of that consumer's learning history will ensure consumer situations will vary each time.

2.8.5 Learning History

Learning history relates to everything that the consumer brings with them to the situation, based on "similar or related experiences a consumer has had before encountering the current behaviour setting" (Foxall, Oliveira-Castro et al 2006, p6). It essentially encompasses the accumulation of all associated reinforcing and punishing consequences of previous consumer behaviour in a similar situation, as indicated in figure 2.11 above, and aids the consumer in predicting the likely consequences of behaviour in this setting.

It is continually evolving, being added to and revised over time as a result of the consumer's relevant experiences. The learning history for a specific behaviour is made up of all previous utilitarian and informational reinforcements and aversive consequences associated with that particular behaviour, or one very similar. The learning history drives the behaviour settings a consumer chooses to enter, preferring those behaviour settings which the consumer associated with reinforcements, and avoiding those associated with aversive consequences. Depending on the relative importance of utilitarian and informational reinforcement for a given behaviour, certain shopping centres will be preferred to others. The learning history also drives consumer's predisposition towards being attentive to different discriminative stimuli, and likelihood that they will engage in a particular behaviour at any given time (Foxall 1994). When a consumer enters a behaviour setting, their relevant learning history (made up of previous reinforcements and aversive consequences in the same or similar behaviour settings) intersects with that behaviour setting to comprise the consumer situation.

To illustrate the use of alternate sources of information where the learning history for a particular setting has not yet formed, take the example of a new mother buying baby food for the first time. The mother has no previous experience of buying food for her child, but based on generally acknowledged socio-cultural rules, the mother knows she will need to specifically purchase baby food. Baby-food tins in the supermarket give some information to the mother about their suitability for children of a particular age, which will help the mother narrow down to available options to only those suitable for her child. Her choice of a particular brand of baby food may be arbitrary, she may use a trial and error approach, or look for information from knowledgeable others. Her choice of a particular brand may be driven by observing another parent in the supermarket buying that brand, providing informational reinforcement to the mother that purchase of that brand is a wise decision, depending on the level of affiliation the mother feels with the other parent. Speaking with other parents, the mother will gain more information on what brands are best as this information reinforcement may drive behaviour in the future. After a few weeks, the mother will form her own rules, as her learning history expands. She may have purchased several different brands of baby food and will be forming and revising her opinion on which brand is best, given the reinforcement previous purchases have elicited. Baby foods which the baby seems to enjoy provide utilitarian reinforcement at caring for the child, and a measure of informational feedback, and purchase frequency may increase. Baby foods which are not enjoyed by the infant, causing, for example, crying, fussing and digestive problems provide aversive reinforcement, and purchase of these foods will probably

decrease in frequency. Informational reinforcement may also come from the approval of other parents. Of course, situational specific factors can also have an affect on behaviour and a mother with limited means or who has grown price conscious in her purchase of baby foods may be more attentive to foods which are cheaper, or on special offer, and will know what to look for to keep costs (aversive reinforcement) to a minimum.

In addition to compensating for a lack of specific learning history about a new behavioural setting by seeking advice, consumption of samples can also be useful to the consumer, as a means of gaining information about the product (Leek, Maddock et al. 2000). In itself, the sampling of a product is a form of consumption, with its own reinforcement feedback, and can help the consumer to begin to develop a learning history, however limited this may be, regarding the new product. Sampling can provide a good way for retailers to prompt positive reinforcement in a consumer regarding their product, while minimising aversive reinforcement in the form of cost by providing the sample for free. Aversive reinforcement may still be present, of course, as the consumer may dislike the taste of a food sample, or dislike the way they are approached, or the pressure placed for a sale after the sample is consumed. Some products are sold with the sample being integral to the sales pitch, and in some parts of the retail industry, go hand in hand with hard selling tactics to move products.

In maximising utilitarian and informational reinforcements, and minimising aversive consequences, consumers will learn which shopping centres formats are best for different types of shopping trip, and through this learning history, will develop a preference for shopping centres which optimise reinforcement. Discriminative stimuli which have been important in eliciting reinforced behaviours in the past will be paid more attention to in future consumer situations.

Some suggest that it is the learning history that is responsible for turning previously neutral stimuli into conditioned 'discriminative' stimuli, based on the anticipated consequences of their effect (Foxall, Oliveira-Castro et al 2006, p6).

Few studies have discussed how to operationalise the examination of learning history. Based on preceding discussion, it seems investigating the salience of consequences to consumers is perhaps the most important thing, considering its definition at its heart links to the expectations of consequences of a behaviour in a situation (the intersection of behaviour setting and learning

history). As such, study 2 shall seek to determine whether importance of consequences offer insight into measuring the learning history. Other studies have examined learning history by integrating further models into the BPM. The Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB) have been considered for use in exploring learning history, by asking them to "identify and evaluate… utilitarian consequences of behaving in a particular way and referring to this as attitude towards behaviour…the individual's socially determined rule-governed behaviour as subjective norm… a measure of how successful the respondent expects to be… [which is] perceived behavioural control" Fagerstrom (2010, p9).

As well as situational/behaviour setting cues discussed earlier, consumer behaviour (including choice of and behaviour at shopping centres) is directed by learning history- the accumulation of previous experience. As we have seen, learning history encompasses many things. For the purpose of this thesis, the focus shall be on the salience of consequences to the consumer, and also on how long the consumer wishes to spend in the shopping centre, leading to the overarching hypothesis that:

H8: Shopping centre response is affected by the consumer's learning history

The hypotheses presented above, framed around the BPM, can be conceptualised in figure 2.13.

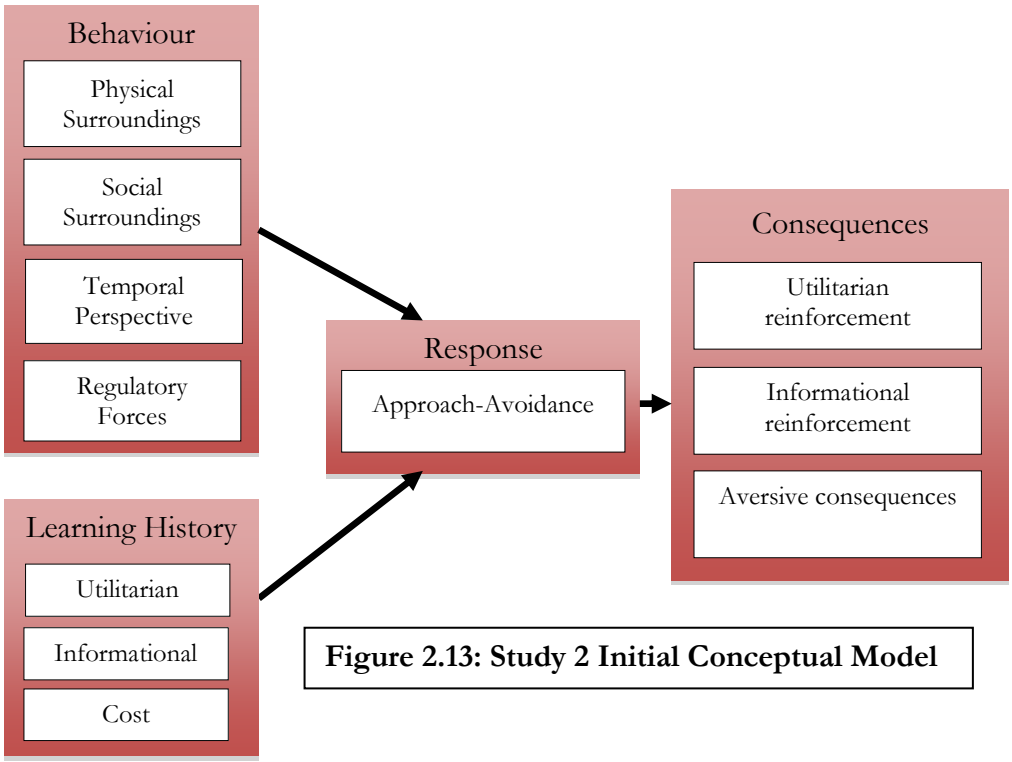


Figure 2.13: Study 2 Initial Conceptual Model

2.2.3 Cognitivism and Behaviourism

Cautions against the prevalence of a single research paradigm to the detriment of the furthering of knowledge have been reiterated across wider fields of psychology. Markus and Zarjonc (1985) commented on social psychology in the 1980s as a study of the social mind, not of social behaviour, thanks to the prevalence of the cognitive paradigm. The cognitive paradigm was so dominant at the time, that researchers even went so far as to attempt to redefine theories developing alternative perspectives (Bandura 1977), in cognitive terms (Markus and Zajonc 1985). Rather than seek to win the war between competing theories, which may lead to a stagnation of theoretical advancement, it is suggested that finding harmony between theories in a "subordinate framework of conceptualisation and analysis" may instead enhance and further knowledge.

Previous studies that have themselves taken a radical behavioural approach have sought to delineate the point at which the radical behavioural perspective would break down as an explanation of consumer behaviour, and have identified the need for other perspectives of research to supplement explanations of consumer behaviour (Foxall 2002; Foxall 2007).

Though a radical behavioural stance ensures that only that which can be observed and measured should be included in interpretations of behaviour, Skinner, along with other researchers, have long recognised that behaviourism as a science must deal with the influence of internal events as part of behaviour itself (Skinner 1963). Covert behaviours (internal forces) directing an individual's formulation of rules must be understood to allow for a full operant account of behaviour (Foxall 1997). These 'private events' are not necessarily mental or cognitive in nature, and can be acceptable in a behavioural framework.

Radical behaviourism does not deny that stimuli are not always external to the organism which is being observed, but recognises that some stimulation comes "from a small part of the universe within our skins" (Skinner 1984, p615), but cautions against using that which can be neither observed nor measured to explain behaviour.

Similarly, radical behaviourism does not reject the existence of variables such as thoughts and feelings, (Foxall and Greenley 1997). Rather, these private events are themselves considered as

behaviours explained by the environmental history of the individual- the repertoire of behaviours, perhaps, that have developed over time in response to stimuli and consequences previously experienced by the organism. Skinner suggests that 'knowledge', as defined by cognitive psychologists, is merely a surrogate of 'the history of reinforcement' (Skinner 1985).

From the opposing perspective, it seems inadvisable to take a purely cognitive perspective and ignore all elements of the behavioural research programme, yet for many years, purely cognitive research has dominated. After behaviourism declined in popularity as a method of scientific enquiry, research turned to examine the brain and the mental processes that determine human behaviour (Weilbacher 2003). Instead of examining discrete observable stimuli and discrete observable responses, research examined the complex brain processes that determine attention to stimuli, and how their perceptions and memories are processed to develop specific patterns of behaviour (Weilbacher 2003). These internal organismic factors have received considerably more attention than stimulus and response factors in the last 40 years (Jacoby 2002), with many consumer behaviour studies choosing to move away from and reject stimulus and response variables and focus solely on internal organismic factors, giving rise to theories such as Bettman's Information Processing Theory of Consumer Choice (Bettman 1979), Nicosia's work on Consumer Decision Processes (Nicosia 1966) or Howard and Sheth's Theory of Buyer Behaviour (Howard and Sheth 1969).

Studies specifically aimed at predicting behaviour were comprised of purely 'cognitive' elements, such as attitudes; those enduring tendencies and evaluations which account for a consumer's response towards an object (Foxall and Greenley 1997), and made up a substantial part of consumer behaviour research in the last 40 years. Elements of cognition were tied into behaviour, from belief to attitude to intention formation, and questions over whether attitudes were consistent and predictive of observed consumer behaviour gave rise to a popular area of research examining this attitude- behaviour consistency.

Research suggested that when direct experience helps shape attitudes, the predictive capability of that attitude is much greater (with moderate correlations) than if the attitude is shaped by indirect experiences (with weak correlations) (Foxall and Greenley 1997). Ultimately, attitudes are shaped by our previous experiences, directly, or indirectly (e.g. through advertising). It has been suggested that if attitudes are indeed shaped by the results of previous behaviour, and behaviour occurs as a result of these attitude stimuli, then the attitude-behaviour link can be

considered in terms of operant conditioning. This suggests a potential to take a behavioural perspective, but also to examine the impact of internal processes and tendencies on behaviour as well as external situational stimulus (Foxall and Greenley 1997).

Over the years, researchers have attempted to examine internal processes to better understand their influence upon behaviour. Models to predict attitude-consistent behaviours were developed principally by Fishbein and Azjen. These evolved with an aim to better predict behaviour through measures of attitude. Their Theory of Reasoned Action aimed to predict individuals' behavioural intentions- their intent to engage in certain behaviours, by examining that individual's beliefs (Fishbein and Ajzen 1975). The first regards the belief that a particular action will result in a given outcome (e.g. that buying a fast car will make them more appealing), weighted by the importance they place on that outcome. The second regards belief about the role of various social referents (such as family, friends, work colleagues), weighted by their motive to comply with those referents. Studies have shown a significant correlation between the behavioural intention and behaviour (Sheppard, Hartwick et al. 1988). In this instance, it is more the behavioural intention that is the predictor of behaviour, rather than attitude itself.

Azjen went on to develop the Theory of Planned Behaviour (TPB), drawing on the elements of the Theory of Reasoned Action, and adding in a measure of perceived behavioural control- the individual's perception that they can achieve a behaviour. This was seen to increase the correlation between behavioural intention and behaviour from 0.53 (Sheppard, Hartwick et al. 1988) to around 0.71 (Ajzen 1991). The downside of these approaches is that they still fail to explain why behaviour is not consistent between multiple situations.

While attention to internal psychological processes seems important and valid (Weilbacher 2003), to take the focus of research away from the stimulus- response model completely seems inadvisable. While cognitive and behaviourist paradigms have done much to enhance understanding of consumer choice separately, together they may prove more illuminating (Foxall and Greenley 1997). The interaction between cognitive and behaviourist paradigms may help to force behaviourists and cognitivists away from their respective comfort zone, to consider alternative theories and invigorate and enrich the research field. For the most part, the behavioural and cognitive research streams have developed and offered explanations of behaviour in isolation of each other. Fortunately, there are some streams of research that have developed and as a result alternative models have emerged, based upon the original associative

learning and operant conditioning models, but also integrating organismic variables into interpretations of behaviour. Though Skinner advocated within his theories, the decomposition of behaviour into its molecular parts (often known as the 'molecular' view of behaviourism, Skinner also suggested that to gain a complete understanding of behaviour, the selection history must be understood at the phylogenic level (biological), the ontogeny level (reinforcement history level) and, for humans and potentially primates, the cultural level (social group practices) This lead to the work by 'molar behaviourists' who argue in favour of considering the ultimate product of the subject's history, not the magnitude of an association, but rather the rate of reinforcement over time, the history of behaviour (Baum 2002; 2004).

2.2.3.1 The Stimulus-Organism-Response Model

The three-term contingency model, or stimulus → response → consequences (SRC) outlined earlier builds on the earlier work in behaviourism, with the S-R component derived from associative learning theory (outlined earlier in this thesis), proposed by Watson, and on the R-C component, derived from operant conditioning theory proposed by Skinner.

While an important step beyond the existing basic associative learning and operant conditioning models, this three-term contingency model seems to not necessarily be complete (McGuire 2000). Presenting one organism with the same stimuli as another will rarely garner the same response. It was suggested that it is the organism itself, and the internal processes of that organism (attention, perceptions, etc.) that help each organism derive meaning of the stimuli they face, with different organisms deriving different meaning of the same stimuli presented. The three-term contingency continued to fail to account for the impact of the organism, and the influence of factors internal to the organism on the meaning they derive from stimuli, or anticipation of consequences. Internal processes such as attention, perception, and memory impact upon the organism's view of the stimulus.

The stimulus → organism → response (SOR) (McGuire 2000) introduces the role of the cognitive mediating elements such as emotional response, attention, perception and memory, to help account for the role of the individual, with O representing cognitive mediating factors, and SOR thereby forming the basic foundation of social learning and cognitive-behavioural theories.

Models such as SOR, bringing together the external and the internal stimuli to help better explain behaviour, are most widely used in the discipline and practice of Cognitive Behaviour Therapy, and much of the theory surrounding cognitive-behaviour therapy can be attributed to the growth of these models. The growth of cognitive-behavioural models marked the move towards consideration of an individual's interpretation of events (Scott 1989). The underpinning of cognitive-behaviour models was that "thought processes, emotions and behaviour are interdependent phenomena", that along with discrete and visible behaviour, an individual's interpretation of events has a sizable impact on their behaviour (Scott 1989).

The work of Aaron Beck (Beck 1976) did much to further the consideration of mentalistic concepts in behavioural studies, suggesting that the meaning an individual derives from an event will impact upon their emotional responses. The influence of mental processes on emotions and behaviour has been considered before with studies such as that of Kelly, suggesting that an organism's anticipation of an event offers partial explanation of their resulting behaviour (Kelly 1955).

The stimulus-organism-response model has been previously used to examine consumers' purchase behaviour in stores as well as their store patronage behaviour (Buckley 1991). While the stimulus is manipulable by retailers, the organism and response components of the model are outside of their control, strictly within the limits of the consumer's skin. The stimulus-organism-response model recognised and utilised by Buckley takes on board the concept that the physical store attributes are interpreted as perceived store attributes- a process known as ecological validity (Buckley 1991). In addition to this, Buckley also examines the consumer characteristics as well as perceived item characteristics. While the latter is not being explored within this thesis, the role of the consumer characteristics is of specific interest.

Other studies have considered that certain stores themselves serve as reinforcing stimuli (Meoli, Feinberg et al. 1991)- so that the number and proportion of stores that are reinforcing stimuli in a mall for consumers has an impact upon the probability that a consumer will choose a particular mall. If stores qualify as reinforcing stimuli in terms of how they are liked by consumers, then we should expect to see differences between customers in the number of stores they 'like' in a mall, and hence, the attraction of the mall itself.

Given the potential of internal processes to act as stimuli for the individual, this chapter shall seek to see if some key internal tendencies can give greater illumination to help the interpretation of the choice of shopping centre.

Considering 'The Organism'

With cognition such a popular and dominating force within the field of psychology, and in itself varied in the components contained within the cognitive domain, a researcher examining the role of cognition in a wider behavioural context is left with a decision to be made about which of the internal evaluations and processes to consider. Along with attitude research, studies have found that consumer behaviour with respect to decision-making, may be controlled partially by personality variables. However, concepts such as personality do not initially look as though they would sit well within a behavioural perspective. They seem to be at odds with the behaviourist's rejection of the internal components and processes of the organism, that is, all things that cannot be directly observed. However, research in the personality domain suggests that such a concept can be linked to aspects of learning (Gray 1970), and so may be cautiously used in behavioural models to explain consumer choice. Further, behaviourists have themselves suggested that not only is behaviour shaped by the external environment, but that the effect of the environment has a role to play in developing personality also (Naik 1998). Skinner suggested that an individual's tendency to behave in a particular fashion would be driven partly by their expectations of the consequences of that behaviour, given previous past experience, and not from some unobservable internal factor. In previous examinations of individual differences, research in the human domain has referred to variations in behaviours like risk taking (Fraser, Gilliam et al. 2001) and activity (Sih, Kats et al. 2003) as personality types, while research on variations in non-human animals explain this using terms such as coping styles, strategies and, notably, behavioural tendencies (Dall, Houston et al. 2004; Sih, Bell et al. 2004). Personality may be seen from a behavioural perspective to serve as a proxy measure of previous experiences and expectancies about what effects their behaviour may have.

Previous studies in the area have long suggested that certain personality dimensions affect the role of susceptibility to reinforcement. Gray's reinforcement sensitivity theory (Gray 1970; Smillie, Pickering et al. 2006), suggested a link between biological systems and personality. The theory suggested that the amount an individual reacts to reinforcement is mediated by

personality dimensions, while Eysenck also suggested an explicit link between a personality dimension and conditioning (Eysenck and Levey 1972). This shall be explored further in later sections.

Personality can be used to convey the concept that a person's actions originate from some causal force within. Many researchers have suggested that personality has important behavioural consequences (Ozer and Benet-Martinez 2006; Carver and Scheier 2008). Perspectives and definitions of personality are many and varied, including Allport's definition (Allport 1961) that "personality is a dynamic organisation, inside the person, of psychophysical systems that create the person's characteristic patterns of behaviour, thoughts and feelings" (Carver and Sheier 2004 p5). This then, covers the underlying aspects of cognition- personality is not merely the collection of internal processes, it is the organisation of those processes, tied to the physical body, and used to determine the way a person relates to the world around them (Carver and Scheier 2008). No two people share the exact same personality, yet psychologists have, for years, attempted to measure personality across multiple dimensions, to help describe individuals in terms of multiple dimensions of personality. Personality provides a level of consistency within the individual, yet allows the individual to respond differently to different situations.

While there are many perspectives of personality in psychology, the dispositional and biological perspectives are the main ones considered for this research. The dispositional perspective of personality posits that people display consistency in their thoughts, feelings and behaviour- that a person's nature, or disposition, is carried with them, as part of them, and endures across time and space, not shifting aimlessly from one instant to the next (Carver and Scheier 2008). This implies that personality is a relatively stable and constant phenomenon, so that a person is the same today as they will be a year from now. The dispositional perspective derives from the fact that individuals are different from each other on many dispositional dimensions, and that a person's core personality is defined by the intersection of these multiple dispositions, with no two people sharing the same intersection of dispositions. The dispositional perspective allows for periods of unpredictability and short-term changes to core personality as people are affected by substantial events. Much personality research from the dispositional perspective has attempted to uncover which dispositional dimensions are most important to personality, and improve the ways in which these may be measured, catalogued and their interaction modelled. This trait-and-type approach is one of the most prevalent in the dispositional perspective of personality. Although there can be many types and sub-types, each individual is described as

having one type, which is largely fixed. Individuals are described as having varying amounts of many traits.

The attempt to categorise people according to their dispositions is not a new phenomena, though it has been a popular facet of modern psychology research. Attempts were made by Galen (circa 150AD), building on the earlier works of Hippocrates (circa 400BC) to categorise people into distinctive groups as choleric (irritable), melancholic (depressed), sanguine (optimistic) and phlegmatic (calm), based upon the belief that each personality type reflected an excess in one of four bodily fluids (Carver and Scheier 2008). This is reflected in the biological perspective of personality- that our bodies in some way determine our personality.

As new dimensions emerged, individuals were categorised into distinctive categories, or types. In the same way Galen placed people into one of four distinctive categories based on bodily fluid excesses, Jung categorised individuals as introvert or extrovert (Jung 1933). More recent attempts to 'categorise' people in personality research have moved away from the idea of grouping people into distinctive categories, and moved toward classifying people depending on where they lie on some continuous dimension. So, rather than classify a person as being distinctively introverted or extroverted, the emphasis is on where on some continuum of introversion/extroversion they lie.

Eysenck attempted to categorise individual's personality as one of four types, depending on how they scored on two continuous trait scales, introversion-extraversion (Jung 1933), and neuroticism (emotional stability). The introversion-extraversion dimension encompasses the disposition towards social interaction, liveliness, activeness and dominance. The neuroticism dimension concerns changeability of emotion- how quickly and how easily a person gets upset and distressed. Eysenck saw both extraversion and neuroticism dimensions as being rooted in the physical body, inseparable from the organism at a biological level.

Extraversion

Eysenck saw extraversion as tied to the degree to which the cerebral cortex is stimulated (Eysenck 1967; Eysenck 1981), with low levels of activation associated with a person being sluggish and drowsy, and high levels of activation associated with high levels of being alert. He suggested that introverts have a higher baseline level of cortical arousal than extraverts, leading

them to more easily become over-aroused, and for them to refrain from social interaction. Extraverts, with lower levels of cortical arousal are more likely to seek out external stimulation. Eysenck's extraversion scale is biologically based on constructs drawing from learning theory and from brain models developed by Pavlov (Zuckerman 2005). Eysenck went on to compare his extraversion personality type with Pavlov's consideration of 'weak' and 'strong' nervous systems (Eysenck and Levey 1972), suggesting a similarity between his 'introverts' and Pavlov's 'weak' personalities, and between 'extroverts' and 'strong' personalities. Eysenck's extraversion dimension of personality has several links to behavioural work. Not only is it drawing on the work of perhaps the first of the behavioural researchers, but conditioning experiments by Eysenck himself suggested a link between extraversion and conditionability. Eysenck examined whether the connection between an unconditioned stimulus (a puff of air in the eye) and a conditioned stimulus (a tone delivered through earphones) could be related to extraversion, though with mixed results (Eysenck 1965). Situational cues will vary in relevance to individuals, based on extraversion. The ties between Eysenck's personality dimensions and behavioural research further suggests that of the different personality inventories, Eysenck's is the most appropriate. This leads to the following hypothesis to be examined in study 1:

Neuroticism

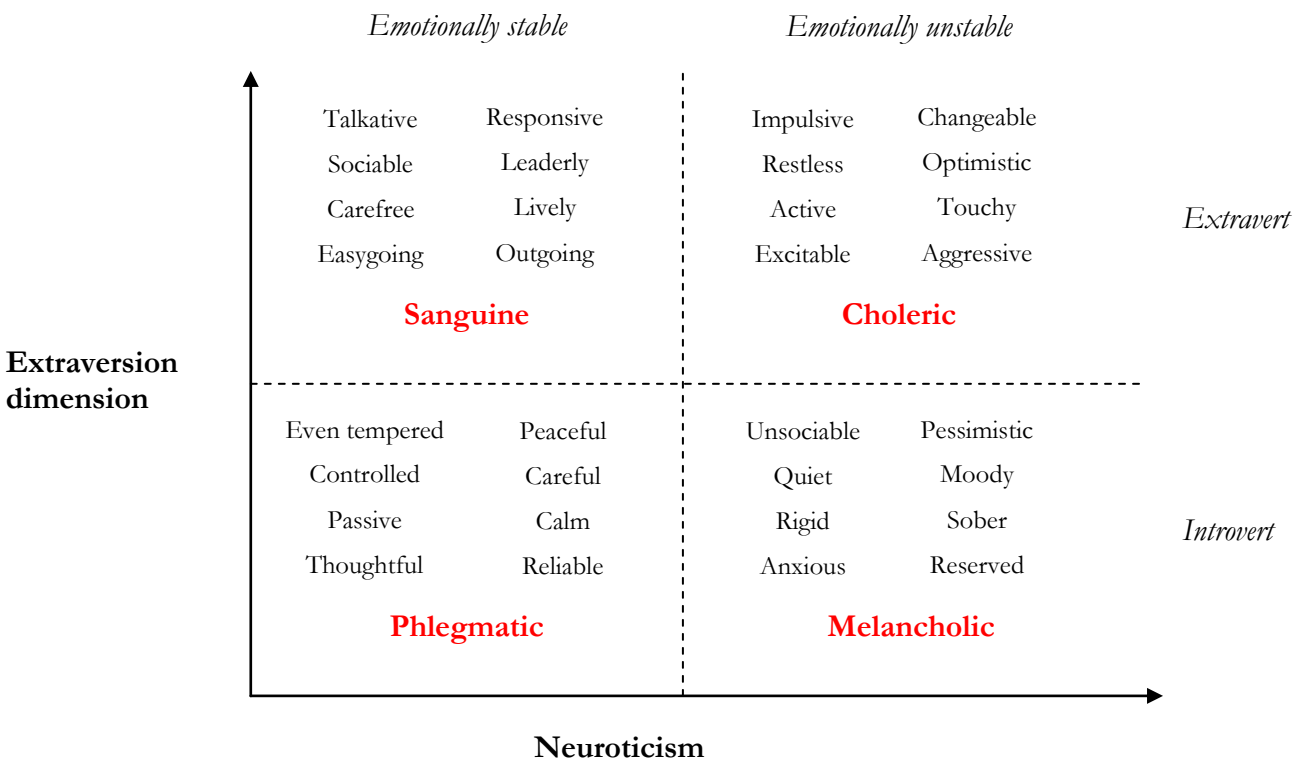
Eysenck proposed that people who are more highly aroused in the brain's emotion centres score higher on the neuroticism dimension of personality, which has high potential for individuals to learn from situations. Highly emotional people may be more easily conditioned than people with more stable emotions, as they will have many emotions in many situations. Studies by Eysenck and Gray repeatedly suggested that conditionability is predicted neuroticism, which relates more with emotional stability, though to a lesser extent than by extraversion. Nevertheless, neuroticism is likely to affect the importance of situational cues to an individual.

Examining each dimension alone suggests that personality cannot be considered a uni-dimensional construct. Not all introverts are alike, while not all extroverts are alike. Introverts can differ substantially from each other when they have very different levels of emotional stability, as can extroverts. The emotional stability of introverts and extraverts enabled Eysenck to develop a more satisfactory picture of personality types.

Examining the interaction of these dimensions allowed Eysenck to suggest four distinct personality types for individuals, based on whether they scored above or below the average on extraversion, and above or below the average on neuroticism. Comparisons may be drawn between the types identified by Eysenck, and the four types suggested earlier by Hippocrates and Galen. A summary of the interaction of Eysenck's extraversion and neuroticism dimensions, and the usual characteristics is provided in figure 2.14. Additionally, Galen's categories of personality are superimposed in blue to aid comparison.

Whether personality dimensions such as those mentioned above have a place in a behavioural perspective still must be considered. Eysenck's Personality Inventory was deemed the most appropriate of the alternative personality inventories, as central to it is its biological bases.

Figure 2.14: Categories of personality based on scores on Eysenck's Extraversion and Neuroticism scales



From the preceding discussion, two final hypotheses are proposed for study 1:

H2: Shopping centre response is affected by organism traits

H3: Organism traits relate to salience of situational stimuli

The conceptual model proposed for study 1 amends the stimulus-organism-response model put forward by Belk, to explore the effect of personality on mediating the impact of situational cues on shopping centre choice, as shown in figure 2.15 below.

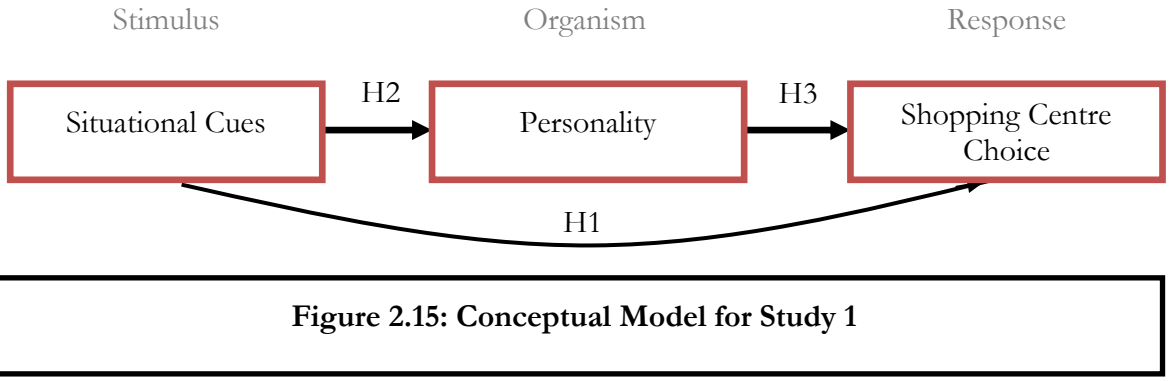


Figure 2.15: Conceptual Model for Study 1

2.2.3.1b Mehrabian and Russell's Stimulus-Response model

The earlier section introduced an extension of classical conditioning, the stimulus → organism → response model. The following section shall go on to discuss another theoretical model based on stimulus → organism → response. Contrasting to the approach outlined above, the second study shall go on to examine the role of a long time highly popular environmental psychology model of shopping centre behaviour, Mehrabian and Russell's model of affect, before considering whether it can be used to augment the BPM outlined earlier. This contrasts the 'trait' view of personality put forward to consider the organism's role above, to a 'state' view of emotions.

Several studies have attempted to examine the influence of environmental stimuli on consumer behaviour (Donovan & Rossiter 1982). They have looked at the role of atmospheric forces on likelihood of approaching various behaviours such as patronage, browsing, communication and satisfaction with performance in store directly, but more extensively, through the indirect influence of emotional response to these stimuli.

Though research on environmental stimuli on behaviour has been around for much longer, and can be related back to classical conditioning, work in this area can be traced back to Mehrabian and Russell, who suggested that situations should not be considered objectively as others purported (Belk 1975), but rather, subjectively, in terms of the emotional response of customers

when they perceive environmental forces. The influence of environment on behaviour is more formally examined within the discipline of 'environmental psychology'. In taking the stimulus-organism-response paradigm as the underlying basis for their research, Mehrabian and Russell sought to take a cognitive-behavioural approach to using environmental cues to explain behaviour in presenting their model (figure 2.16 below).

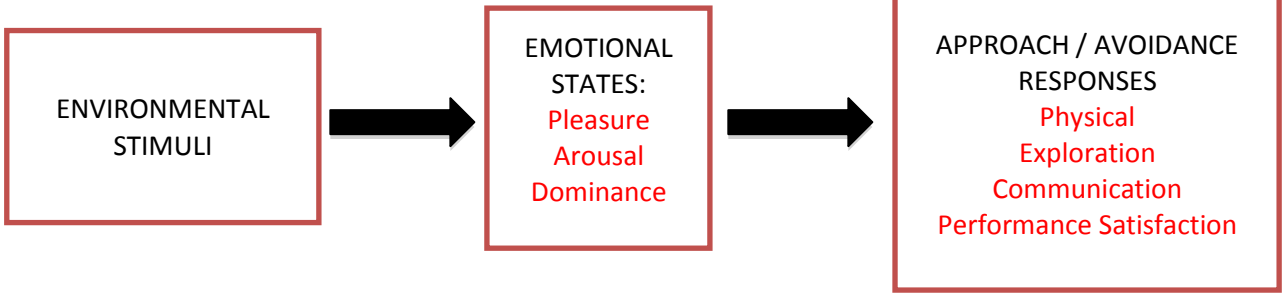


Figure 2.16: Modified Mehrabian-Russell Model
Source: adapted from Donovan et al (1994)

identified this as a useful application. Consumer research has remained one of the most popular application domains for Mehrabian and Russell's 'Stimulus-Response Model'. Donovan and Rossiter (1982) noted their dissatisfaction with considering store atmosphere as merely a component of store image, and suggested that it could be considered in its own right to explain consumer behaviour. They further suggested that to consider 'atmosphere' as a uni-dimensional construct is flawed, as environments, including retail environments, are more complex and made up of multiple dimensions. This is in line with Belk's assertion that, considering previous studies, situations can be divided up into overarching dimensions.

Stimulus- the Environmental Cues

In their original work, Mehrabian and Russell (1974) suggested examining stimulus quite generally in terms of the load (information rate) of an environment, which relates to degree of complexity (number of elements and changeability in the environment) and novelty (level of unexpectedness, surprise and lack of familiarity). In this way, they could account for the differential influence of environmental attributes across respondents. One respondent might view an environment as high in novelty, if they have never been in such an environment before while another respondent would view the environment as low in novelty if they had visited before.

Other approaches attempted to classify aspects of the situation, as discussed earlier. Such taxonomies of in-store factors already existed, and new ones were developed in subsequent years. Belk's taxonomy, mentioned earlier was an obvious pre-existing framework for describing the elements of the retail environment. Later, Foxall put forward a revised taxonomy with four dimensions (Foxall 1995). Research also trended towards examining different in-store factors in great detail, choosing to focus on just one aspect of the physical surroundings, namely the use of colour (Valdez and Mehrabian 1994), lighting (Markin, Markin et al. 1976), scent (Kent 2003), music tempo (Yalch and Spangenberg 1990) and type (Areni and Kim 1993), amongst many others. Studies in environmental psychology examined the role of environmental cues both directly on behaviour, but also on emotional response, suggesting that certain ambient and other situational cues can affect certain emotional responses, which will now be discussed in more detail. Discussion above highlighted the direct impact of stimulus on consumers, but many of these studies have looked at the direct and indirect impact of stimulus, via the impact of stimulus on emotional response. For example, the role of pleasure and arousal as mediators of aural influence on consumer behaviour is a popular notion, specifically in eliciting favourable product and store evaluations (Dube and Morin 2001). Much of this influence appears to happen at an unconscious level, as in many of the studies, the majority of respondents report being unaware of music (North, Hargreaves et al. 1999).

High tempo music can result in heightened arousal, and in some cases, may even cause anxiety (Yalch and Spangenberg 1990). Unfamiliar music seems to lead to higher levels of pleasure (Yalch and Spangenberg 2000).

Different colours have varying levels of success in promoting feelings of pleasure (Bellizzi and Hite 1992) and attracting consumer attention, yet paradoxically, it appears those colours eliciting the greatest physical draw to customers (reds) were those reported to be least pleasant (Bellizzi, Crowley et al. 1983), as individuals tend to prefer 'cooler' colours such as blues and greens (Babin, Hardesty et al. 2003).

The Organism- Emotional Responses

For the intervening 'organism' aspect of their model, Mehrabian and Russell (1974) proposed that emotional response could be considered with three emotional states, that mediate the

approach-avoidance behaviours, and there emotional states are 'pleasure', 'arousal' and 'dominance'. Earlier sections considered the direct impact of physical and other situational cues on behaviour directly. The following section shall go on to introduce emotional responses elicited in retail environments and explore how situational cues have been found to impact emotional response.

The pleasure-displeasure scale is a continuum relating to how well the environment inspires feeling of happiness, joyfulness and pleasure. The physical attributes of the shopping centre are important to the pleasure a consumer can derive from a shopping trip, and can be manipulated by retailers to build up customer perceptions of shopping value and loyalty (Babin and Attaway 2000).

Arousal-nonarousal is a continuum, one end of which is a sleepy inactive state while at the other is a state of excitement and high stimulation. Enjoyable situations are expected to increase levels of arousal (Mehrabian & Russell 1974). Also, in examining the influence of 'load' on consumers, research suggested that high levels of load directly influence arousal- high load produces high arousal while low load produces low arousal (Mehrabian & Russell 1974). Individual differences introduce a level of complexity to this however, as some individuals are more predisposed to filter stimuli than others. A measure of physical surroundings- the salience of ambient cues is to be included in this study, and potentially offers a measure of situational load.

If we are to consider information load in terms of the number or magnitude of situational cues affecting consumers, it is important to consider how cues beyond the mere physical surroundings might affect consumers also. If information load relates to the amount of situational information to be processed, then by extension, it is important to consider cues beyond the physical surroundings- cues from social surroundings, temporal factors and regulatory forces.

Other studies have suggested (Ng, 2003) that the level of arousal evoked by an environment is directly linked to the information load (i.e. novelty and complexity). Novelty to a limited extent can be considered in terms of how frequently the shopping centre has previously been visited by a respondent. This leads to a further hypothesis that:

Finally, dominance-submissive is an emotional response relating to degree of control and freedom the respondent feels that they have in the environment. When Mehrabian & Russell first developed their three emotional response measures they did not attempt to suggest the way in which consumer behaviour is affected by dominance.

Later researchers pointed to parallels with Wundt's earlier research (Mandler 1979) which also identified three dimensions of emotion- pleasure-displeasure, tension-relaxation and excitement-quiescence.

Later studies using Mehrabian & Russell's model suggested dropping the dominance dimensions, which was asserted to be ambiguous and required interpretation by respondents (Russell & Pratt 1980). This led to the development of Russell's model of affect, a two dimensional consideration of emotional response, and a means in which to classify environments based on the combined values of arousal and pleasure. This enabled environments to be classified as distressing, gloomy, relaxing and exciting (see figure 2.17) depending on the sort of emotional states they evoke in respondents.

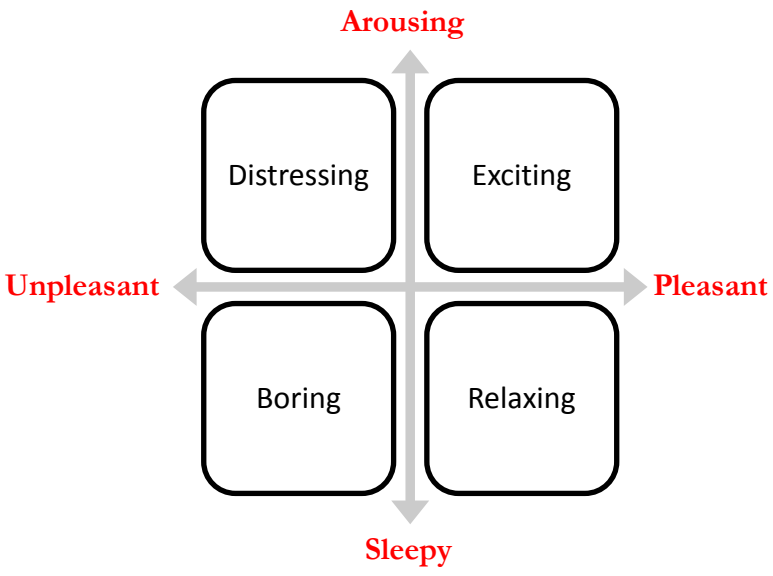


Figure 2.17 The Russell Model of Affect
Source: adapted from (Lovelock and Wirtz 2010)

Donovan and Rossiter (1982) noted the growing trend at the time for retailers to manipulate store atmosphere significantly to affect its consumers, and questioned whether the magnitude of the influence of store atmosphere stimuli (layout, lighting, colour, music, etc.) was being

accurately reported. Indeed they suggested that such effects were being overstated based on anecdotal evidence.

They suggested that the effects of store atmosphere on consumers are not actually behavioural, but instead are emotional states that, due to being transitory, are difficult to recall and to verbalise. Two problems which are compounded by the prevailing timing of data collection- after the effect.

A great deal of environmental psychology research emerged which sought to establish exactly how environmental cues affect emotional responses, based on Mehrabian and Russell's framework. Though discussion earlier in the chapter has explored the wealth of research examining the impact of situational stimulus on consumers responses in retail environments, the next section shall discuss some of the studies which have looked more specifically at the impact of situational stimulus on consumer emotional responses, as per Mehrabian and Russell's framework.

Studies in the area of retail environmental cues and consumer emotions have tended to look at very specific components in isolation. Studies choose just one aspect of the ambient cues to study, yet these are all forces that together avail the consumer's senses in stores, affecting their emotional responses to varying degrees. Examining situational cues in isolation enables more detailed understanding, but fails to account for combination effects.

Studies have not just looked at these ambient cues, but also looked at specific aspects of them too. Music has been broken down and scrutinised in terms of its tempo (Milliman 1982) and style (North, Hargreaves et al. 1999), colour has been divided and studied in terms of its hue (the colour description), value and chroma (Thompson, Palacios et al. 2002). Value and chroma offer a means to classify colours in terms of saturation, with high chroma colours being rich, and high value colours being paler pastel colours (Gorn, Chattopadhyay et al. 1997). Scent has been examined in terms of its congruence with the atmosphere (Mitchell, Kahn et al. 1995) and its pleasantness (Morrin and Ratneshwar 2000).

Colour has been shown to impact directly on behaviour as indicated earlier, but also on physiological (Kaiser 1984) and emotional responses. Different colours have varying levels of success in promoting feelings of pleasure (Bellizzi and Hite 1992) and attracting consumer

attention. Gorn et al (1997, p1391) reported that red hues induce excitement while blue hues induce relaxation. Paradoxically, it appears those colours eliciting the greatest physical draw to customers (reds) were those reported to be least pleasant (Bellizzi, Crowley et al. 1983), as individuals tend to prefer 'cooler' colours such as blues and greens (Babin, Hardesty et al. 2003). Colours with greater intensity (saturation) have been found to be more arousing (Berlyne 1971). Berlyne (1971, p68) identified that red is more intense than blue, thereby confirming that red is more intense than blue. The influence of colour on emotional response and behaviour is not conclusive, and not within the scope of this study to investigate, so the more general measure of, 'load' on response, outlined above shall be examined.

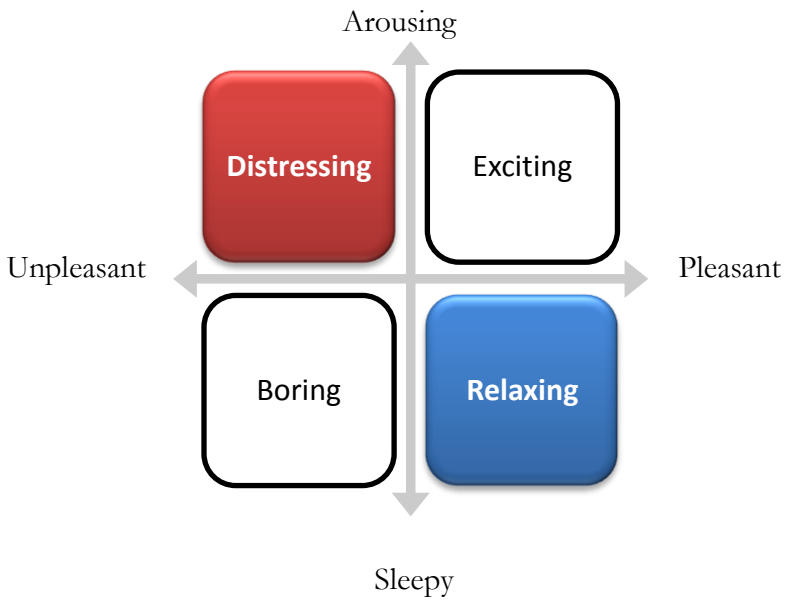


Figure 2.18 The Russell Model of Affect with Colours mapped according to theory
Source: adapted from (Lovelock and Wirtz 2010)

As well as affecting emotional response, environmental cues have been shown to effect behaviour directly. This was discussed earlier on. Moreover, studies following Mehrabian and Russell and repeatedly examined the link between emotional response and behaviour, with some suggesting (Donovan & Rossiter 1982) that emotional response mediates the stimulus-response relationship.

H9 Emotional Responses relate to variables in the behaviour setting

The Response- Approach/Avoidance Behaviours

The ultimate outcome of Mehrabian and Russell's (1975) model is behaviour in terms of approach or avoidance, a concept which Foxall later considered (1997). They classify approach as desire to "move towards, stay in, explore, interact supportively in, perform well in, and return to the environment" (Donovan and Rossiter 1982, p41), while avoidance is the opposite of this.

In their research, Donovan and Rossiter (1982) went further than to merely use store atmosphere to explain patronage behaviour, but also to explain behaviour of consumers in store. The behaviours they moved on to study were of significant interest to retailers. Patronage is a crucial behaviour to encourage in consumers, but is not necessarily a precursor to purchase. Interestingly, Donovan and Rossiter avoided discussing 'purchase' or 'purchase intention' as a behaviour of interest, which bucks a key trend in consumer research. Instead they consider other in-store behaviours that have been linked with purchase- exploration (browsing within the store), communication (talking with other shoppers and sales personnel) and degree of enhancement of performance satisfaction relating to task performances (repeat-shopping frequency), with their research favouring general behavioural intentions on these approach-avoidance domains. Rather than measure the four approach-avoidance intentions with scale measures, they used just eight questions (Mehrabian and Russell 1982 p44-45).

In examining the link between organism and response, research suggests that pleasure is the main driver of behaviour (Donovan and Rossiter 1982), in line with earlier studies. Mehrabian and Russell favoured measuring behaviour in terms of level of approach verses avoidance. They suggested that the pleasure-displeasure continuum (with pleasure relating to the high end of the scale) is related to approach behaviours. High pleasure leads to high levels of approach while low pleasure (displeasure) leads to high levels of avoidance.

As Donovan et al (1994, p292) indicate, “prior conditioning due to stores’ atmospheres could lead to long-term selection or avoidance of the stores themselves”, confirming the idea that classical conditioning may have long-term impact on store selection and preference. This is a difficult concept to verify without doing a longitudinal study in which emotional responses and various types of reinforcement are measured at all shopping centres visited by respondents. However, when we examine respondents reporting on a visit to their most preferred shopping centre, we would expect to see high levels of pleasure.

'Arousal' typically operates as an amplifier, upon the strength of the approach-avoidance behaviour. In pleasant environments, arousal becomes a strong predictor of approach behaviour intentions. In unpleasant situations, high arousal leads to stronger avoidance behaviours than low arousal. However, when the situation evokes a neutral response in terms of pleasure, moderate arousal has the greatest influence on approach behaviours, while high and low arousal lead to avoidance behaviours. In a later study Donovan et al (1994, p292) again confirmed the "bi-directional aspect of arousal and pleasure", indicating that if retailers are confident that their store is perceived as pleasant, they should consider intensifying arousal through the use of bright colours and upbeat music, to further increase approach behaviours, though this must be done carefully to avoid decreasing the pleasantness of the environment.

Dominance did not appear to in any way predict approach behaviour intentions. A cautionary note against the use of Mehrabian and Russell's stimulus 'information rate' (load) was offered by Donovan and Rossiter (1982), who found that it did not apply well to in-store factors. They raised the call for a new taxonomy of these in-store factors, which will be developed in the process of this study.

Donovan and Rossiter were the first to emphasise the value of the Mehrabian-Russell model in explaining approach-avoidance behaviours in the context of retail environments. Study 2 will go on to examine whether the Mehrabian-Russell model is applicable at the level of the shopping centre rather than just store, and also, to determine whether it can improve the predictive capacity of the Behavioural Perspective Model, in explaining consumer behaviour with respect to shopping centre choice and behaviour.

However, physical approach behaviour may also give some indication of future shopping centre. Though it does not capture previous experience, being a transitory state, 'pleasure' should predict physical approach behaviour.

Another tenet of Donovan et al's study that shall also be explored is an area suggested for future research- working out what construes a pleasant environment. Therefore, specific stimuli which correlate strongly with 'pleasure' may be a good initial avenue to explore to increase levels of pleasure. Other studies have examined stimuli in detail at the store level, as previously discussed,

but this study should provide a starting point to identifying stimuli in the shopping centre worthy of examination in the future. Further hypotheses for study 2 are therefore:

H10: Shopping centre response is affected by emotional responses.
H11: Different shopping centres will yield different levels of emotional response

The preceding discussion has considered the role of Mehrabian and Russell's model, which takes a cognitive-behavioural stance. More recently, several studies have sought to examine the link between Mahrabian and Russell's affective variables and behavioural variables from the BPM (Foxall & Greenley 1997). They questioned the theoretical underpinning of Mehrabian and Russell's model, and suggested it be considered in light of the BPM instead.

Foxall & Greenley (1997) and later Foxall & Yani-de-Soriano (2005) sought to examine whether there were similarities between BPM constructs and constructs from the Mehrabian-Russell model, as well as examine the relationships expected within the Mehrabian-Russell model, which have previously been established. The present study will adopt a different way of measuring levels of utilitarian and informational reinforcement, and also apply the frameworks in a different context from the previous research.

After looking at consumer behaviours in terms of openness-closeness of the behaviour setting, and utilitarian and informational reinforcement associated with the setting, Foxall & Yani-de-Soriano (2005) sought to explore whether emotional responses were linked with these dimensions.

Foxall & Yani-de-Soriano (2005) suggested that the emotional response pleasure can act as an index of utilitarian reinforcement. As described earlier utilitarian reinforcement relates to functional and pleasurable consequences of a behaviour. A situation with high utilitarian reinforcement will likely derive a high pleasure response from consumers. As such, they hypothesised that "Pleasure will be higher for responses associated with consumer situations maintained by relatively high levels of utilitarian reinforcement" (p520). In this study, they found that in situations maintained by relatively high levels of utilitarian reinforcement, the pleasure emotional response put forward by Mehrabian and Russell (1974) is higher than in situations maintained by relatively low levels of utilitarian reinforcement.

Foxall & Yani-de-Soriano (2005) also looked at arousal- which is a measure of the novelty, complexity and information load of an environment, and suggested that informational reinforcement, which is a measure of performance feedback is expected to be related to arousal. They hypothesised that "Arousal will be higher for responses associated with consumer situations maintained by relatively high levels of informational reinforcement than for those maintained by relatively low levels of informational reinforcement" (p520). They confirmed that consumers in situations characterised by relatively high levels of informational reinforcement have higher levels of arousal emotional response than in situations characterised by lower levels of informational reinforcement.

Dominance, a scale measure of the emotional response to the level of control exerted over an environment, that has so often been dropped because of its ambiguity and subjective nature (Russell & Pratt 1980), was hypothesised by Foxall & Yani-de-Soriano (2005) to relate to the relative openness-closeness of the setting. Foxall & Greenley (1997) had earlier suggested that the difficulties faced with the dominance dimension may relate to the ways in which it was applied in previous research. Foxall & Yani-de-Soriano (2005) suggested that the lack of variance in dominance between settings was due to the fact that previous research had only considered a single type of setting. Studies had failed to come up with a "theoretically justified typology of consumer situations" Foxall & Greenley (1999, p150). Settings in previous studies were argued to be random, convenient and intuitively selected, providing a very narrow range of consumer experience (Lutz & Kakker 1975; Donovan & Rossiter 1982). Following on from an earlier study that uncovered dominance varies depending on openness-closeness of the setting (Foxall & Greenley 1997), they hypothesised that "Dominance will be higher for responses associated with those consumer situations characterized by the relative openness of the setting scope than for those characterized by the relative closeness of the setting scope" (Foxall & Yani-de-Soriano 2005, p520). Again, they discovered that in behaviour settings characterised as relatively more open, dominance was higher than relatively closed settings.

After considering whether the emotional response components of the Mehrabian and Russell model could be related to the reinforcement and openness-closeness components of the BPM, Foxall & Yani-de-Soriano (2005) went on to consider the connections between levels of approach-avoidance for behaviour settings with different levels of openness-closeness and settings classified by relatively different levels of utilitarian and informational reinforcement. The basis of this was that approach would be highest for those situations with the highest levels of

(both utilitarian and informational) reinforcement, and also for the most open settings. This lead to their hypotheses that "Approach–avoidance scores for accomplishment and hedonism will significantly exceed those for accumulation and maintenance" (p521). Interestingly, Foxall & Yani-de-Soriano (2005) could not completely accept this hypothesis, and it did not match up precisely for the different classifications of behaviour setting. They also hypothesised that "Approach-avoidance scores for open consumer behaviour settings will significantly exceed those for closed settings," (p521) finding that approach is indeed higher in situations characterised as more open.

Foxall & Greenley (1998) suggested that the different types of behaviour setting in terms of openness-closeness, and relative levels of utilitarian and informational reinforcement, could be characterised in terms of the varying levels of emotional response (pleasure, arousal and dominance), summarized in figure 2.19 below.

Figure 2.19 The Behavioural Perspective Model Contingency Matrix

	BEHAVIOUR SETTNING SCOPE	
	Closed	Open
ACCOMPLISHMENT (high utilitarian, high informational)	**Contingency category 2** FULFILLMENT + P + A - D	**Contingency category 1** STATUS CONSUMPTION + P + A + D
HEDONISM (high utilitarian, low informational)	**Contingency category 4** INESCAPABLE ENTERTAINMENT + P - A - D	**Contingency category 3** POPULAR ENTERTAINMENT + P - A + D
ACCUMULATION (low utilitarian, high informational)	**Contingency category 6** TOKEN-BASED CONSUMPTION - P + A - D	**Contingency category 5** COLLECTING AND SAVING - P + A + D
MAINTENANCE (low utilitarian, low informational)	**Contingency category 8** MANDATORY CONSUMPTION - P - A - D	**Contingency category 7** ROUTINE PURCHASING - P - A + D

Source: Adapted from Foxall & Greenley 1998

Consideration of how aspects of Mehrabian & Russell's theory can be considered in terms of the BPM opens up the possibility of being able to integrate the emotional response and approach constructs into the BPM model. This is the key extension of the BPM proposed in the current study, which will be presented in the following section.

2.3 Conceptual models

2.3.1 Study 1

The conceptual model developed for study 1 is based upon the simple stimulus-organism-response model but forward by Belk (1975) and essentially study 1 seeks to examine the direct and indirect influence of situational cues upon shopping centre choice. However, as it is not possible to directly examine the mediating influence of a scale variable upon the association between a scale independent and categorical dependent variable, this shall be broken down into separate hypotheses. The overarching hypotheses for study 1 are presented below.

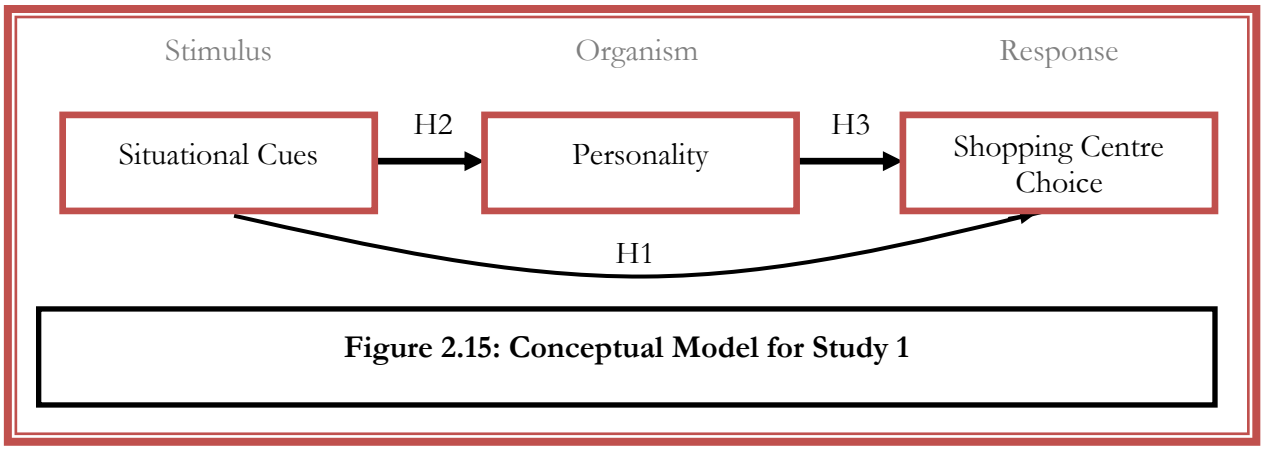


Figure 2.15: Conceptual Model for Study 1

Table 2.4: Summary of Study 1 Overarching hypotheses	
Hypothesis Number	**Hypothesis**
H1	Shopping Centre response is affected by situational variables
$H1_0$	Shopping Centre response is not affected by situational variables
H2	Organism traits relate to salience of situational stimuli
$H2_0$	Organism traits do not relate to salience of situational stimuli
H3	Shopping Centre response is affected by organism
$H3_0$	Shopping Centre response is not affected by organism

2.3.2 Study 2 Conceptual Model

The conceptual model for study 2 essentially integrates elements of Mehrabian and Russells (1974) model of affect into Foxall's (1992) BPM. This can be visualised in figure 2.20.

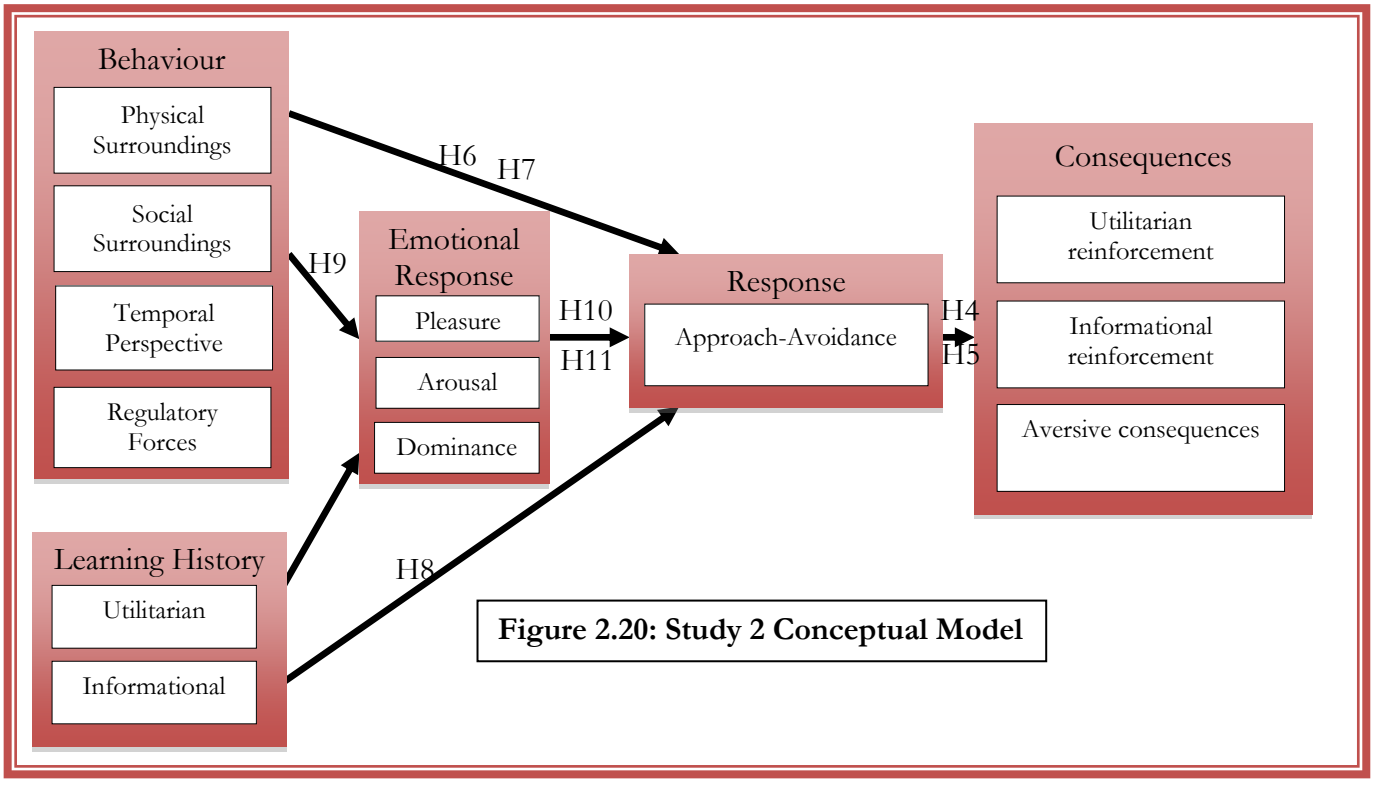


Figure 2.20: Study 2 Conceptual Model

Table 2.5: Summary of Study 2 Overarching Hypotheses	
Hypothesis Number	**Hypothesis**
H4	Shopping centre response is affected by consequences of the visit
$H4_0$	Consequence of visit has no affect on shopping centre response
H5	Different Shopping Centres will yield different levels of consequences
$H5_0$	Different Shopping Centres do not yield different levels of consequences
H6	Shopping centre response is affected by variables in the behaviour setting.
$H6_0$	Behaviour setting variables have no affect on shopping centre response
H7	Variables in the Behaviour Setting vary in strength across shopping centres.
$H7_0$	Variables in the Behaviour Setting do not vary in strength across shopping centres
H8	Shopping centre response is affected by the consumer's learning history
$H8_0$	Consumer learning history has no affect on shopping centre response
H9	Emotional Responses relate to variables in the behaviour setting
$H9_0$	Emotional Responses do not relate to variables in the behavior setting
H10	Shopping centre response is affected by emotional responses.
$H10_0$	Emotional responses have no affect on shopping centre response
H11	Different shopping centres will yield different levels of emotional response
$H11_0$	Different shopping centres will not yield different levels of emotional response

2.4 Chapter Summary

This chapter has focussed on an examination of literature in the areas of consumer behaviour, and retail patronage, with gaps in research into retail patronage highlighted. The review of the theories put forward in these areas allowed for generation of conceptual models and related hypotheses to be put forward for two empirical studies, which aim to examine how well models previously used to examine purchase choice can explain shopping centre patronage behaviour. The next chapter will go into detail of the methodological approach used for the two studies. The philosophical and methodological approach will be highlighted, before presenting details of how the empirical work was conducted.

3. Methodology

The previous chapter highlighted the theoretical stance of this thesis, and proposed two studies, the first, based upon and then expanding upon the three-term contingency to examine its use in explaining shopping centre patronage. The second study builds upon the first, and considers the more complex but consumer specific BPM, integrated with a model from environmental psychology, used to examine shopping centre patronage behaviours. Hypotheses were developed for the original and expanded models for the two studies. The following chapter outlines the methodological component of the thesis, used to examine these hypotheses and therefore test the models. Firstly, a brief discussion of philosophical perspectives and clarification of the philosophical stance adopted for the empirical work is provided. Following on from the philosophical debate, the methodological framework for the study shall be outlined. Finally, the methods used to create, verify and refine the primary data collection forms and processes for the two studies shall be outlined, along with the mode of data collection and overview of the survey samples. Preliminary information about the metrics used in the studies shall finally be provided.

Research Objectives:

- To review the extant literature to determine a suitable approach to examine shopping centre choice
- To explore whether an existing 'purchase' level theoretical model of consumer behaviour can be adapted to examine consumer behaviour at the level of shopping centre choice
- To identify the most salient forces affecting patronage behaviour at the shopping centre level
- To make recommendations to retailers based on the most salient forces affecting

To address the thesis research objectives (recapped above), a series of hypotheses were developed from the extant literature and presented in the previous chapter (summarised at the end of chapter two). By testing these hypotheses using suitable statistical analyses, on data created from robust metrics measuring model variables, it is hoped to determine whether the models specified in any way explain patronage and consumption behaviours with respect to shopping centres. The intention of this chapter is to emphasise and ensure that the empirical

research on the theoretically grounded hypotheses is conducted in a rigorous and meaningful fashion.

3.1 Philosophies of Behaviourism

Strictly speaking, Behaviourism should be considered as the philosophy of the science of behaviour analysis (Baum 2005). It sets the rules and ideas on how behaviour analysis research is conducted. Within behaviourism as a philosophy of science, there are several philosophical positions that may be adopted, the two most significant of which are the methodological behaviourist stance, and the radical behaviourist stance. These fundamentally relate to the belief in the existence of unobservable factors which may impact on behaviour, and how such variables, if they do indeed exist, actually influence behaviour. Not to be confused with the theories of behaviourism outlined in chapter 2, Radical Behaviourism and Methodological Behaviourism are but two of many philosophical frameworks for approaching behaviourist research (Staddon 2001). They outline the overarching stance for a researcher, proposing the most suitable way to view subjects and constructs of value to the research.

Having developed alongside behavioural theories, by the behaviourist founders, some philosophical frameworks go hand in hand with certain theories; for example, with Skinner's Operant Learning and Analysis of Behaviour, favouring his Radical Behavioural perspective; and Watson's associative learning (classical conditioning), favouring his Methodological Behavioural perspective. The contemporary methodological behaviourist believes that to be scientific in psychological research, only objectively observable and measurable phenomena are to be considered. However, it allows for the possibility that internal processes may present partial explanations of behaviour. The radical behaviourist believes that only objectively observable and measurable phenomena are to be considered, and that any hidden internal processes are meaningless to analysis of behaviour.

3.1.1 Methodological Behaviourism

Watson's manifesto suggested that behaviourism should ignore introspection in attempts to explain behaviour (Watson 1913). As the forefather of the methodological behaviourist stance,

he believed that methodological behaviourism grounds psychology firmly in science. Watson's methodological behaviourism purports that mental states and processes should not be examined in the pursuit of behavioural explanation in psychological research, as it provides nothing to aid understanding. Methodological behaviourism places emphasis on using scientific means of enquiry only, using hypothetico-deduction to establish potential explanations of behaviour then subjecting hypothesis to controlled experiments. Tests must be repeatable by other experimenters, for validation, and results generalisable via inferential statistics to the wider population being studied.

At the centre of the Methodological Behaviourist approach, is the notion that the discipline should take an experimental approach (Watson 1931), be objective, and empirical, and repeatable. In order to do so, the methodological behaviourist stance only allows observable phenomena to be included in scientific enquiry, if they can be 'operationally defined', in terms of the associated observable phenomena, and in so doing, be verifiable by other researchers. The approach can be maintained as scientific- empirical, observable and repeatable, as long as the unobserved phenomena to be 'inferred' (such as states, mechanism or processes), are defined in operational terms, with respect to the publicly observable phenomena. In this way, methodological behaviourists can maintain their position as scientists, while allowing for the existence of mental concepts. However, some have criticised this approach, as the theoretical concepts of the unobservable phenomenal belong to a different dimension from the observable phenomena.

3.1.2 Radical Behaviourism

Radical Behaviourism is strictly Monist, discounting the notion of other dimensions, such as the mental dimension allowed by later Methodological Behaviourists. However, the Radical Behaviourist does not completely ignore the internal processes or 'behead the organism' (Skinner 1976), acknowledging physiological stimulation as an important facet of behaviour. Although the radical behaviourist rejects the concept of dimensions other than the measurable, physical dimension, he accepts that part of the environment is not public, in that it may only be accessible to one organism, yet these private activities (such as thinking, perceiving or recalling) are important not as aspects of a mental dimension, but as part of the behavioural dimension, and can be publicly verifiable under the right conditions. Radical behaviourists are interested in determining which contingencies lead to the development of private phenomena, and how such

phenomena influence public behaviour. These internal 'mental' phenomena, characteristically private and inaccessible to anything other than the organism being studied, can exist to the radical behaviourist, when they can be described as behavioural components, i.e., in terms of publicly observable behaviour.

From the Radical Behaviourist approach, behaviour is based on the interaction between an organism, and the environment in which it exists (Skinner 1981), and this is the focus of behavioural study. It is not simply a function of the physiology of an organism itself, but the ways in which it interacts with its environment. Skinner proposed that factors in the surrounding environment could instead be measured to explain behaviour. External or environmental factors can be manipulated in the laboratory to modify change in behaviour, and this is scientifically measurable.

Radical behaviourists see behaviour as a function of three components- genetic endowment, the material environment, and the social/cultural environment. Behaviour adapts to the changing environment, and those who do not adapt, die out- this is how genetic endowment can predispose organisms to behave in a certain way. The material environment presents organisms with reinforcements and punishments which shape the organism's behaviour, and the social/cultural environment presents social/cultural contingencies which affect the broader behaviour of the social group to which the organism belongs. Thus, behaviour can be categorised at different levels. Phylogenic behaviour is shaped during the history of an organism's species, while ontogenic behaviour is shaped during the lifetime of the individual organism. Ontogenic behaviour can occur at an individual level, or, at a wider level, as a function of the organism belonging to a social group.

Radical Behaviourism adopts a Pragmatic epistemology, in that it is less interested in what can be learned, than how that knowledge can be put to use for meaningful gain. The emphasis is on the practical applications of the outcome, how enquiry can enable us to make sense of what happens to us. One of the early philosophers to develop the concept of pragmatism was William James (1842-1910), who presented the pragmatic approach as a theory of truth.

Radical behaviourists view language, or 'verbal behaviour' as a measurable operant behaviour, which is reinforced by the verbal behaviour of others, and in turn reinforces the behaviour of others. Humans are unique in their ability to communicate with one another via language. A

person engaging in verbal behaviour requires a listener to be present to reinforce the behaviour. The actions of the listener provide the consequences. Verbal behaviour enables humans to pass on advice and information on how to behave. In some situations, behaviour resulting from verbal reinforcement is less powerful than one learned in person. As a preservation mechanism, verbal reinforcement shows as strong a power to affect behaviour as direct reinforcement. A person advised to avoid drinking a poison does so as a self-preservation mechanism. They do not need to experience the effect first hand, or witness its affect on another to avoid it. A consumer who has had a bad experience with a particular shampoo is quite likely to avoid buying that shampoo in future. However, had that consumer not had the bad experience, but instead been advised to avoid a particular shampoo by a friend, because that person had a bad experience, the likelihood of the consumer purchasing that shampoo will probably still decrease, but the effect may not be as long lasting as if it resulted from the consumer's own negative experience. Out of curiosity, the consumer may eventually decide to try the product for herself.

Radical behaviourists are concerned with using whatever data is available, in an empirical, objective way, to seek knowledge about behaviour. Where there is incomplete data, as there is where unobservable variables are present, radical behaviourists attempt to interpret the data rather than endeavour to predict or control behaviour.

3.1.3 Radical versus Methodological Behavioural Perspectives

Both methodological behaviourists and radical behaviourists agree that many components of behaviour are not publicly observable. The crucial difference between these approaches is that methodological behaviourists argue that these unobservable phenomena are from other dimensions (rather than the behavioural dimension) as they are not apparent to anyone other than the subject, while radical behaviourists reject this, arguing that these private phenomena are still in the physical/material/behaviourist dimension. Radical behaviourists see that methodological behaviourism, and the concept of mentalism can obscure and misinterpret important facts, and impede the search for genuine variables, making incorrect assumptions which ultimately lead to false accounts for behaviour.

A behavioural approach was deemed appropriate in this study of shopping centre choice, as choices made at all levels, and the types of activities engaged in at shopping centres, appear to change over time, to reflect the experiences and the external conditions that affect the individual. A behaviour that is constantly changing, that is difficult to be described or explained

rationally, is one that is difficult to measure. Formulas of shopping centre choice, like the gravity models and spatial interactions models, have been able to explain and predict shopping behaviour convincingly, but fail to account for individual differences, or variations in an individual's perspective depending on their situation. By taking a behavioural approach, it is hoped to explore some factors at work on consumers, and see whether consumers may be affected by them. It was felt that bringing these factors into a more formal, rigid construct would lead to a very constricted view of an ever changing behaviour. Instead, by maintaining a more exploratory approach, it is hoped to avoid any such unyielding analysis.

Radical behavioural approaches to examine complex behaviours often occur as 'interpretations'. Rather than attempting to predict and control behaviour, a radical behaviourist approach instead seeks to interpret it (Skinner 1976). This interpretation is concerned with examining the contingencies that produce a behaviour (Foxall 1999).

3.2 Philosophy of Research and Methodological Framework

Research Philosophy

The research philosophy adopted for this research is positivism. A brief overview of the philosophy and why this is being adopted over an alternative dominant stance in consumer research shall be provided. It has been argued that positivism is the dominant paradigm in consumer research (Ozanne and Hudson 1989). The debate between use of positivist verses interpretivist in consumer research has been taken up several times before, with discussion, sometimes described as acrimonious (Hirschman 1989) regarding which approach is favourable, and also of whether or not the approaches are in fact incommensurable, so different that comparison becomes meaningless (Tadajewski 2008).

Positivism, which some academics call instead 'naturalism' (Bhaskar 1979; Heath 1992) tends to favour methods adopted in the natural sciences, believing the methods robust while still relevant to research further afield in the social sciences (Heath 1992). While many researchers have said that there are fundamental differences between the positivist and naturalist approaches that precludes reconciliation, or even comparison (Hirschman 1986; Ozanne and Hudson 1989), others suggest that it is only when considering the doctrinaire paradigms that they are fundamentally incompatible (Heath 1992). When the more liberal positions towards positivism

and humanism (or interpretivism) are compared, the differences are much smaller, and they are more commensurable. Heath's full summary of the key ontological, epistemological and methodological issues in the doctrinaire and liberal flavours of positivism (which he calls naturalism) and interpretivism (though Heath focuses on this as humanism, for intents and purposes the meaning is the same) is presented in appendix B, but some of the important distinctions will be discussed here.

Ontologically, positivists view that one reality exists, independent of the people that observe it (realism), though as Heath points out, liberal positivism asserts that one reality exists, but allows that multiple interpretations exist. The ontological stance of interpretivists is instead that multiple realities exist, with doctrinaire interpretivism asserting all of these realities have equal validity while the more liberal version (which Heath describes as 'conservative humanism') asserts these realities are not equally valid. Also, positivists examine interactions between elements of interest. They view the whole as being more than the sum of the parts, in that the interaction between the parts can be more powerful than when all of those parts are considered in isolation (elementalism). By contrast, though interpretivists similarly view the whole as being more than the sum of the parts, their ontological perspective is holistic rather than elemantalist (Heath 1992).

Considering the epistemological issues with each perspective, interpretivists consider the difficulty faced in classifying direction of causality, and so tend to eschew causality in favour of description, often disregarding causal sequence of events. Positivists are given to consider descriptive, explanatory and causal, with doctrinaire positivists focusing on uni-directional causation only. Positivists favour cataloguing observable behavioural phenomena in the same way natural scientists might observe mitochondria (in bio-physics), molecular structures (in chemistry) or mineral deposits (in geography), though liberal positivists in the social sciences may also attempt to observe the non-observable (through verbal behaviour), to provide causal explanations. They also catalogue the procedures, research setting, subjects and results, largely to communicate robust generalisable research that can be replicated to further understand the phenomena of interest (Heath 1992). Interpretivists, meanwhile consider research findings to be bound to the time and context in which the research took place, making generalisation impossible, at least for the doctrinaire stance. This allows flexibility in the research processes, which therefore need not be concerned with rigour of sampling or measures. Another key difference in the epistemological stance of positivists and interpretivists considers the extent to

which the observed phenomena are influenced by the researcher. Doctrinaire interpretivists assume data are always biased, and that researcher and phenomenon always interact. Doctrinaire positivism is limited in that it assumes that data are never biased, and the observed phenomena are in no way influenced by the fact that they are being observed, largely through the epistemological stance in which researcher and phenomenon are kept independent (Heath 1992). Liberal positivist acknowledge that bias may occur, as in some instances researcher and phenomena interact, but that appropriate steps can be taken with the methods used to ensure researcher bias is mitigated or bias measured where appropriate. To a similar extent, conservative interpretivists also acknowledge that while researcher and phenomenon always interact, steps can be taken to minimise the effect of the researcher. The epistemology of the positivist philosophy therefore fits very well with behavioural theories and the philosophies behind these. Research design for interpretivists is inductive, while for positivists, deductive logic is required. Deduction starts out with a number of possible truths, and through research reduces these down to fewer and fewer truths until ideally, only one remains, which allows for an accurate conclusion to be made about the subject of interest. Inductive reasoning, favoured by interpretivists typically starts with a small amount of information, and based on interpretation of this, makes broad conclusions, as humans tend to be very good at spotting patterns (Arthur 1994). Positivists typically favour the hypothetico-deductive method in which hypotheses are derived based on previous observations (e.g. on findings from previous studies), which may then be proved or disproved based on rigorous testing, and this approach is adopted for the present study.

Debate between interpretivist and positivist approaches continue into the domain of qualitative verses quantitative measurement. Doctrinaire positivists always choose quantitative methods, while liberal positivists prefer quantitative, but also consider qualitative methods as appropriate. The balance is usually tipped in favour of qualitative methods for interpretivist research.

Methodology

As previously stated, it was determined a behaviourist approach to studying shopping centre choice might offer insights into factors affecting consumers in their development of a preferred type of shopping centre. As such, the methodology employed follows those characteristics of a behavioural methodology, which is different from much of the prevailing consumer research

that exists in examining shopping centre choice, and the methodologies applied in wider studies of consumer behaviour.

This study takes a departure from the overwhelmingly 'intentional stance' favoured in much consumer research done since the 1960s, and focuses instead on a 'contextual stance' favoured by many researchers adopting a behaviourist methodology (Foxall 1999). The 'intentional stance' typically concerns itself with explanation and prediction of intentional behaviour, with intentions including beliefs and desires, "hopes, fears, intentions, perceptions, expectations, etc." (Dennett 1989, p271). Instead, the present study follows a stance which grounds the consumer behaviour of interest firmly in the context of the environment which shapes that consumer choice, namely, the physical and social environments, and avoids explorations of the beliefs and desires which may be driving these choices.

This study takes a quantitative approach to research favoured by positivists, as largely befits research underpinned by the scientifically idealistic behavioural perspective, which calls for rigorous, measurable variables. Both qualitative and quantitative research attempts to give the best understanding of the subjects of interest, and in marketing, that usually means providing the best possible understanding of consumers in the context of the research. Researchers favouring each approach tends to find flaw with the other.

Quantitative research requires the use of highly structured questions and/or measurement of forces of interest with predetermined response options to gather data from a large number of respondents (sample), identified as likely to be representative of the population of interest, and extracted in a rigorous fashion (Burns and Bush 2006). It is only with quantitative research that hypotheses may be tested. The inherent strength of quantitative research is in its ability to use statistical inference to identify concrete patterns within the data, and generalise these beyond the sample. To be able to trust generalisation of findings, there must be some indication that the sample has been collected in a rigorous fashion, and is representative of the wider population. Use of quantitative approaches like questionnaires, when conducted properly, are powerful means of identifying and measuring the effects of forces of interest upon respondents, at a minute level.

While a quantitative approach is taken, it is true that qualitative research also has its benefits. Qualitative research tends to be more flexible and adaptable as research progresses. Qualitative

research is also more holistic (Malhotra & Birks 2007), attempting to capture a fully rounded and deep understanding of all forces affecting a particular consumer. Techniques used in qualitative research, such as in-depth interviews, focus on drilling down and gaining the most detailed insights into the deeply held views of respondents, and crucially, why they behave the way they do. It takes a skilled researcher to be able to get the respondent to be comfortable enough and in the right frame of mind to be able to get the required information. By contrast, quantitative data collection approaches like questionnaires tend to gather less detailed information. Qualitative research is necessary when it seems that respondents would likely be unable or unwilling to provide full and candid responses about a topic in a structured quantitative approach like a questionnaire. It is also not constrained in the way quantitative approaches are, by the extent of the researchers knowledge. While a knowledgeable researcher is still essential, questioning can often go down very different paths, depending on the respondents answering.

However, qualitative research has been criticised (usually by researchers favouring quantitative research) as unscientific, lacking in rigour, reliability and validity in relying on small sample sizes (even just single respondent samples) ignoring representative samplings, and in so doing, failing to be able to generalise the findings of their research (Malhotra and Birks 2007; Hair, Wolfinbarger et al. 2010). Interesting and insightful findings on such small samples can only really hope to offer explanations for that sample- in quantitative research, it is possible to do so using inferential tests, to determine probabilistically whether findings can be generalised to the wider population. Associated with this, qualitative tends to be very resource intensive, in terms of time and costs. Time spent gathering data on a per participant basis is much greater than for quantitative approaches, though experiments in specific fields can be costly in terms of equipment and training. It is difficult to put estimates on the size of the phenomena under investigation (Hair, Wolfinbarger et al. 2010). It is also heavily reliant on the subjective interpretive skill of the researcher.

Due to its nature, qualitative research tends to be used in two ways. Due to its flexible nature, it is often used for exploratory research, to help develop a theoretical basis where previously there was a significant gap. Qualitative research also comes into its own when it comes to offering explanations for patterns found from quantitative research. Statistically significant findings in quantitative research can often be interpreted using the underlying theory, but often, more

insightful interpretations can be offered by using qualitative research to ask knowledgeable respondents 'why' they behaved the way they did (Malhotra & Birks 2007).

So, while qualitative research tends to provide detailed insights into why a small set of consumers behave the way they do, their underlying motivations, etc., quantitative research is useful in determining small but significant differences across a broader set of respondents. Qualitative research, whether using focus groups, in-depth interviews, or other qualitative data collection approaches tends to be most resource intensive (in terms of researcher time) during the interpretation stage, with the flexible nature of qualitative research allowing data collection to proceed without the significant time input that quantitative approaches require (though projective techniques need a great deal of preparation time.

Data for this study was principally collected through the use of questionnaires. The choice of the questionnaire data collection method was made after first evaluating the alternative means of collecting data.

For quantitative studies using data collection methods like questionnaires or experiments, interpretation of the outputs is more straightforward, and the time intensive part of the research is in the beginning, ensuring data collection is rigorous, and data collection will enable all hypotheses to be fully tested with appropriate statistical techniques. Indeed, quantitative research should have established a testing plan before the data has even been collected, and this is essential to ensure the right sort of data is collected.

Studies wherein the dependent variable is unobservable must be examined within an appropriate theoretical framework, to enable critical analyses (Foxall 1999), and it must be examined in an appropriate fashion.

The dependent variable in this study, the preference for a particular type of shopping centre was not directly observable, instead derived from the respondent's questionnaire answers. Similarly, the independent variables were also derived from questionnaire data collected from the sample. As such, the three term contingency model (Skinner 1953) was adopted to analyse the impact of the independent variables on the dependent variable. It would be difficult to use observation to consider factors affecting consumers in their choice of shopping centre, so questionnaires are to be used in this study. Observation was also discounted, as the study was concerned with the

customers' awareness of situational variables, and this effect on their choice of shopping centre. Observation does not offer much value at this level, being better suited to analysing consumer choices made within the shopping centre. Additionally, sample size for direct observation is usually fairly small, again bringing about issues with representativeness (Burns and Bush 2003). Unfortunately, secondary research was also ruled out, as suitable secondary data was not available to supplement the primary research, other than to confirm the sample of consumers was reasonably representative of the population of the north east of England.

Experimental design was also ruled out early on in the research design phase. Because the research was interested in the role of many situational variables on consumer choice of shopping centre, an experimental approach was considered too constrained. The experimental approach tends to be more applicable when there are only a few parameters to consider. This investigation wished to pursue a more holistic view of situational effect on consumers.

Questionnaires enable collection of a broader selection of data, illuminating areas such as effect of cues on consumers at an individual level, and effects on emotional response, etc., that observation cannot allow. They also facilitate collection of data from a much larger sample than alternative quantitative or qualitative approaches. They allow precise measures that enable even small variations to become apparent in analysis. Given their structured nature, they are easy to administer and results are standardised to aid statistical analysis (Hair et al 2010). However, it is vital to ensure questions are accurate representations of the construct of interest. They do not easily yield in-depth data, or tend to explain in detail the reasons behind the data gathered. It can also be difficult to get good response rates.

Considering the scope of the study, to examine a cross-section of the shopping population across the north east, another logistical consideration was to ensure the methodology adopted would be palatable to shopping centre managers granting access to their customers. Interviews initially seemed a viable option for gaining deeper insight into the role, at the individual level, that situational variables may play in driving consumer choice of shopping centre. Mall-intercept interviews are also a popular means of gathering data in this area (Burns and Bush 2003). However, interviews were ruled out as logistically unfeasible, as it would be difficult to gain a full picture of the many situational variables at work within a short interview. A considerably longer interview would be required to gain a fuller picture, and it was thought that few shopping centre managers would allow their customers to be disturbed from shopping for more than a

short amount of time. In addition, many of the shopping centres visited were fairly small, and were unlikely to have facilities devoted to customer research, which are important to mall-intercept data collection (Gates and Soloman 1982). Also, it was felt that a series of interviews would not be truly representative of north east customers, and that a larger sample would be needed.

It was felt that, a survey would offer a more structured approach, and facilitate the standardisation of data, making it possible to quickly and accurately observe the range of responses from the sample. This approach would also aid in the analysis of large volumes of data, from many respondents, as survey data may be represented simply and clearly in tabular format, enabling appropriate statistical analysis to be conducted (Burns and Bush 2003). The size of a sample yielded by a questionnaire methodology is likely to ensure it is more likely to be representative of the population than samples yielded by interviews or observations. This sample would also have the potential to be explored by recognising and examining its subgroups. Clearly, surveys are a popular and widely used method in marketing research, frequently applied in commercial and academic research to find out more about consumers. Indeed, in many 'Marketing Research' textbooks, a disproportionate amount of text is devoted to the specifics of questionnaires compared to other research methodologies.

3.3 Data Collection- Questionnaire Development

The survey to be used comprised of several metrics, which will be discussed in this section. As appropriate questionnaire design is vital to its success as a data collection tool, the following section shall cover the creation of the survey used in this study, paying particular attention to the design and development of the original situational scale metric, and will lead into the analysis of the data yielded by the questionnaire metrics.

With theoretical models to form the basis for the research, it is necessary to determine the constructs of interest and their composition, to ensure hypotheses may be tested. It is important to ensure that metrics used to measure constructs are both meaningful and robust, so an approach suggested by Churchill (1979) on metric design was adopted to form the basis for scale development. These discriminative stimuli scales were created based on a review of extant literature, and developed following the iterative process outlined in figure 3.1 below suggested by Churchill (Churchill 1979), to ensure rigour and validity of the metrics. This involved the

generation of valid and feasible questionnaire items; collection of data; 'measure purification' (Bristow and Mowen 1998; Bristow and Mowen 1998), involving the improvement of ambiguous items and removal of redundant and duplicate questions as part of the pilot study of the questionnaire. Then reliability and validity were assessed. As a part of the development process, the questionnaire was repeatedly validated and analysed to ensure both accuracy and reliability, as a measure of the degree to which shopping situation impacts on different consumers

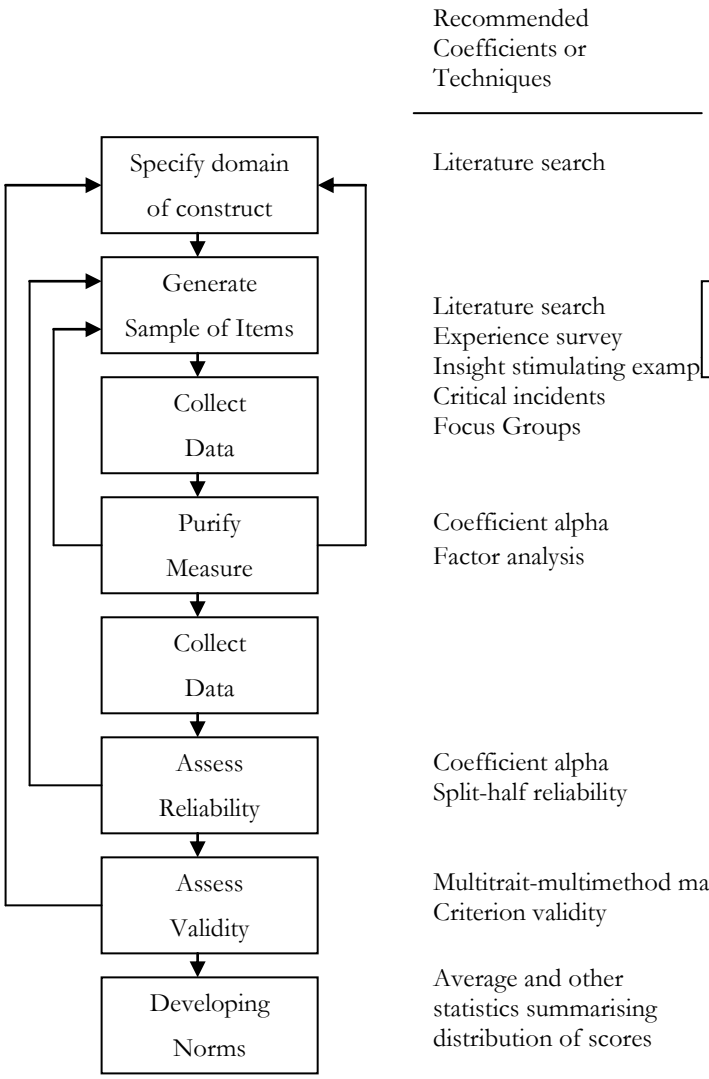


Figure 3.1: Suggested Procedure for Developing Better Measures

Source: adapted from Churchill (1979)

Subsequent to Churchill's widely cited paper, discussions of instrument development have highlighted inadequacies of instrument validation, and concerns that "the primary and prior value of instrument validation has yet to be widely recognised" (Straub 1989 p147). Though originally discussed in the context of research in Management Information Systems, more recent discussion has focussed on scale development and validation in broader areas including behavioural research (MacKenzie, Podsakoff et al. 2011). They summarise the limitations in previous scale development procedures as being threefold. The first is that the construct domain

is not adequately defined and considered properly in terms of appropriate conceptual definitions. The second is that the measurement model is rarely correctly specified, in particular, the latent (unobservable) constructs are not related with their indicators. Finally, that previous studies have failed to use (construct validity) techniques already established to ensure the scale metrics developed are actually measuring the conceptual constructs the claim to measure (MacKenzie, Podsakoff et al. 2011). Even though Churchill's original procedural framework for scale development included the necessary 'assess validity' stage, MacKenzie et al (2011) suggest that few studies appropriately consider this. Issues surrounding validity will be considered later on. MacKenzie et al put forward an overview of procedure for developing scales, which bears some similarity with Churchill's earlier procedure, with some additional detail in terms of validation (figure 3.2).

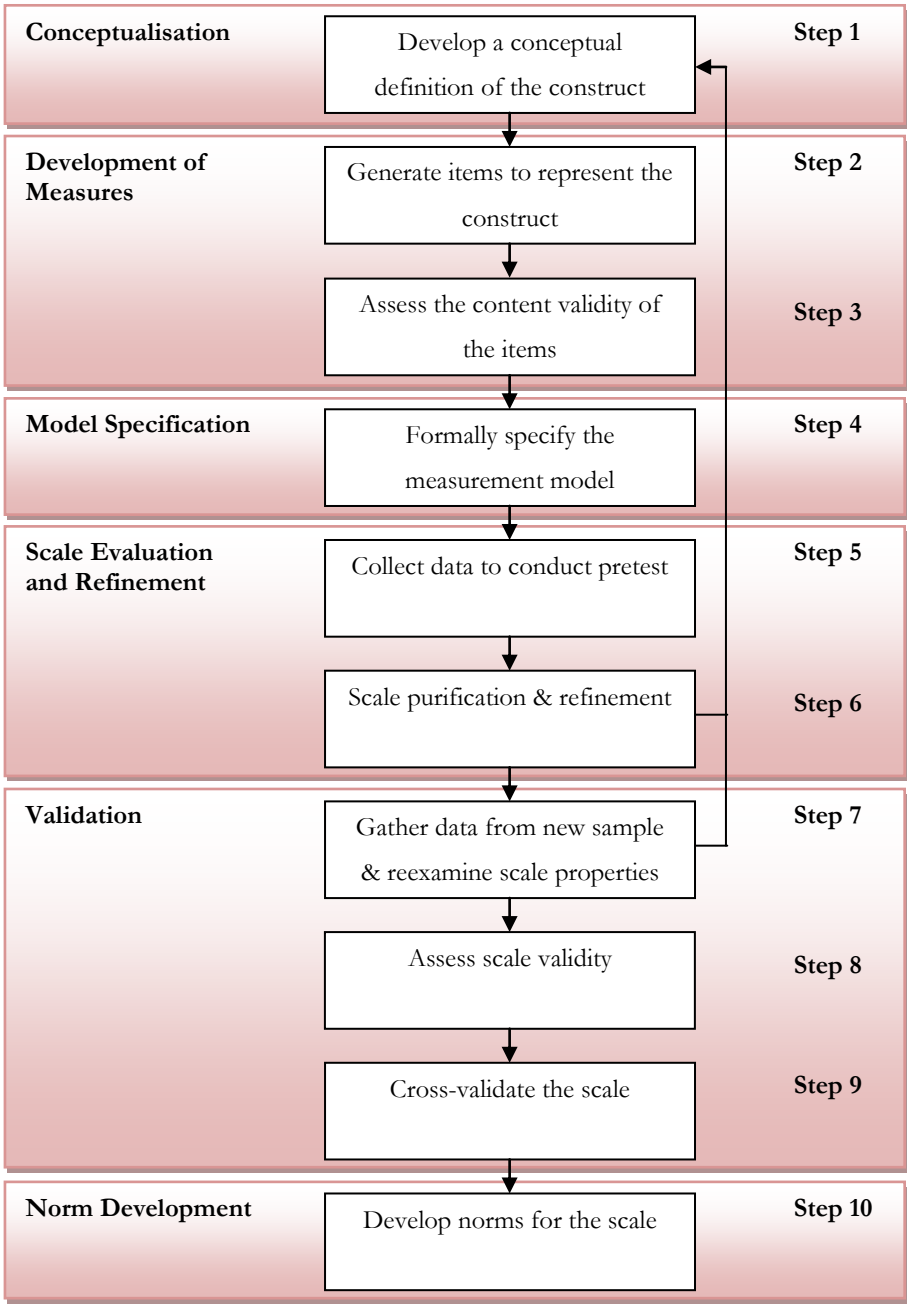


Figure 3.2: Updated Overview of Scale Development Procedure
Source: MacKenzie et al 2011

Churchill's procedure shall be used to structure the discussion around scale development, with stages first acknowledged, before considerations for scale development for the two studies are presented.

3.3.1 Specify Domain of Construct

Principles of Construct Definition

Churchill defines the first step of scale development as specifying the domain of the construct. A 'construct' is considered 'abstract and latent', rather than observable and concrete (Nunnally and Bernstein 1994), because the variable is literally constructed by the researcher. This means establishing the extent and focus of the domain- what the construct does and does not contain. MacKenzie et al (2011) recognise 'definition of the conceptual domain of the construct' as the first stage of the scale development procedure, wherein the researcher must "specify the nature of the construct and its conceptual theme in unambiguous terms and in a manner that is consistent with prior research" (p298), highlighting also how the construct differs from related constructs. Along with Churchill's second step (generating a sample of items), the first step involves examination of relevant literature in the area. In this instance, literature is used to determine how the construct has been defined by previous researchers. This should ensure the defined constructs are theoretically grounded, highly pertinent, and importantly, specific to the study at hand. He illustrates that while the satisfaction constructs 'expectations' and 'consequences' have been well defined and widely used (Howard and Sheth 1969), what exactly should the marketer attempt to assess on these constructs? This come down to further reading, but also contextually specific attributes. The domain of the 'expectations' construct might be very different for a study on shopping centre satisfaction for example, compared with one examining satisfaction with a car purchase. Critical dimensions for one (after sales service, durability, status) have little relevance to the other. Specifying domain of construct, ensuring it is relevant given the application theoretical construct (through thorough review of literature) to the research at hand, is therefore of vital importance. This will be true for the constructs under investigation in this research.

MacKenzie et al (2011) suggest that when specifying the construct domain, one should examine how this construct has been used in prior research, specify the nature of the construct's

conceptual domain in terms of the entity to which the construct applies, and the property the construct represents. Then the conceptual theme of the construct should be specified, and finally the construct presented in unambiguous terms.

Study 1 Construct Definition

To summarise discussion from the previous chapter, the three-term contingency and organismic extensions were identified, so constructs specific to the conceptual framework for study 1 are the constructs of interest. Belk's taxonomy of situational effect was identified as a pertinent measure of the discriminative stimuli (Belk 1975), so it was necessary to design a way in which it could be utilised to return meaningful results through the form of a survey. Previous research into these situational components had tended to focus on experimental methods, in the field and in laboratory settings, measuring either the real or perceived influence of situational factors on consumer behaviour (Yalch and Spangenberg 1990; North and Hargreaves 1998; Summers and Hebert 2001). While experimental design has yielded interesting results in the past, it was unworkable in the context of the present study, concerned with the examination of the strength of many different situational variables at the level of shopping centre, rather than just one situational stimulus at the store or product level. As such, a suitable scale metric, representing multiple situational stimuli was deemed more appropriate. As such a scale does not already exist, it was deemed necessary to proceed to development from scratch. Other constructs within the model already exist, or were not identified as possible to measure with scale metrics. Table 3.1 below summarises the constructs and observable variables for study 1, including further details suggested by MacKenzie et al (2011).

Table 3.1: Summary of Study 1 Constructs			
Construct	**Use of construct in prior research**	**Specify nature of constructs conceptual domain**	**Conceptual theme**
Discriminative Stimuli: • Physical surroundings • Social surroundings • Temporal perspective • Task Affect • Antecedent States	Experimental- hypothetical scenarios describing situation in terms of 5 types of stimuli.	Entity: Person General Property: previous impact of discriminative stimuli on entity.	Multi-dimensional; Stable for a given situation
Response: • Shopping Centre choice (specific shopping centre visited)	'Shopping centre type' used previously to consider attribute factors specific to different shopping centres.	Entity: Person General Property: shopping centre visited on data collection.	Uni-dimensional; Nominal variable
Consequences: • Utilitarian Reinforcement • Informational Reinforcement	Forced rank examining reinforcement associated with different FMCG product categories	Entity: Shopping Centre General Property: classification of shopping centre in terms of reinforcement level felt.	Multi-dimensional; Stable for a given situation
Organism (multi-dimensional personality) • Extraversion • Neuroticism • Psychoticism	Questionnaires on wide ranging subjects, physiologically grounded	Entity: Person Property: Personality dimensions	Personality: Multi-dimensional; stable over time & situations

Study 2 Construct Definition

The theoretical model identified from the literature review for use for study 2 was the BPM, with aspects of Mehrabian and Russell's model (1974) integrated to form the proposed conceptual model. Some of the constructs of these models were multi-dimensional constructs, which are introduced and summarised in table 3.2. There shall be some variation in considering comparable constructs in study 1 and study 2, notably, discriminative stimuli. Noted in the literature review was the variance in taxonomy of situations put forward by Belk, and later Foxall. As the theoretical basis for study 2 is Foxall's BPM, his taxonomy will be favoured for study 2, above Belk's, which was initially favoured for study 1. Also, while the consequences construct is in essence the same for study 2 (with the addition of aversive consequences), there is one key difference. Consequences were considered as a forced rank (with shopping centres being ranked on reinforcement levels they facilitate) for study 1. For study 2, reported level of reinforcement felt from a shopping centre will be examined. In addition, learning history is a

construct not considered in study 1, and one that has some complexity, based on feedback from previous levels of reinforcement (Foxall, Oliveira-Castro et al. 2011).

Table 3.2: Summary of Study 2 Constructs			
Construct	**Use of construct in prior research**	**Specify nature of constructs conceptual domain**	**Conceptual theme**
Situation (discriminative stimuli): • Physical surroundings • Social surroundings • Temporal Perspective • Regulatory Forces	As in table 3.1 above. Otherwise, specific components considered in isolation in detail	Entity: Person Property: impact of discriminative stimuli on entity on visit	Multi-dimensional; variable across situations
Consequences: • Utilitarian reinforcement • Informational reinforcement • Aversive Consequences	Forced rank examining reinforcement associated with different FMCG product categories	Entity: Person Property: impact of reinforcing stimuli on entity on visit	Multi-dimensional; variable across situations
Response: Shopping Centre Choice	'Shopping centre' earlier used to consider shopping centre specific attributes.	Entity: Person Property: Shopping centre visited.	Nominal variable
Response: Approach-Avoidance: • Physical • Exploratory • Communication • Performance satisfaction	Environmental Psychology research following Mehrabian & Russell looking at approach-avoidance	Entity: Person Property: level of approach/ avoidance for four types of behaviour	Multi-dimensional; variable across situations
Learning History: • Utilitarian related • Informational related • Cost related	Studies on BPM include Learning History construct.	Entity: Person Property: For previous visits, salience of consequences	Multi-dimensional; variable across situations
Emotional Response: ▪ Pleasure ▪ Arousal ▪ Dominance	Developed by Mehrabian & Russell & used in subsequent research	Entity: Person Property: how entity responds emotionally to situation.	Multi-dimensional; variable across situations & over time

3.3.2 Generate Sample of Items

Principles of Item Generation

MacKenzie (2011) agrees with Churchill (1979) that once the construct has been specified, that the next step in metric construction is to start to generate items which represent the construct. The first point of call for item generation is to examine previous definitions of the construct of interest, and how many dimensions/components it has. MacKenzie (2011) argues that it does not matter whether the construct of interest is uni-dimensional or multidimensional, item generation is intended to capture all essential aspects of the construct, without straying into

measuring concepts beyond the construct domain. When considering a multidimensional construct, item generation must be conducted for each dimension, while all dimensions of the construct are properly captured. Where conflicting research puts forward different taxonomies (i.e. conflict in terms of the extent of the construct or delineation of dimensions), it is important at this stage to identify the most pertinent taxonomy for the given research framework. Churchill recognises several sources to form the initial basis for identifying items, the first of which is the existing literature. He also suggests using experience surveys with knowledgeable individuals and insight-stimulating examples. Finally, exploratory focus groups can offer further insights into item creation as well as dimension determination and refinement. Once dimensions have been determined, item generation involves the development of a series of items that will adequately measure the dimensions of the construct of interest. Churchill suggests that in the item generation stage it is important to find slight variations of phrasing to use to generate a wider set of items for a construct, to enable refinement of the measure at a later stage. Items with "slightly different nuances of meaning" (p68) in the pool of items ensures the eventual measure has a better foundation. Others have hinted that part of the reason to generate a larger than necessary pool of items relates to procedures for checking reliability of scale metrics. Cronbach's alpha is used to examine internal consistency of scales (discussed in later section), and is acknowledged to be sensitive to the number of items in the scale (Foxall and Pallister 1998).

Item development also means having an awareness of, and dealing with the eventuality of 'yea-' or 'nay' saying tendencies by reversing items to create 'negative' questions of existing 'positive' ones. Later stages of item generation also need to consider the effect of socially desirable responding, and ensure items are generated to minimise this. MacKenzie et al suggest that before going on to scrutinise the items, initial efforts should be made to remove items with social desirability (Nederhof 1985).

Principles for item generation suggested by Churchill (1979) were considered for study 1, and principles for item generation suggested by Churchill (1979) and Mackenzie et al (2011) were considered for study 2. Other key points raised in marketing research textbooks on questionnaire development were also considered, including choice and utilisation of different types of items, and organisation of items.

When constructs are measured with scale metrics, it is important to select a scale that seems appropriate. Key scale types used in marketing are as follows:

- Dichotomous- questions are posed in such a way as to attract a yes/no response.
- Semantic differential (bipolar)- a series of bipolar opposite pairs of adjectives are presented, with respondents asked to indicate where on the continuum they feel like they best fit.
- Summated ratings (Likert or Likert-type)- a series of statements are presented, with respondents asked to mark the degree to which they agree/disagree with the statements. True Likert scales are used to measure attitude dimensions, while Likert-type or 'summated ratings' scales used to measure non-attitudinal constructs.

Between the two studies, a wide variety of scale item type was used. Pre-existing scales were predisposed to use particular types of scale, so in some instances, there was no need to critically evaluate the different types of scales. For example, Eysenck's personality inventory (study 1) uses dichotomous (yes/no) scales, Mehrabian & Russell's (1974) emotional response scales use semantic differential (bipolar) scales (Malhotra & Birks 2007). The main strengths and weaknesses of these three scales are summarised in table 3.3.

Table 3.3 Scale Type Strengths and Weaknesses

Scale Type	Strengths	Weaknesses
Dichotomous (yes/no) 'questions'	• Distinct responding • No issues with central tendency bias	• Many items needed for good range • Takes time to read and respond
Semantic differential (bipolar) 'paired adjectives'	• Minimal requirements for response time. Fast to read. • Few items capture wide scale range	• Scale development- researcher must determine opposite adjectives for each item. This may be subjective.
Summated ratings 'statements'	• Few items capture a wide scale range	• Takes time to read and respond to items

Where semantic differential and summated ratings scales are used, the specifics of item response options must also be considered. Traditionally, 5 possible response options are offered for summated ratings scale: 'strongly disagree'; 'disagree'; 'neither agree nor disagree'; 'agree'; 'strongly agree'. Traditionally for semantic differential scale, 7 options are offered for each item (Malhotra & Birks 2007), usually 1-7, though -3 to +3 is also sometimes used. However, there are further considerations, and not all Likert scales have 5 'points' and not all semantic differential scales have 7 'points'. While a greater number of 'points' offers a finer level of detail, but if the question is difficult to engage with, or the respondent lacks detailed knowledge, then fewer response options work out better. Another consideration on the number of response

options, is whether to have an odd or even number of options. An odd number of options provides respondents with a 'neutral' option, for times when they really don't feel they agree in any particular direction with the response. An even number of response option forces the respondent to show an inclination in one direction or another. This may lead to inaccuracies in reporting however, though respondents can frequently 'opt out' of such questions, at least in paper based surveys, by skipping the question. Inaccuracies can be compounded when even number of response options are used with a web survey which forces a response. For the purpose of study 2, all summated ratings scale items and semantic differential scale items have seven response options to maximise the potential range of responses.

Other operational points often discussed in the questionnaire development section of Marketing Research (Malhotra and Birks 2007) are discussed in brief by MacKenzie. Namely, items themselves, once it is established they are pertinent to the construct of interest, should be written as clearly and simply as possible. Double-barrelled items should be avoided or split into distinct items. Items should not presuppose a level of theoretical or technical understanding on the part of the respondent, unless the focus of the questionnaire is to examine experts in the area. As such, all technical and theoretical terminology should be stripped from items, which should be phrased in terms that are understandable and accessible to all of the potential sample.

After the item generation stage, MacKenzie et al (2011) suggest their third step, which was not present in Churchill's procedure, which is to assess the items for 'content validity'. According to Straub et al (p424), content validity concerns "the degree to which items in an instrument reflect the content universe to which the instrument will be generalised" (Straub, Boudreau et al. 2004). Content validity is to ensure that together the items measure what they are intended to measure. This is put forward as two interconnected judgements on the items (MacKenzie, Podsakoff et al. 2011);

- Individual items should be representative of some aspect of the construct's content domain.
- Is the construct wholly represented by the items generated.

If both of these can be judged to be the case, then the construct can be considered valid. MacKenzie goes on to offer a very detailed and quantitative way to test content validity, while it is common in textbooks to see a more straightforward and qualitative process (Malhotra and Birks 2007). The norm is to give the questionnaire to experts in the field to scrutinise, and if any items are not deemed by the experts to be measuring the named construct, they be dropped from the construct measure.

MacKenzie et al (2011) argue that the next step in construct measure development is to 'formally specify the measurement model' that encapsulates the anticipated relationships between items and the focus construct and/or dimensions' the supposedly represent. This partly requires the scale of measurement to be set while ensuring model parameters are all identified and fully represented across the generated items. In this way it ensures adequate data is collected so that hypotheses may be tested. The principles mentioned in this section shall now be considered for the two studies in this thesis.

Study 1 Item Generation

Table 3.4 below summarises the constructs included in study 1, identifies dimensions, specifies whether a new scale is required, the type of metric to be adopted and finally, a summary of key sources used to develop items. In some instances, items may be taken directly, in others, they are reworded according to the theme.

Table 3.4: Summary of Study 1 Item Development

Construct	Dimensions (variables)	New/ Existing	Type	Sources
Discriminative Stimuli: based on Belk's taxonomy (Belk 1975)	• Physical surroundings • Social surroundings • Temporal perspective • Task Affect • Antecedent States	New **scale** metrics	Dichotomous (yes/no)	(Bearden and Etzel 1982; Hirschman and Holbrook 1982; Brinberg and Plimpton 1986; Rizkalla 1989; Bearden and Rose 1990; Babin, Darden et al. 1994; Herrington and Capella 1996; Spangenberg, Crowley et al. 1996; Aylott and Mitchell 1998; D'Astous 2000; Roslow, Li et al. 2000; Babin and Babin 2001; Summers and Hebert 2001; Arnold and Reynolds 2003; Lee and Dubinsky 2003; Mangleburg, Doney et al. 2004; Miltenberger 2004)
Response:	• Shopping Centre choice (specific shopping centre visited)	Open	Discrete (shopping centre visited)	
Consequences:	• Utilitarian Reinforcement • Informational Reinforcement	New	Forced rank (ordinal)	(Foxall, Oliveira-Castro et al. 2004; Oliveira-Castro, Foxall et al. 2005; Foxall, Oliveira-Castro et al. 2006)
Organism (multi-dimensional personality)	• Extraversion • Neuroticism • Psychoticism	Existing scale metrics	Personality: Dichotomous (yes/no);	(Eysenck and Wilson 1975)

The main construct development for study 1 was for the discriminative stimuli in the environment. Using Belk's (1975) taxonomy, literature in the area was scrutinised to identify items for adoption/refinement for study 1. The following highlights the key sources used to find questions to use and/or adapt for this study. Coming from disparate sources, refinement often meant changing the way the item was worded to reflect a dichotomous scale (for example, when an item came from an existing summated rating scale).

The initial pool of items was developed principally from an exhaustive search of the extant literature to locate previously validated scale items. Previous research examining the influence of situational factors on consumer behaviour is fairly extensive, though most seem to favour experimental design. Such experimentally based studies were used to draw relevant concepts upon which questions might be worded. For example, the use of appropriate lighting seems important to the decision to visit a store (Summers and Hebert 2001), so items were designed to ask "Have you ever felt your spirits lift when going into a warm, bright, airy shopping centre?" and "Have you ever noticed a store that seemed to bright?". Likewise, it seems that a pleasant scent has the potential to draw customers to a store (Spangenberg, Crowley et al. 1996), so the question "Have you ever felt drawn into a store that smelt nice as you walked past?" was included.

Many studies have reported the effects of peer influence on consumer behaviour (Bearden and Etzel 1982; Brinberg and Plimpton 1986), so several questions were included to examine this stimulus, including "Do you try to buy brands that are similar to those your friends buy?", "Do you make more purchases when shopping with others than when shopping alone?", "Have you ever returned a purchase because a friend or family member did not like it?" and "Has a friend ever persuaded you to buy something you might not otherwise have bought?". Similarly, salespersons also seem to have the potential to have a sizable impact on consumer behaviour (Lee and Dubinsky 2003), eliciting the development of questions such as "Would a sales assistant's cheerful or helpful manner ever make you feel more inclined to make a purchase?".

The influence of time since last mealtime also appears to affect purchase behaviour (Miltenberger 2004), yielding the questionnaire item "Do you find yourself buying more food when grocery shopping, if you have not yet eaten?". Many studies have examined the influence of time pressure on purchase decisions, so several questions were used to explore various aspects of this, including "Do you find a bit of time pressure can push you to make important

purchase decisions?", and "Do you find you make more split-second purchase decisions when pushed for time?". Seasonal purchase variations suggested by previous research (Roslow, Li et al. 2000) yielded the question "Do you find the type of things you buy yourself change depending on time of year?".

Research clearly suggests that different customers are driven by different goals, for example, seeking varying degrees of utilitarian and hedonic value (Hirschman and Holbrook 1982; Babin and Babin 2001). Many questions were developed to examine the influence of these different task stimuli on consumer behaviour, including "Do you find you shop mainly because you want to, and not because you have to?" and "Do you find shopping more of a chore than a pleasure?"

Fewer studies have used questionnaires to research the influence of situational variables on consumer behaviour, and many of those that do, omit questionnaire items from published work. Where items in the extant literature were relatable to the study, they were adopted for use. Some items taken from the literature were used in a form close to their original state, but more often, items were used to inspire differently worded questions, as were the salient points drawn from experimentally based studies. Where questionnaire items were included, these items were drawn out and examined for used in the new situational scale. Because of the nature of this study, it was difficult and somewhat undesirable to take the items directly from the literature. In these studies, it was usually the immediate effect of discriminative stimuli on consumer behaviour, whereas the present study was more concerned with measuring awareness of, or susceptibility to, situational stimuli, and the effects of this susceptibility to subsequent choice of shopping centre.

Several questionnaire items were merely adjusted from their original format to suit the purpose of this study, frequently with the inflection of the question altered. For example, from a study on the effects of music in service environments (Herrington and Capella 1996), questions such as "I found the background music to be pleasing" were translated to "Have you ever stayed a long time in a store that plays good music". Many items regarding social influence were tweaked for use in the survey. For example, "It is important that my friends like the products and brands I buy" (Mangleburg, Doney et al. 2004) was adapted for use as the question "Is it important to you that your friends like the products you buy?". "I tend to pay attention to what others are wearing" was changed to "Do you ever watch others to keep up with changes in fashion?" (Bearden and Rose 1990). Questions from studies relating to the influence of task orientation on

consumer behaviour were also adapted for use in the study, with items such as "I like to spend time browsing through stores without buying anything in particular" adapted to "Do you ever find yourself browsing, even when you have no intention to buy?" (Rizkalla 1989), "I enjoyed this shopping trip for its own sake, not just for the items I have purchased" became "Do you enjoy shopping for its own sake, not just for the items you purchase?" (Babin, Darden et al. 1994), and "To me, shopping is an adventure" (Arnold and Reynolds 2003) was used to design the item "Do you feel a sense of adventure when shopping?".

However, more frequently, items taken from previous studies were used to inspire completely new items. In a study on the irritating aspects of retail environments, many discriminative stimuli were uncovered, and these themes used to create many items for the situational questionnaire (D'Astous 2000). The item "Have you ever left a store that you felt was too crowded?" was created because crowding was discovered as a major irritant. Other items, such as "Have you ever avoided returning to a shopping centre that seemed unclean?", "Have you ever left a store after noticing a bad smell?", "Do you become frustrated or angry when you get lost, or cannot find what you want?", "Do you find slow moving crowds in shopping centres annoying or frustrating?" and "Would a sales assistant's cheerful or helpful manner ever make you suspicious of their motives" were developed from themes along the lines of "store is not clean", "bad smell in the store", "finding his/her way in a large shopping centre", "being deceived by a salesperson" and "people move slowly" (D'Astous 2000). Several items, including "Would you tend to choose an alternative shopping centre than go somewhere with inadequate parking?" and "Do you get frustrated or annoyed when returning to a familiar store, to discover items have been moved around?" were taken from interview excerpts provided by previous studies (Aylott and Mitchell 1998).

Consultation with academics in the field of consumer psychology and in marketing provided further understanding of the requirements for the questionnaire. Although the discriminative stimuli were recognised as a key factor affecting choice of shopping centre, this was difficult to quantify, and in order to do so, the questionnaire would comprise of a set of fixed questions to cover aspects of the shopping situation. Consumers should be more aware of those factors that have the greatest impact on them, remembering those times in the past when certain aspects of the shopping centre situation may have affected them. The items used in the questionnaire were therefore designed to encourage respondents to think back to their own shopping experiences,

and try to recall whether certain instances of the situational variables had indeed affected their behaviour, whether to the positive or the negative.

The questions relating to situational cues were intended to measure how strongly different discriminative stimuli had affected customers in the past. A simple dichotomous scale was adopted for the questionnaire. The study did not seek to examine attitudes towards the shopping situation, but experience of the shopping situation, so the use of a Likert or Likert-type scale could not provide additional information, and would only cloud the issue. The individual items were scored simply '1 for yes' or '0 for no'. People who answer 'yes' many times gain a higher score, recalling more experiences where they have been affected by various discriminative stimuli.

Questions concerning memory can be difficult to answer when they are highly specific. It is best to avoid questions which require the customer to remember specific details (Burns and Bush 2003). To overcome this, questions asking about their previous experience of various situational factors were kept simple, ascertaining only whether the respondent could recall a time in their shopping experience when a particular situational factor may have influenced their behaviour. This is partially why a dichotomous yes/no answering system was favoured over a Likert-type scale, which would have required the respondents to make value judgements.

Once items had been generated, with precautions made by ascribing to procedures set out in literature and research methods texts to ensure items were clear, concise & required no interpretation or deep understanding, content validity was considered. Two independent specialists in the field of consumer psychology and marketing were shown the questionnaire, with intended constructs defined for their perusal. These experts were asked to consider the measures, and determine whether they believed the items intended for the measures actually measured what they were intended to measure. Feedback from the experts was used to initially refine the questionnaire, before it was distributed to the pilot sample. To ensure that the draft questionnaire of these 150 items, grouped by situational variable was valid, it was given to five academics for analysis, and the questionnaire was refined according to feedback, thereby ensuring content (face) validity. Based on the feedback from the experts, certain items were reworded to remove ambiguity, and some items were removed completely, when flagged as unusable, redundant or highlighted as ambiguous by more than one expert. The revised questionnaire was then given to five non-experts to analyse, to ensure no specialist terminology

had slipped through. Again the questionnaire was revised to remove ambiguous items. This was vital, as the non-experts represented the actual sample to be queried, and items they saw as potentially problematic might also be problematic for the respondents. Items were then randomly ordered, to prevent the possibility of 'yeah' answering (Coolican 2004), where a respondent may get into a pattern of responding similarly every time for questions along the same lines. The revised questionnaire was then returned to two experts for a final check, both for ambiguity and for quality of random ordering, before being ready to distribute the pilot survey. The pilot questionnaire can be found in Appendix C. For the pilot, there were many items to measure each of the situational dimensions- physical surroundings (31); social surroundings (39); temporal perspective (20); task affect (29); and antecedent states (25).

The other key construct of interest to develop from scratch offered some complication to the research, as no other research had measured utilitarian and informational reinforcement at an individual level. Earlier studies have suggested adopting a forced ranking system for these dimensions. (Foxall, Oliveira-Castro et al. 2004; Foxall, Oliveira-Castro et al. 2006) ranked utilitarian reinforcement levels for FMCG products by looking at their attributes (basic verses additional features) and level of differentiation, also looking at price. The informational reinforcement ranking level was based on brand differentiation, with leading and well known brands receiving a higher level rank than supermarket own brands. Price differentiation was used alongside this, with product categories with a broader set of prices used to indicate different ranked levels. However, it seems appropriate to consider the reinforcing consequences on behaviour on an individual basis- two consumers visiting the same shopping centre can experience very different things from their visits, which offer greater variability than the largely anticipated fixed outcomes of the purchase of an FMCG product. It is therefore proposed to develop measures of reinforcement felt by consumers as a consequence of their shopping centre visit.

Study 2 Item Generation

Constructs used in study 2 were mainly measured with summated ratings or with semantic differential scale measures. Table 3.5 below describes key details of item generation for each construct for study 2, including whether the construct required metric development from scratch, the type of measure used, and a summary of key sources used to develop items, or where an existing scale was used directly.

Table 3.5: Summary of Study 2 Item Development				
Construct	**Dimensions**	**New/ Existing**	**Type**	**Source**
Situation: based on Foxall's taxonomy (Foxall 1992; Foxall, Oliveira-Castro et al. 2006)	• Physical surroundings • Social surroundings • Temporal Perspective • Regulatory Forces	New **scale** metrics	Summated ratings (Likert-type)	(Bearden and Etzel 1982; Hirschman and Holbrook 1982; Brinberg and Plimpton 1986; Rizkalla 1989; Bearden and Rose 1990; Babin, Darden et al. 1994; Herrington and Capella 1996; Spangenberg, Crowley et al. 1996; Aylott and Mitchell 1998; D'Astous 2000; Roslow, Li et al. 2000; Babin and Babin 2001; Summers and Hebert 2001; Arnold and Reynolds 2003; Lee and Dubinsky 2003; Mangleburg, Doney et al. 2004; Miltenberger 2004)
Consequences:	• Utilitarian reinforcement • Informational reinforcement • Aversive Consequences	New **scale** metrics	Summated ratings (Likert-type)	(Foxall, Oliveira-Castro et al. 2004; Oliveira-Castro, Foxall et al. 2005; Foxall, Oliveira-Castro et al. 2006)
Response: Shopping Centre Choice		Open		
Response: Approach/ Avoidance:	• Physical approach • Exploratory approach • Communication approach • Performance satisfaction approach	New **scale** metrics	Summated ratings (Likert-type)	(Mehrabian and Russell 1974; Russell and Mehrabian 1976; Donovan and Rossiter 1982; Donovan, Rossiter et al. 1994; Valdez and Mehrabian 1994)
Learning History:	• Utilitarian related • Informational related • Cost related	New **scale** metrics	Summated ratings (Likert-type)	(Foxall, Oliveira-Castro et al. 2004; Oliveira-Castro, Foxall et al. 2005; Foxall, Oliveira-Castro et al. 2006)
Emotional Response:	▪ Pleasure ▪ Arousal ▪ Dominance	Existing **scale** metrics	Semantic differential (bipolar)	

Situational construct

Though the same sources were used to generate items for study 2 situational stimuli as for study 1, there were some key differences. A different taxonomy (Foxall 1992) was used to fit in better with the underlying theoretical model than the taxonomy initially used in study 1 (Belk 1975). The reason for adopting Foxall's (1992) taxonomy will be discussed in further detail later. Also, with hindsight, it was apparent that there were clear limitations with the nature of the metrics

developed for study 1, the most notable being the limited range facilitated by the use of a dichotomous scale. This limited range created issues for statistical analyses. To overcome this, summated ratings scales were used instead, so new measures of situational forces developed from the extant literature, with notable variables from study 1 taken into consideration. The only dimension that yielded requirements to scrutinise different literature for further information, was the new dimension 'regulatory forces' from Foxall's framework, which replaced the two dimensions 'task affect' and 'antecedent states' suggested by Belk. Principally, Foxall's work was scrutinised for a definition of 'regulatory forces', which has been mentioned a great deal in many articles, but never discussed in detail, or items to measure it offered. As such, Foxall's work discussing regulatory forces was strongly in mind when items were generated. After discussion with an academic expert in the field, the following attributes of shopping centres were felt to represent its regulatory forces: parking restrictions and tariffs, security, customer freedom, queuing, and time limited offers in stores within it. As such, a series of items were generated to cover these regulatory forces. For the four dimensions of the situation, multiple items were generated for the pilot study- physical surroundings (10); social surroundings (9); temporal perspective (9) and regulatory forces (7).

Consequences construct

The construct 'consequences' was a more complex construct to develop. Previous research looking at utilitarian reinforcement, informational reinforcement and aversive consequences used a forced ranking system, which was adapted for use in study 1. Considerations that arose after analysis of study 1 suggested that the forced ranking system is too limited for the application to shopping centres, compared with the previously successful applications to (usually) fast moving consumer goods (Foxall, Oliveira-Castro et al. 2004; Oliveira-Castro, Foxall et al. 2005; Foxall, Oliveira-Castro et al. 2006). A potential limitation with using forced ranking is that each different shopping centre, as for each different product (considering product category and brand) is classified differently for the associated levels of reinforcement offered. Study 1, and arguably earlier studies are somewhat limited in the forced rank approach, which may well be suitable, but does not fully allow for the possibility that individuals in the same shopping centre may be reinforced differentially, perhaps from individual differences, or from variance with experiences in the shopping centre. So an attempt to capture felt levels of reinforcement after visiting the shopping centre was made for this study 2 construct.

Utilitarian reinforcement has already been defined in the literature review, and notably relates with consequences relating to the utility of the visit. As such, concepts such as productivity, efficiency, effectiveness, frugalness and excellent deals were captured in questions developed for this dimension.

Key attributes relating to informational reinforcement, emerging from the literature, look at indirect, symbolic consequences, and feedback to the customer as a consequence of their visit. Positive feedback and perceived respect and approval from others was a key aspect captured by informational reinforcement, and captured across several items presented. Confidence in choice of shopping centre was also to be captured with items generated for this dimension.

The final dimension of consequences is aversive consequences, a dimension that has received considerably less attention in previous studies than utilitarian and informational reinforcement. Literature relates it to the negative (potentially seen as punishing) consequences of a behaviour. At a basic level it relates with costs associated with the visit, so items were presented to explore aspects of monetary cost, time cost, accessibility issues and problems of way-finding.

All together, utilitarian reinforcement was measured with 8 items, information reinforcement with 9 items, and aversive consequences with 5 items.

Response construct

Response was to be measured slightly differently in study 2 from in study 1. Respondents were asked to specify the last shopping centre they visited, so this captures one aspect of the 'response' component of the conceptual model- the choice. However, 'response' was also measured with a four dimensional construct of approach/ avoidance with respect to the shopping centre last visited. While approach-avoidance has been measured several times before in previous studies, these scales have frequently been very brief. Donovan and Rossiter (1982) looked only at general approach-avoidance intentions, rather than the four dimensions that they themselves acknowledged, using the following items: 'would you *enjoy* shopping in this store?'; 'how much *time* would you like to spend browsing in this store?'; 'would you avoid ever having to *return* to this store?'; 'is this a place in which you would feel *friendly* and talkative to a stranger who happens to be near you?'; 'would you want to avoid looking around or *exploring* this environment'; 'do you *like* this environment?' and 'is this a place where you might try to *avoid*

other people, and avoid having to talk to them?' (p44-45), essentially covering each dimension with just two items. For the sake of more robust measures, in line with the procedures outlined by Churchill (1979) and MacKenzie et al (2011), further items were generated to give a more complete and encompassing measure for approach-avoidance dimensions, for the pilot, coming up with 5 items to measure physical approach-avoidance; 5 items for exploratory approach-avoidance; 6 for communication approach/ avoidance, and 4 items for performance satisfaction approach-avoidance, based initially on items revised and rephrased from Donovan and Rossiter's (1982) research. Some of the existing items seem to contravene best practice as highlighted by Churchill (1979). 'Is this a place in which you would feel *friendly* and *talkative* to a stranger who happens to be near you?' for example is a clearly double-barrelled question. Respondents may feel like they would feel friendly, but not necessarily talkative with strangers in retail environments. Questions like 'how much *time* would you like to spend browsing in this store?' requires a very different response set than the other items, which Donovan & Rossiter (1982) were never fully explained in the article, but likely to have been considered as a specific response set regarding visit frequency.

In accordance with guidelines originally set out by Churchill (1979) a wider set of items was generated by using nuances of existing items, to ensure a wider set of items could be used in the initial pilot study, to enable future refinement.

Learning History

Learning history is another construct which has received a great deal of attention in literature, but little of this has focussed on how to operationalise measurements of this from a consumer's perspective. The BPM purports that an individual's learning history is constructed mainly from feedback gained from the consequences of previous behaviours. However, as Porto and Oliveira-Castro (2011) suggest, "The consumer learning history is personal, but can be captured by observation or through verbal reports of past experiences" (Porto and Oliveira-Castro 2011 p2561). In their study, Porto and Oliveira-Castro (2011) examined learning history in terms of the utilitarian and informational benefits of brands (Porto, Oliveira-Castro et al. 2011). As such, learning history for this study was measured as an attitude to the importance of different consequences of behaviour. While other constructs measured in study 2 relate to the response-the shopping centre last visited, learning history relates more to the importance the respondent places on achieving different types of consequences which will result from their earlier

experience of consequences. With this, and the items for measuring consequences in mind, three dimensions for learning history are conceived: utilitarian learning history, informational learning history and cost learning history. The latter dimension was felt to more appropriately consider importance of minimising costly consequences of visits. Utilitarian learning history considers just how important it is to respondents that their choice of shopping centre enables productivity, efficiency, get good value and achieve positive feelings.

Informational learning history looked at the importance respondents place on others approving of their behaviour, the importance of being seen by others in the right sort of centre by the right sort of people. Essentially, it explores the importance that the choice of shopping gives desirable feedback from others. In the end, these dimensions were measured with a total of 23 items- utilitarian learning history (8); informational learning history (10) and cost learning history (5).

Emotional Response Construct

For study 2, several existing scale metrics were adopted directly for simplicity. Previously created scales will usually report rigorous reliability and validity tests for research, because this is necessary for publication in academic journals, if using a new scale. As such, where dimensions in this study overlap with dimensions in existing studies, existing scales shall be adopted and used with reference to original authors.

Mehrabian and Russell's (1975) PAD measures, measuring pleasure, arousal and dominance emotional responses, has been widely used in environmental psychology research over the years. While the original PAD dimensions were measured many more items, the most widely used version of PAD is shorter, comprised of 18 items, with 8 pleasure items, 7 arousal items and 3 dominance items (with dominance dropped from several studies). For the sake of this study, which was planning to measure 6 overarching constructs across 17 dimensions (variables), brevity of scales was essential to encourage the best possible response rate. This is the only question set used in its entirety with no refinement for the purposes of this study. The pilot questionnaire for study 2 can be found in appendix D

3.3.3 Collect Data to Conduct Pre-test (Pilot)

Principles of Data Collection for Pre-test

Churchill (1979) never specifies the collection of data to pre-test the metrics under consideration, though this is an unspoken expectation, considering the requirements underpinning the next step: 'purify the measure', which requires data. MacKenzie et al (2011) specify this step (p310) as 'collect data to conduct pre-test', acknowledging that "data need to be obtained from a sample of respondents in order to examine the psychometric properties of the scale..." A key consideration for pilot data collection is that the pilot sample should be representative of the final sample. Measurements may elicit different responses across different sub-populations.

Study 1 Pilot Data Collection

After content validity was ensured, the remaining 144 item survey was distributed to a convenience sample of 71 postgraduate students enrolled at the University of Durham for the pilot study. While there is a potential risk of sample bias with the use of students for questionnaire research, this was considered negligible for the pilot study. Students were eligible for the final sample of shopping centre customers, so were considered appropriate subjects for testing the reliability and construct validity of the situational scale metric. Collection of data for the pilot study yielded 71 responses which were used for reliability analysis and subsequent measure purification for the discriminative stimuli dimensions.

Study 2 Pilot Data Collection

As study 2 was based in part on key points raised from study 1, a brief pilot study was conducted with undergraduate Business students and the University of Students. Questionnaires were collected using the online survey system Qualtrics (www.qualtrics.com/) with 24 of the 31 returns yielding usable data for purification processes.

3.3.4 Purify the Measure

Principles of Measure Purification

Both Churchill (1979) and later writing by MacKenzie et al (2011) agree that 'measure purification' is a vital step in ensuing robust and accurate measures. As such, once the pilot data was collected, a series of procedures were carried out to help identify poor items, refine the scale measures, and ensure the measures moving forward for use in final questionnaires were reliable and accurate reflections of the intended constructs and the dimensions within them.

Churchill (1979) specifies categorically that "coefficient alpha *absolutely* should be the first measure one calculates to assess the quality of the instrument" (p68), with this offering an indication of the internal consistence of a scale measure. Cronbach's alpha will be conducted for both studies to test the reliability of each of the scale measures developed (and confirm reliability for existing scale measures also). The coefficient results from the assumptions of what Churchill describes as 'domain sampling model', which looks at inter-item correlations. Cronbach's alpha essentially takes the set of items measuring a scale, divides the scale into two sub-scales, then looks at the correlation between these two subscales, with the assumption (from the 'domain sampling model') that if all of the items are measuring the same construct dimension, they should all have a good correlation with each other, and thus the two half scales should have a good correlation with each other (Cronbach 1951). The alpha value is extrapolated when all possible combinations of split-halve scales have been examined, providing a number that should fall between 0 and 1 (unless reverse items have not been adequately accounted for). High alpha values denote high internal consistency, while low alpha scores suggest low internal consistency, and would suggest lack of reliability. Acceptable alpha values (denoting reliability) vary between researchers and between disciplines, with some suggesting alphas above.7 (Nunnally 1978) and others above .8 (Gliem and Gliem 2003). The classification system in table 3.6 has been previously offered for classifying the quality of Cronbach's alpha values:

Table 3.6: Rules for Cronbach's Alpha Value Interpretation	
Alpha Value	**Rule of thumb**
<.5	Unacceptable
>.5	Poor
>.6	Questionable
>.7	Acceptable
>.8	Good
>.9	Excellent
Source: (George and Mallery 2003)	

For this study, the figure of .7 (Pallant 2010) will be used to indicate reliability, though, in accordance to Nunnally's assertion that lower alpha values may be acceptable, scores close to achieving .7 may also be considered. It is noted that increasing the alpha value partly comes down to the number of items in the scale, though with diminishing returns (Gliem & Gliem 2003), and as mentioned earlier, Cronbach's alpha is particularly sensitive to small scales (Foxall & Pallister 1998). Some have argued (Cortina 1993) that the link between alpha value and number of items means that a larger cut-off should be observed for scales with a large number of items. A sufficiently large pool of items is important for reliability analysis twofold- as larger scales are more likely to be reliable and as a large item pool offers a great deal of scope to identify and remove items which are not gaining scores common with all others.

Foxall also recommends using item-to-total correlation as well as Cronbach's alpha and to establish internal consistency for a scale (Foxall and Pallister 1998).

Study 1 Measure Purification

To ensure the reliability of the situational scales, each scale item was analysed for internal consistency, that is, individual items were queried for their contribution to the overall score of the scale they were a part of. Cronbach's alpha coefficient was first calculated to check the reliability of the different situational variables, ensuring that for each scale, only one situational variable was being measured, while enabling the removal of ambiguous items. Items were removed if they would significantly increase the Cronbach's alpha in their absence. Table 3.7 below summarises the Cronbach's alpha for each of the final situational variables measured.

Table 3.7: Summary of Study 1 Pilot Situational Cronbach's Alphas	
Situational Factor	**Alpha Value**
Physical	0.6819
Social	0.7705
Temporal	0.7396
Task	0.8267
Antecedent	0.8050

The final alpha for each of the scales were acceptable given the .7 rule (Nunnally 1978; Churchill 1979; Bristow and Mowen 1998; Pallant 2005). However, Cronbach's alpha has been described as being highly sensitive to the number of items in a scale, and that it is usual to get low Cronbach alpha scores for scales of less than 10 items. This may account for the physical situational variable being just under 0.7. Alpha values would have degraded further, if any more items were removed from the scales.

Overall scale totals were correlated with individual items (item-to-total correlation) to assess the relative contribution of each of the items in that scale. Items with only a small correlation with the total scale have small discriminatory power and therefore do not help predict the overall trend (Burns and Bush 2003). Items correlating 0.44 or less with the total were removed from the questionnaire, which is in line with the recommended minimum correlation value of 0.35 (Churchill 1979; Bristow and Mowen 1998). From the item-to-total analysis, only one item out of those remaining scored less than 0.5 for item-to-total correlation. This offers a strong indication that each of the remaining items are a strong predictor of their respective scale totals, thereby ensuring all of the remaining items in the scales have internal consistency.

As a result of the pilot study, the situational questionnaire was cut down from 144 items to just 35 items, across Belk's situational scales, with each scale comprised of 7 items. By keeping the strongest questions for each of the situational factors, with item-to-total correlations exceeding 0.44 and Cronbach alpha exceeding 0.7 for all scales except physical, which scored an alpha of 0.6819, the final condensed version should be reliable for use in the final survey.

Following the pilot study of the situational questionnaire, the final consumer survey was put together with five sections. The questionnaire was designed to show the degree to which

different factors present at the time of a shopping trip actually affect the behaviour of the customer during that shopping trip. With this in mind, the questionnaire was developed to offer insight into the effects of different components of the three term contingency on consumer choice of shopping centre. The questionnaire was organised in a way that was hoped to increase responding and minimise bias.

The first section was intended to ask questions to gain the interest and cooperation of the consumer, and to help to set the context for the rest of questionnaire. Along with the introduction to the study, this included warm up questions, including several background questions, on those shopping centres they visit with greatest frequency, reason for visit, what activities they engage in within the shopping centre, and how they got to the shopping centre. Questions here were nominal questions, with some open ended questions. The nominal questions would be simple and quick to answer, providing an indication that the rest of the questionnaire would be similarly straight forward and interesting. This section was the start of the more taxing questions. Scales used in this study, where possible, included reverse items also, to reduce halo responses.

The third section included the dichotomous questions for those situational scales described above. Where possible questions were organised to minimise bias- for the situational section, questions measuring the five situational variables were mixed up to reduce chances of pattern response. This was also the case for the following section measuring the three dimensions of personality.

In the penultimate section, Eysenck's personality inventory was included, dichotomous questions intended to give scale measures of extraversion, neuroticism, and psychoticism.

In the final section, respondents were asked simple, personal questions relating to their demographic characteristics and socio-economic situation to minimise the impact of fatigue on the more important measures. These nominal questions would be simple, and require no real effort or thought on the part of the respondent to complete. It was also hoped that by including potentially sensitive questions like income, age, and postcode at the end of the questionnaire rather than at the start, this would increase response rates by minimising drop-outs from respondents who would not like to answer these questions. It should be noted that these potentially sensitive questions were altered to reduce potentially offending respondents. For

example, respondents were given the option to opt out of giving their annual income level. The full final questionnaire (with scoring system) can be found in Appendix E.

Study 2 Measure Purification

Before reliability testing, reverse items were handled using 'recode' in SPSS. From the 25 valid pilot returns, Cronbach's alpha was calculated for each of the scale measures of interest to establish whether they were reliable. Initial use of Cronbach's alpha on data collected from the pilot for the scales can be found in the column called 'Initial Alpha' below, and suggested that all scales except temporal perspective, utilitarian reinforcement and dominance (highlighted in table 3.8 below) were above the accepted .7 range. Dominance, measured with only three items, had little scope for improvement by refinement. It is quite different from reliability tests in previous studies which managed to find reliable and distinct dominance measures (Newman 2007).

Temporal perspective and utilitarian reinforcement were further examined to identify items that would improve alpha if deleted. Subsequent to this, three items were removed from temporal perspective and two removed from utilitarian reinforcement. Removal of these items meant for shorter scales which achieved reliability (i.e. refined until alpha > .7). This left a questionnaire which contained, along with many miscellaneous variables, 17 scales with a total of 112 items.

To counteract the effects of an already lengthy questionnaire, further items were identified for removal, while maximising alpha scores. This meant removing items until the reliability score would no longer increase or increases are nominal. For the most part, scales which had previously been composed of more than 5 items were reduced to 5 items in length. The column called 'final cut' in table 3.8 below gives the final alpha values for the study 2 pilot. Surprisingly, there were no instances at this stage where reliability was reduced by cutting down to 5 items in length. I.e. the final cut alpha value is the optimal alpha for the scale, or is not considerably less reliable than the reliability for the slightly longer optimal scale. All scales to be included in the final study are reliable at the accepted threshold of .7, except 'dominance'; a short pre-existing scale, which was subsequently dropped, as it has been in previous studies.

According to George & Mallery's (2003) guidelines, physical surroundings, aversive consequences, communication approach-avoidance, and pleasure have excellent reliability; social surroundings, regulatory forces, informational reinforcement, physical approach-avoidance,

exploratory approach-avoidance, utilitarian learning history, informational learning history and cost learning history have good reliability, and temporal perspective, utilitarian reinforcement, performance satisfaction approach-avoidance and arousal have acceptable reliability.

Table 3.8: Summary of Study 2 Pilot Reliability Tests

	Initial Alpha		First Cut		Final Cut		Minimum
	Alpha	Items	Alpha	Items	Alpha	Items	Item-to-total
Physical Surroundings	0.799	10	-	-	0.912	5	.808
Social Surroundings	0.862	9	-	-	0.858	5	.814
Temporal Perspective	0.643	9	0.713	6	0.751	5	.645
Regulatory Force	0.802	7	-	-	0.836	5	.675
Utilitarian Reinforcement	0.678	8	0.726	6	0.797	5	.300
Informational Reinforcement	0.836	9	-	-	0.864	5	.669
Aversive Consequences	0.963	5	-	-	0.963	5	.875
Physical Approach-avoidance	0.868	5	-	-	0.868	5	.734
Exploratory Approach-avoidance	0.898	4	-	-	0.898	4	.761
Communication Approach-avoidance	0.923	6	-	-	0.925	5	.755
Performance Satisfaction Approach-avoidance	0.717	4	-	-	0.717	4	.496
Utilitarian Learning History	0.722	8	-	-	0.814	5	.731
Informational Learning History	0.853	10	-	-	0.876	5	.752
Cost Learning History	0.843	5	-	-	0.843	5	.732
Pleasure	0.914	8	-	-	0.914	8	.466
Arousal	0.761	7	-	-	0.761	7	.268
Dominance	0.405	3	-	-	0.405	3	.560

Another approach suggested by Foxall & Pallister (1998) was to check item-to-total correlation, so this was also considered for the pilot for study 2. Totals were first calculated for each of the scales in the table above. Item-to-total correlations were calculated for all remaining items to be contained in the final study. Full correlation tables can be found in appendix F, but a summary is provided in the final column labelled minimum item-to-total in table 3.8 above of the minimum item-to-total correlations for each final scale from the pilot. Most scales achieved

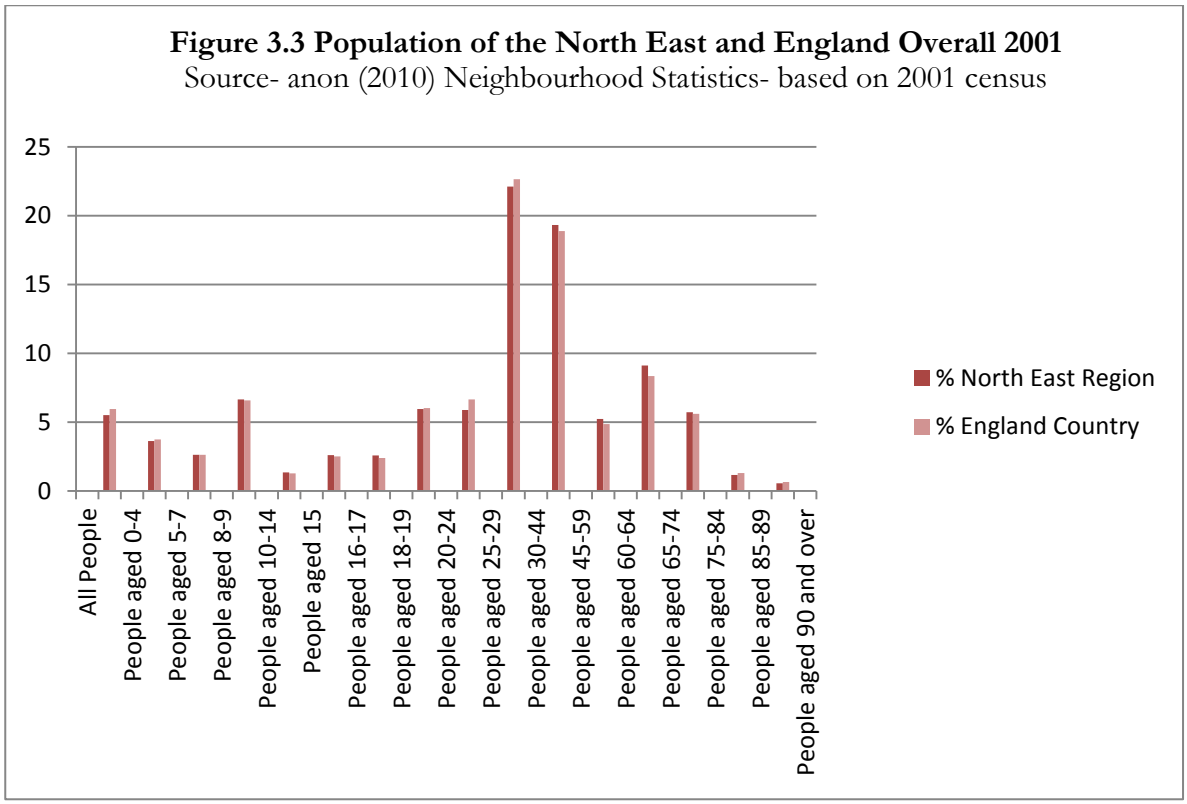
good item-to-total correlations. The only scales that potentially have items which do not predict well the total are utilitarian reinforcement and arousal. For utilitarian reinforcement, the minimum item-to-total correlation was .300, the next minimum was .838, so this will be carefully examined in the final study. For arousal, the minimum item-to-total correlation was .268, with the next smallest item-to-total correlation being .556 so this shall also be examined closely in the final study. Interestingly, dominance, the only dimension to offer problems from the reliability analysis provided a good item-to-total correlation. The final questionnaire used for study 2 can be found in appendix G.

3.3.5 Collect Data (Final)

Study 1 Data Collection

Survey Scope: As shown in the Introduction chapter, the demographic characteristics of the population of the North East of England is comparable to that of the UK (figure 3.3). The north east provides a good cross section of different types of shopping centre in a more confined geographical area than the whole of the UK.

Figure 3.3 Population of the North East and England Overall 2001
Source- anon (2010) Neighbourhood Statistics- based on 2001 census



This holds true for study 2 as well as for study 1.

Survey Sample

Shopping centre customers comprise the population being studied by this investigation. As such, the sample was collected in situ from shopping centres which represent the variety of different types of shopping centre in the study area, to ensure a representative sample of consumers. The sample for Study 1 was initially carried out in October-November 2005. Although some people moving through a shopping centre are not strictly 'customers' in the traditional sense of the word, but may instead be passing through, the majority of people in a shopping centre are customers, which in the context of this investigation is defined as people engaging in 'consumption' of the shopping centre space, whether making purchases in stores, browsing through stores, or engaging in other leisure activities.

The sampling plan employed was a non-probability sampling approach- taking a random sample from customers passing past the busiest points in the shopping centres. The main difficulty with this was that certain members of the target sample avoid the busier routes in shopping centres which may introduced sample bias. Since the profile of shopping centre customers may vary with time of day and day of week, data collection was conducted in each location at a variety of times and days, morning, afternoon and evening, weekday and weekend, to ensure a wide cross-section of shopping centre customers were represented.

Of the people who took a questionnaire, approximately 50% filled it in and posted it back. Of just under 550 questionnaires distributed, 301 were returned, yielding a response rate of just over 50%. Of these 301 questionnaires, 9 (~3%) were deemed unusable, because of multiple missing values. Those questionnaires with only the occasional item missing were kept, but omitted from any analysis which required the missing items. The details of the sample drawn will be provided in chapter 4.

Access

Access to a variety of types of shopping centres in North East England was required for survey distribution to the target sample. A list of shopping centres in the study area was compiled after

a rigorous search on internet business directories Yell.com and Thompson local web (anon 2003; anon 2003). A letter was sent to the management of each of these shopping centres requesting access, outlining the procedure that would be followed in conducting the research. Specifically, centre managers were informed that the customers would not be bothered for more than a few seconds, and only requested to take a questionnaire home to complete in their own time. Out of 19 letters sent out, access was granted to 6 shopping centres, which represented the wide variety of shopping centre formats in the area, and was important for ensuring a variety of customers in terms of their shopping centre preferences. It was vital to visit many different types of shopping centre, to gain access to the cross-section of potential customers living in the north east of England. The six shopping centres visited enabled a fairly representative sample of north east shoppers to be taken. Should only one centre be used for access, it would be impossible to gain a reasonable sample of customers who prefer other formats of shopping centre. Details of the shopping centres can be found in Appendix H.

Data Collection Mode

Data were collected by approaching customers in the pedestrian flow of the shopping centres. Since formal training of researchers was unfeasible, it was deemed the best approach would be to keep it simple and friendly. Customers were approached in a polite manner, using a standardised approach- "Would you like to help with some academic research?" This allowed the customer to be quickly appraised that this was a non-profit study, and they were not being asked for money. Each questionnaire was given with a pen and stamped addressed envelope to minimise barriers to filling in the form, and a token gesture of a confectionary treat to elicit trust and appreciation, and therefore hopefully, a reciprocal response.

This 'mall-intercept' type approach is a popular method for gaining marketing information from customers, largely through its ease of use, and given the response rate of 50.17% for the present study, it seems to have been an effective approach. It is widely recognised as a key means for gaining customer responses, introduced in the 1960s with the development of enclosed shopping centres, and by the 1980s, mall-intercepts accounted for 33% of all surveys (Schleifer86 in Hornick88), and around 19% of all marketing research in 1984 (Dupont 1987), though mall-intercepts have been declining in popularity (Frost-Norton 2005).

Researchers employed in collecting data in this study were female. From literature in the area of mall-intercept studies (Hornick and Ellis 1988), it is suggested that female researchers have a better response rate than male researchers in getting respondents to fill in a questionnaire.

This study was not as time-intensive on either the customer or the researcher as traditional mall intercepts. Only a minute was required to distribute the questionnaire, and then the researcher could move onto the next customer. Filling in questionnaires at home should maximise the quality of customer responses, as they will not feel the time pressure that may be present in the mall, or physically uncomfortable, and embarrassed at having passers by watching them (Burns and Bush 2003). Some limitations in the 'mall-intercept' approach are also present in this approach, however. The representative value of the sample may be in question, as the majority of the sample will be made up of people who shop most often in shopping centres (Gates and Soloman 1982; Dupont 1987). There is no feasible way of overcoming this one contribution to a biased sample.

The data collection technique used in this study was a self-administrated drop-off survey. Drop-off surveys are effective because they take up less of the researcher's time and minimise the influence of the researcher, provide relatively high response rates, and are fairly cheap to conduct (Brown 1987; Burns and Bush 2003). By asking respondents to take the questionnaire away and post it back later, their anonymity was ensured, which may reduce the effects of socially desirable responses. This also minimised interviewer bias, although selection bias is more difficult to overcome. In addition, the need to restrict the length of a strictly 'mall-intercept' survey was no longer an issue. So a hybrid approach- 'mall-intercept self-administrated drop-off' survey approach was adopted in this investigation.

Data from the questionnaires were entered into the computer using Formic, enabling fast, efficient data entry, and minimising human error. Using random sampling, 10% of the electronic records were checked against hardcopy originals to ensure accuracy of Formic pre-formatting. Following data entry, the data were cleaned in preparation for statistical analysis. Questionnaires with missing sections were removed- there were 9 such questionnaires, taking the total number of records down to 292. The records were queried for further missing values, and where there were only one or two items missing, middle values were used, to allow for statistical analysis. Reverse items were then altered as required, allowing scale totals to be calculated. Data were

further cleansed to correct spelling and typing errors for open ended questions, and to ensure consistency.

Ethical Considerations

Before entering into the specifics of the data collection, it is important to add a note here to confirm that appropriate ethical guidelines were consulted and followed at all stages of this research. Ethical guidelines offered by the university and by professional marketing research bodies were considered and this research was confidently conducted in an ethical fashion. Participants were always treated with complete anonymity, and assured that their data would not be disclosed to third parties, only used for the study at hand. Informed consent was granted by all participants, who were assured they could terminate their part in the research at any time. Vulnerable groups were avoided. Only participants over the age of 16 were included in both studies.

Study 2 Data Collection

Although the target population for study 2 was the same as that for study 1 (shoppers in the north east of England), data was collected for study 2 in quite a different manner. One of the key points to come out from study 1 was the potentially limited number of behavioural responses allowed. Most types of shopping centres were accounted for (though this raised its own complications in terms of classification schemes), but not all. A more open ended approach that did not require access to shopping centres was deemed more suitable. Rather than question shoppers at a particular shopping centre, like in study 1, instead, social media and email were used to access a sample of shoppers in the north east, with the first question asking them to name was the last shopping centre they visited, and answer some of the questions with this shopping centre and shopping trip in mind. This would allow a more natural index of popularity of shopping centres to emerge.

Survey Sampling

A non-probability sampling technique was used to extract the data, combining initial convenience sampling in which staff working at Durham University (in the study area) were

contacted, but more importantly snowball sampling, in which respondents were encouraged to pass on the questionnaire to people they know in the north east. These referrals were asked to also pass on the survey to others to ensure a broader geographical sample was possible. At the same time, the link to the questionnaire was shared on Facebook pages of major shopping centres in the area, with substantial numbers of followers.

Data Collection Mode

The use of electronic survey using the online survey provider Qualtrics allowed respondents from a wider geographical area to be attracted without having to question respondents in the shopping centres themselves. It was hoped, given the length of the questionnaire, that being able to fill it in comfortable settings would increase response and completion rates. It also allowed fast and less costly responding, and minimised both interviewer bias and removed the potential for human error when it comes to data entry (Malhotra & Birks 2007). Forcing responses also meant that important questions could not be missed, and pages of questions could not be missed accidentally. However, instructions had to be explicit and unambiguous, and there is always the potential that respondents miss-read instructions before answering the questions, which could affect accuracy. The key disadvantage of this approach is that all respondents need internet access and be internet savvy. Though less problematic than the mall-intercept approach adopted in study 1, the potential for self-selection bias may also be reasonably high, as respondents who dislike shopping avoid the questionnaire (Baltar and Brunet 2012).

3.3.6 Assess Validity and Reliability

Principles of Assessing Validity and Reliability

Churchill (1979) calls for the final data set to be checked once more for reliability, to ensure confidence in the developed and refined measures, which form the basis for hypothesis testing. These measures must be reliable and valid for researchers to have any confidence in the outputs of hypothesis testing. Churchill suggests checking Cronbach's alpha again, arguing against the use test-retest reliability in addition to the internal consistency check. Test-retest was used to ensure forces external to the measures are not likely to have a substantial impact on supposedly

stable constructs (like traits or attitudes, for example), but is problematic because it relies upon respondents' memories and has subsequently fallen from favour.

Another procedure which is essential, before hypotheses are tested, is to check the construct to determine the number of dimensions which it contains. Churchill (1979) recommends using factor analysis to identify the number and composition of dimensions in terms of items. He highlights the importance of doing this after the metric purification stage, as 'garbage items' which don't share a common core tend to produce more dimensions than are identifiable conceptually. As such, factor analysis has been saved for the time when there is sufficient sample size, and the measure has been purified and checked initially for reliability. In the following sections for each study, first principal component analyses will be presented for each construct, then these scales (with key items identified) be checked for reliability.

Principal Component Analysis

Factor analysis is an overarching term used for a family of analytical techniques for identifying ways to reduce data into fewer components. Factor analysis tools are described by Churchill (1979), MacKenzie et al (2011) and many others (Pallant 2010) as useful in the development and appraisal of scale measures. Using factor analysis, it is possible to take multiple items, and find a way to group them according to common patterns emerging from data. In this way, fewer distinct dimensions are identified, which enables the simplification of subsequent hypothesis testing. Rather than testing many potentially unreliable and invalid items in hypothesis tests, fewer robust and statistically valid variables can be tested. This lends further credibility to the validity of hypothesis testing, i.e. that these tests will contain variables which are worthy of testing, and therefore findings will have greater validity also.

Factor analysis is most generally broken down into two approaches- exploratory and confirmatory, and within each of these there are different types. Confirmatory factor analysis is a more complex set of techniques used to confirm the structure of constructs using structural equation modelling. Exploratory factor analysis techniques are used more readily to examine how items are interrelated, giving indication of suitable ways to group a set of items into fewer 'latent' variables, which represent the underlying dimensions of a construct. Literature is sometimes conflicting in describing factor analysis and principal component analysis (PCA). Principal component analysis takes the original observed items, and uses the variance between

all of the items to transform them into fewer aggregate 'latent' variables, so at face value, appears to be the same as factor analysis. While some describe PCA as just one of a family of technique of the overarching factor analysis (Pallant 2010), others describe factor analysis as quite different from PCA, with factors estimated from mathematical models with only shared variance considered (Tabachnick, Fidell et al. 2001). Principal component analysis is argued to be most useful if the end goal is the reduction of data into its component parts, providing 'an empirical summary of the data set' (Stevens 1996) p363, and has the benefit of avoiding potentially problematic 'factor indeterminacy' (Tabachnick & Fidell et al 2001 p61), and so shall be used to identify dimensions and dimensional composition.

A set of procedures for PCA outlined by Pallant (2010) will be followed to first explore the data, before determining which items comprise which dimensions. While it would be ideal to identify dimensions commensurate with theoretical dimensions, this may not always be possible.

Pallant (2010) suggests approaching PCA (considered in this investigation in as one of the techniques included in the factor analysis family) in three steps. These steps were followed to factor analyse each of the constructs considered across the two studies.

The first step in PCA entails assessing the data to determine its suitability for factor analysis. A key determinant of PCA suitability is the sample size. Small data sets do not yield factors that generalise well (Pallant 2010 p183). Larger samples are usually more desirable. Recommended sample size for factor analysis varies considerably. Malhotra & Birks (2007) concede that in marketing research, it is often the case that sample sizes may be reasonably small. Along with others, they suggest that it is not sample size in general that is of concern, rather, that the sample must have at least 5 respondents per item. So a 20 item construct would require a sample of at least 100. The largest construct in study 1 is 35 items in length, suggesting a sample of 175 is required for factor analysis. The study 1 sample of 292 is therefore adequate for PCA. For study 2, the largest construct is 20 items in length, therefore requiring a sample of 100. The final sample of 177 for study 2 is therefore adequate for PCA.

The other key determinant of suitability of factor analysis is the strength of item multicollinearity. One of the first things PCA provides is a correlation matrix of items within the construct of interest. It is suggested that if few correlations between items are over .3, that factor analysis is not relevant (Tabachnick & Fidell 2001). This is essentially because principal

component analysis is looking to determine 'latent' variables with the greatest intra-item correlations, with different latent variables showing little correlation. Other tests can be run to determine whether data should be considered as suitable for PCA- these include Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Pallant 2010), with a significant Bartlett's result and a KMO value of above .6 recommended (Kaiser 1970). Before PCA is carried out for constructs across the two studies, correlation matrices, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy will be first examined and summarised to confirm suitability of PCA.

The second step in factor analysis is to determine, for a construct, the most appropriate number of factors (latent variables) within that construct, and can be done using a number of techniques, including an initial PCA. At its heart, PCA is trying to achieve a balance between explaining as much variance in the data as it can, and reduce to number of factors to the fewest possible. A certain number of dimensions for a particular construct are often expected based on preceding theoretical discussion of a construct. Indeed, for these studies, items were generated to ensure multiple dimensions for a particular construct would be fully captured in the data collected, with multiple items for each dimension. However, it is not always the case when new measures are developed, in different contexts from previous studies, that the theoretically defined dimensions will also be captured in new studies. Factor analysis is an important tool to examine patterns in the data to determine whether the number and composition of dimensions (factors) in the data collected match up with the number of dimensions identified in theories developed from previous studies. As one of the goals of PCA is to reduce the data to the most simple solution of fewest factors, it is often likely that the dimensions suggested from PCA are fewer in number and potentially broader in scope than those suggested in the theory. A combination of techniques within PCA will be considered to identify the optimal number of components for a construct. Pallant (2010) suggests considering Eigenvalue rule (Kaiser's criterion), examining the scree plot and parallel analysis. The Eigenvalue rule suggests that only components with an eigenvalue (which relates to the extent of variance explained) of 1 or above be kept. The scree test is a visual aid to interpreting the variance of each component explained, by plotting the eigenvalues for each factor. Parallel analysis takes key information relating to the data collected (number of variables and subjects) and creates random data from these numbers, and using multiple replications, extracts Eigenvalues. The Eigenvalues from the real data can then be compared with those constructed from the parallel analysis. When the real Eigenvalue exceeds the 'criterion value' from parallel analysis, it is accepted that this construct is acceptable. These,

as well as visual aids of multicollinearity shall be considered in determining the optimal number of components.

The final step, once the appropriate number of factors has been determined, is to run the final PCA and interpret it. This is described by Pallant (2010) as 'Factor rotation and interpretation'. (p184). Factor rotation will aid the interpretation of the PCA components. Data will first be examined using factor analysis, before checking the output factor scales for reliability. Checking reliability of the theoretically defined scales before factor analysis may be a fruitless exercise if factor analysis identifies different or fewer scales than anticipated.

Assessing Validity and Reliability for Study 1

In SPSS, the situational construct for study 1, with items built around based on Belk's (1975) taxonomy, was factor analysed. Using principal components analysis, the 35 items were scrutinised to determine whether they factor loaded on the five dimensions suggested by Belk (1975). Data was first assessed to determine whether factor analysis was suitable (see appendix I). Barlett's Test of Sphericity (Bartlett 1954) reached statistical significance ($p < .001$), and Kaiser-Meyer-Olkin (KMO) reached an acceptable score of .806 (Pallant 2010) supporting the factorability suggested by the correlation table, which revealed multicollinearity.

Initial principal components analysis suggested that 11 factors were present with eigenvalues above 1, with factors explaining between 2.9% and 17.476% of variance (cumulatively 58.67% of variance). 11 items are far more than anticipated, since the items were developed based on Belk's five situational dimensions. Also, statistical methodologists suggest that using procedures such as the 'greater-than-one rule' are flawed (O'Connor 2000), and that tests like parallel analysis and Velicer's minimum average partial (MAP) test are more robust and more widely recommended. Inspection of the scree plot (in appendix I) suggested a possible break after 4 factors. Catell's (1966) scree test suggests that 4 components be retained for further testing. Parallel Analysis, conducted using Monte Carlo PCA for Parallel Analysis, suggested that 4 factors may be more appropriate (please see table 3.9).

Table 3.9: Comparison of Eigenvalues from principal components analysis (PCA) & the corresponding criterion values obtained from parallel analysis for Situational construct			
Component Number	**Actual Eigenvalue from PCA**	**Criterion value from parallel analysis**	**Decision**
1	5.172	1.726	Accept
2	2.251	1.629	Accept
3	1.828	1.562	Accept
4	1.524	1.503	Accept

Only four components had eigenvalues greater than the corresponding values in the randomly generated data matrix (based on 35 variables, and a sample of 292 respondents). Therefore, principal component analysis will be conducted with four components, with varimax rotation also conducted to aid interpretation (see table 3.10), in line with earlier studies (Hackett and Foxall 1999; Leek, Maddock et al. 2000). For the table of unrotated loadings, please see appendix I.

Table 3.10 Four factor Varimax Rotated Component Matrix[a]

	Component			
	1	Social	Temporal	Physical
Do you find shopping exciting?	.721			
Do you enjoy shopping for its own sake, not just for the items you purchase?	.698			
Do you go shopping to escape ordinary life?	.587			
Compared to other activities, does your time spend shopping feel truly enjoyable?	.618			
Do you find you shop mainly because you want to, and not because you have to?	.506			
Do you find your mood improves with each purchase you make?	.398		.335	
Have you ever gone shopping when sad or depressed, to cheer yourself up?	.671			
Do you ever shop to put yourself in a better mood?	.649		.354	
Do you tend to make a lot more purchase decisions immediately after payday?	.320			
Is it important to you that your friends like the products you buy?		.590		
Would you be put off buying a product you really liked if your friends did not like it?		.583		
Do you try to keep up with current fashions and trends?		.519		
Have you ever found certain products more desirable when someone you admired used/endorsed it?		.544		
Do your tastes (e.g. in clothes, movies, music, etc.) change to match those around you?		.571		
Do you ever watch others to keep up with changes in fashion?		.525		
Do you try to buy products that are similar to those your friends buy?		.601		
Do you believe a crowded shopping centre must be a good shopping centre?		.363		
Do you ever get excited when seasonal decorations appear in shopping centres?		.304		
Would you make an unnecessary purchase, just to cheer yourself up?	.402		.564	
Do you tend to make more rash purchase decisions when excited?			.566	
Do you tend to make more rash purchase decisions when bored?			.587	
Do you find you start to make more bad decisions when you are hungry?			.389	
Do you find a bit of time pressure can push you to make important purchase decisions?		.305	.598	
Do you find yourself buying more food when grocery shopping, if you have not yet eaten?			.399	
Do you find you make more split-second purchase decisions when pushed for time?			.660	
Do you find yourself spending more on yourself in the run-up to a seasonal event?		.333	.340	
Do you ever find yourself browsing, even when you have no intention to buy?				.579
Do you find the type of things you buy yourself change depending on time of year?				.464
Do you enjoy getting into the spirit of holidays?				.473
Do you still browse through shops even when you do not have money?				.446
Have you ever left a store after noticing a bad smell?				.372
Have you ever stayed a long time in a store that plays good background music?				.377
Have you ever left a store that displays items in a haphazard or disorganised way?				
Have you ever gone inside a store to warm up on a cold day?				
Have you ever left a store because you felt the music was too loud?				
Percentage of Variance Explained	19.16%	8.34%	6.78%	5.64%
Cronbach's α	.549	.69	.699	.816

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Interpretation of the components suggest that component 1(8 items) reads somewhat like a mix of task affect and antecedent states, component 2 (7 items) describes social surroundings, component 3 (8 items) relates to temporal perspectives and component 4 (6 items) physical surroundings. In light of a four factor solution, which is comparable with Foxall's four aspects of the situation, component 1 may in fact be interpreted as regulatory forces. Though not originally conceived of to measure regulatory forces, several items relate to forces imposed on consumers in the situation by personal, social, and situational regulations, such as the influence of personal feelings towards shopping, ability to engage in shopping due to monetary constraints, etc. In some definitions, regulatory forces are the rules concerning shopping (Oliveira-Castro, Foxall et al. 2005), self or other rules that specify contingencies (Foxall and Yani-de-Soriano 2005).

Disappointingly, when the situational scales are tested for reliability with the key contained items displayed in table 3.10 above, not all scales pass reliability analysis at the anticipated level. The regulatory forces scale is acceptable as having good reliability, while social surroundings and temporal perspective generally round up to provide acceptable reliability. Physical surroundings however, only achieve a Cronbach's alpha of .549, which George & Mallery (2003) suggest is poor reliability. Later discussion of 'latent' variable calculation will discuss how this may be overcome.

Assessing Reliability and Validity for Study 2

Because study 2 considers several different constructs, most of which were developed from scratch, factor analysis was conducted for each of these. The following sections shall consider the factor analysis for each of these constructs in turn. First, the 'Situational' construct will be considered, then the 'Reinforcement construct', the 'Approach-avoidance construct', the 'Learning History' construct, and finally, 'Emotional Response' construct. Factor analysis should determine whether the dimensions identified in the extant theory are recognisable in the final data collected for study 2, or whether constructs applied in the context of shopping centre choice have different dimensions. Full figures for reliability tests for study 2 can be found in appendix J.

Situational Construct Principal Components Analysis (PCA)

Firstly, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were tested to help determine whether factor analysis is appropriate for situational variables. Kaiser-Meyer-Olkin returned a value of .887, which is greater than the recommended value of .6 (Kaiser 1970) and Bartlett's test of sphericity was significant, so both tests suggest the situational items are suitable for factor analysis.

Next, the correlations of situational items were examined to ensure sufficient cross correlations exist. Figure 3.4 below shows a visual representation of how all of the situational items correlate with each other, with light areas denoting the largest correlation coefficients, and dark areas the smallest correlations. Looking at the correlation table itself, many items had reasonable correlations of over .3 (Pallant 2010).

Initial PCA revealed four components with eigenvalues over 1, explaining 34.9%, 22.1%, 7.2% and 5.6% respectively, to a total of 69.3% variance. However, with further examination, the scree plot (Cattell 1966) suggested a clear break after just two components. Interpretation of parallel analysis suggested that either two or three components should be considered. In the parallel analysis summarised in table 3.11, it is suggested that three components be retained for PCA, with the eigenvalues of three components exceeding the criterion values from the randomly generated data with comparable parameters (20 variables x 177 respondents). Further repeats of parallel analysis sometimes provide similar results, while others show eigenvalues for only two components exceeding parallel criterion values. Given the potentially conflicting results from parallel and scree plots, the (most likely) two factor and also three factor solutions shall be explored.

Table 3.11: Comparison of Eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for Situational construct

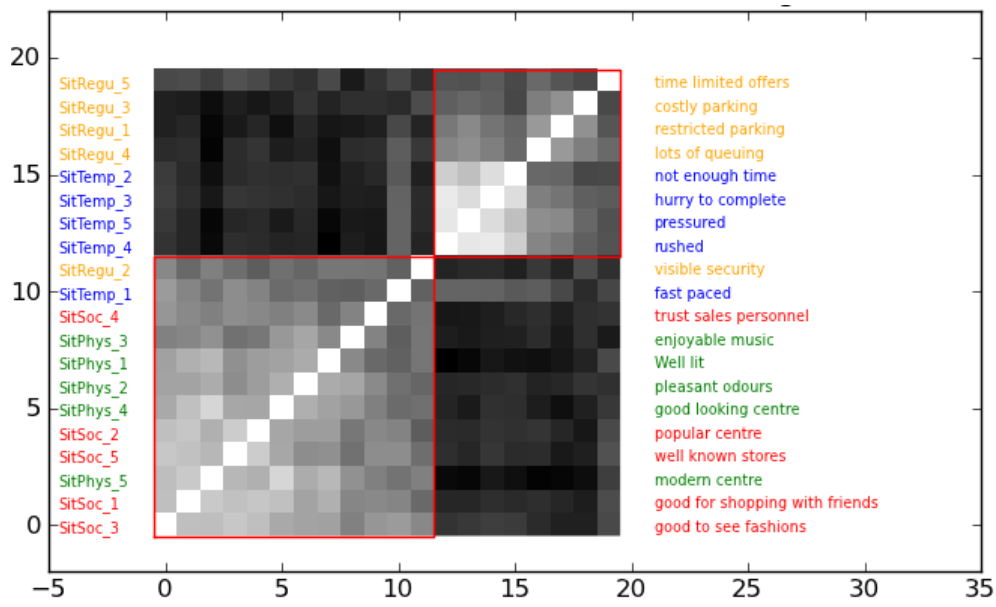
Component Number	Actual Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	6.878	1.6611	Accept
2	4.431	1.5314	Accept
3	1.433	1.4318	Accept
4	1.113	1.3557	Reject

As initial exploratory factor analysis for the situational construct compared with parallel analysis suggests, only two, at most three dimensions can be shown within the data collected, rather than

four factors for situational scales derived from theory. Rather than having distinct scale measures for physical surroundings, social surroundings, temporal perspective and regulatory forces, two new constructs are found for the data. It may be that the scales look completely different from those identified in the theory, or it may be that items across multiple theoretically identified dimensions in fact comprise just one aggregate dimension.

Rather interestingly, it is the examination of the normalised covariance matrix that offers the most definitive insight into whether there are two or three correlations. Figure 3.4 below shows the groupings of strong correlation coefficients. It is clear from figure 3.43 that there are two distinct groupings of variables (though again, it does highlight some potential for a third component), with variables within each group sharing strong correlations with each other, and very weak correlations with variables in the other grouping.

Figure 3.4 Covariance for Behaviour Setting



This figure provides initial insight into the composition of the components likely to be uncovered in the PCA, though at this stage does not necessarily give clear indication of loadings. It appears that physical surroundings and social surroundings variables correlate strongly with each other, suggesting that component 1 is instead an overarching measure of the surroundings. A temporal and a regulatory variable also appear to relate quite strongly here. The regulatory item (Regulatory 2) asks about the visibility of security personnel, so it is not surprising that is correlates strongly with the strongly social and sensory characteristics of variables measuring surroundings. The temporal variable relates to whether the environment felt fast paced, but notably, appears to also correlate quite strongly with component 2. Component two is

apparently a smaller component, with slightly fewer variables. It appears to be comprised of other forces acting upon the consumer in the situation- temporal and regulatory forces. It does suggest that regulatory forces 5- which asks about the prevalence of time limited offers, does not appear to correlate strongly with either of the two components, but rather, only fairly weakly with variables across both components.

Varimax rotation was used to determine a more accurate classification of the components, first for a three component solution, then for the two factor solution, to see whether there is any clear indication of the best factor solution.

Table 3.12: Rotated Component Matrix for three factor solution for Situation

	Component		
	1 Surroundings	2 Temporal	3 Regulatory
The shopping centre is well lit	.760		
Odours in the shopping centre are pleasant	.765		
I enjoy the music played	.638		
The shopping centre looks good	.823		
The shopping centre has a modern feel	.879		
The shopping centre provides a good opportunity to shop with friends	.863		
The shopping centre seems popular	.812		
The shopping centre is a good place to see new fashions and trends	.852		
I would trust sales personnel in the shopping	.626		
The shopping centre has lots of well known stores	.815		
The shopping centre felt very fast paced	.538	.371	
I didn't have enough time to do everything I wanted in the shopping centre		.879	
I had to hurry to complete my shopping trip on time		.923	
I felt rushed for time in this shopping centre		.919	
I felt pressured to complete my shopping quickly		.864	.321
Parking is very restricted at the shopping centre.			.744
Security personnel are highly visible.	.517		
It costs a lot for people to park at the shopping centre.			.817
A lot of time is spent queuing in the shopping centre.		.347	.708
There are many time limited offers in the shops.			.373
Percentage of Variance Explained	34.9%	22.1%	7.2%
Cronbach's α	.926	.876	.744

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 4 iterations.

The varimax rotated three component solution above (table 3.12) appears to confirm initial interpretation from visualisation of cross-covariance, that there the largest component is the combined physical and social surroundings, here simplified to read 'surroundings'. When required to find three components, PCA appears to largely separate out temporal variables into one component, and regulatory into another, although Regulatory 2, which was shown earlier to

relate more strongly with surroundings items, is loaded onto that dimension, with no apparent secondary loading on the regulatory component. Temporal 1, earlier identified to relate more strongly with surroundings items was shown in this solution to indeed load primarily on surroundings, though with a secondary loading on the temporal perspective component.

The two component solution is presented in appendix K. The two factor solution is similar, with the same 12 variables loading onto component 1. Component 2 takes on all of the variables previously split across temporal perspective and regulatory forces. The three component solution shall be retained and three variables (surroundings, temporal perspective, and regulatory forces) created from loaded items to generate the new latent variables which form the basis for hypothesis testing in the following chapter.

Consequences Construct Factor Analysis

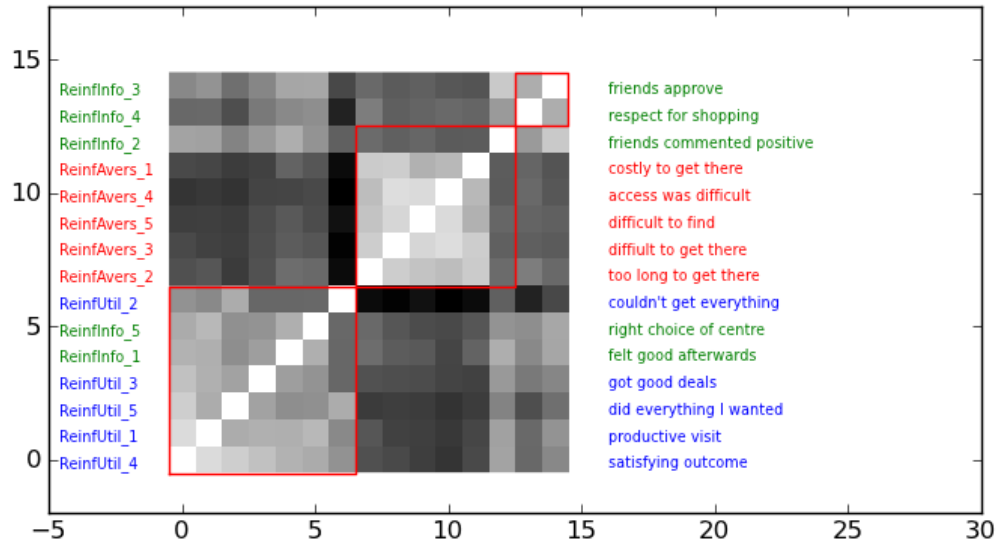
Both the KMO measure of sampling adequacy (.832) and Bartlett's test of sphericity ($p < .001$) returned figures suggesting PCA is acceptable for consequences (see appendix K). Examination of consequences variable covariance shows sufficiently good relationships between items (visualised in figure 3.5 below). Examination of eigenvalues of the initial PCA revealed three components with eigenvalues over 1, explaining 31.2%, 27.2% and 10.4% of variance respectively, accounting for a total of 68.8% variance. The scree plot (appendix K) suggests three components be considered, as does parallel analysis, with the three eigenvalues all above the randomly computed eigenvalues within parallel analysis (table 3.13).

Table 3.13: Comparison of Eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for Reinforcement construct

Component Number	Actual Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	4.676	1.5333	Accept
2	4.081	1.4055	Accept
3	1.557	1.3155	Accept

However, visual interpretation of the reinforcement covariance in figure 3.5 below suggest that there may not be three components to consider, but rather, just two. A two factor solution shall also be examined, as well as the recommended and theoretically based three factor solution.

Figure 3.5: Covariance for Consequences



To enable clearer interpretation of the components, Varimax rotation was used for first the three then two component PCA, presented in table 3.14 and appendix K.

Table 3.14: Rotated Component Matrix for three factor solution for Consequences

	Component		
	1 Aversive	2 Utilitarian	3 Informational
I felt good after my visit to this shopping centre.		.576	.500
Friends commented positively on the products I bought.		.426	.660
My friends approve of my choice of shopping centre.			.821
People will respect me more for visiting this shopping centre.			.818
I'm confident that my choice of shopping centre was the right one.		.544	.487
My visit to the shopping centre was a productive one.		.812	
I wasn't able to do everything I planned during the visit.	-.526	.507	-.322
I was able to get some good deals on my visit.		.653	
I am satisfied with the outcome of my visit to the shopping.		.908	
I managed to do everything I wanted on my visit.		.821	
It was costly to get to the shopping centre.	.812		
It took too long to get to the shopping centre.	.835		
Getting to the shopping centre was difficult.	.926		
Access to the shopping centre was very difficult.	.866		
Finding the way to the shopping centre was complicated.	.856		
Percentage of Variance Explained	31.2%	27.2%	10.4%
Cronbach's α	.896	.839	.839

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

The three factor solution works reasonably well, mostly in line with items generated based on theoretical underpinning. Component 1, identified as aversive consequences is clearly comprises of the aversive variables developed, with the additional loading of a (reverse) utilitarian variable which also loaded on component 2 and 3. Component 2 was identified as utilitarian

reinforcement, though it comprised of some informational variables also. Three of component 3's (informational reinforcement) variables; Reinforcement 1 'I felt good…', Reinforcement 2 'Friends commented positively…', and Reinforcement 5 'I'm confident that my choice…' loaded on component 2 as well as component 3, with Reinforcement 1 and Reinforcement 5 loading principally on component 2, rather than the anticipated component 3.

The two component solution (seen in appendix K) is more complex to interpret, though there are fewer cross-loadings. Largely speaking it seems that component 2 relates to the aversive and punishing consequences of shopping centre visits, while component 1 relates to all reinforcing and rewarding consequences of shopping centre visit, disregarding the theoretically anticipated difference between utilitarian and informational reinforcement. To keep in line with the scree and parallel analyses above, and the usefulness of the outputs, the three factor solution shall be adopted, with latent variables computed based on the loaded variables, with these variables carried forward for hypothesis testing. The two factor solution would not allow for the relative impact of the different types of reinforcement to be fully explored.

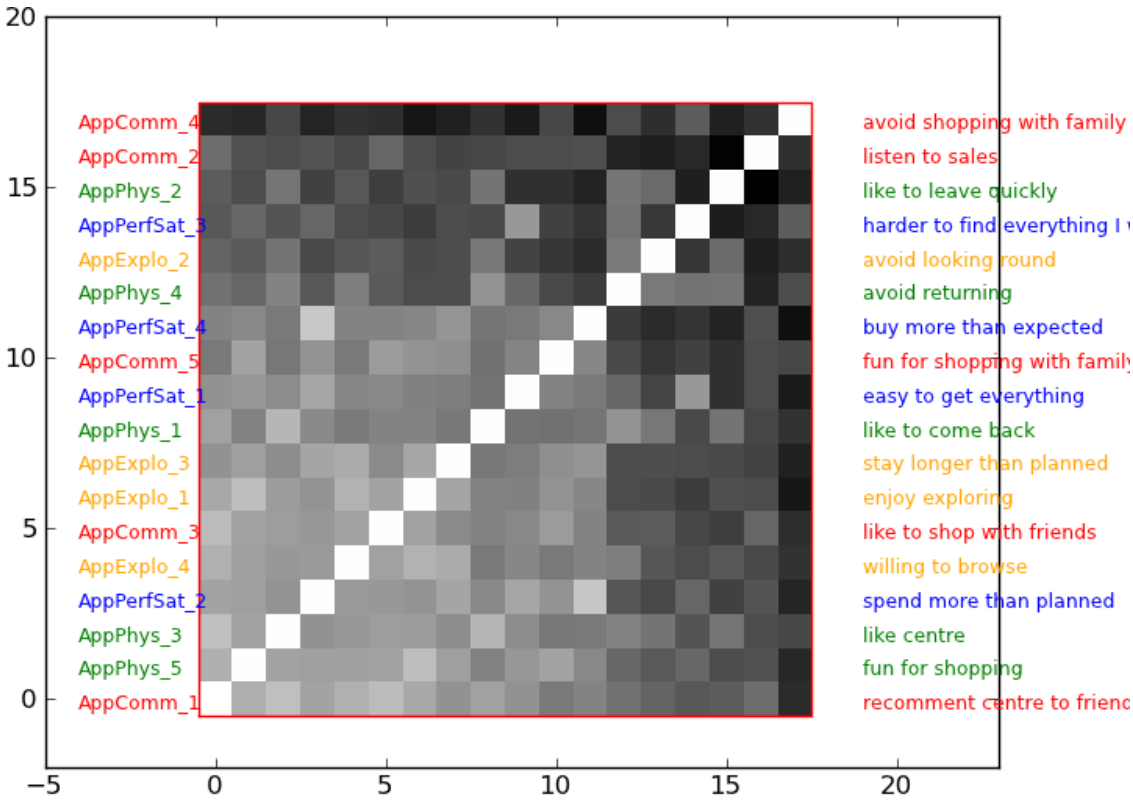
Approach-avoidance Construct Factor Analysis

The KMO measure of sampling adequacy and Bartlett's test of sphericity (.920) agree that factor analysis is appropriate to establish dimensions for approach-avoidance behaviours in the data collected. Approach-avoidance items were then examined for cross correlations, with the visualisation of this summarised in figure 3.6 below. Many items had strong correlations with other items in the matrix. Initial PCA suggested that three components be considered for approach avoidance (with eigenvalues of over 1), explaining a total of 68.0% of variance across these components (53.4%, 8.3% and 6.3%) while the scree plot (see appendix K) conflicted drastically with this, suggesting that approach avoidance be considered as a uni-dimensional construct, with a break after just one component. Looking at the degree of variance explained by each of the components when considering only the basic index of eigenvalues of over 1, it does appear that perhaps only one component should be considered, since the second and third components together only explain a further 14.6% variance to the first component's 53.4%). Scrutinisation of parallel analysis summarised in table 3.15 below gives further evidence that only one or at most two components be considered for the approach-avoidance construct.

Table 3.15: Comparison of Eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for Approach-avoidance construct			
Component Number	**Actual Eigenvalue from PCA**	**Criterion value from parallel analysis**	**Decision**
1	9.612	1.5890	Accept
2	1.496	1.4739	Accept
3	1.125	1.3898	Reject
4	.844	1.3120	Reject

Finally, the visualisation of the cross correlations in figure 3.6 below further support these indications that the approach-avoidance construct developed for study 2 be considered as uni-dimensional rather than as a multi-dimensional construct. Some items have stronger correlations with other items than others, and these items are anticipated to load more strongly in the singly component solution.

Figure 3.6: Covariance of Approach-Avoidance



Given these analyses, PCA will be carried out for two components to see whether this presents a meaningful solution.

Table 3.16: Rotated Component Matrix for 2 factor solution for Approach-Avoidance

	Component	
	1	2
I would like to come back to this shopping centre in the future	.779	
I would leave this shopping centre as soon as possible	.540	.500
I like this shopping centre	.843	
I would avoid returning to this shopping centre	.660	.537
Shopping here is fun	.845	
I would enjoy exploring this shopping centre.	.812	
I would avoid looking around this shopping centre.	.581	.481
I'd stay longer in this shopping centre than planned.	.788	
I'd be willing to browse in this shopping centre.	.823	
I would recommend this shopping centre to friends	.863	
I would be willing to listen to the advice of sales personnel	.527	
I would like to shop here with friends	.817	
I would avoid shopping here with family	.413	.391
Shopping here with family would be fun	.745	
It is easy to find everything I want at the shopping centre.	.768	
I'd be willing to spend more money than planned in this shopping centre.	.830	
It's harder than usual to find everything I want in this shopping centre.	.576	
I would probably buy more items in the shopping centre than expected.	.729	-.374

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

Interpretation of the rotated PCA solution suggests that two distinct components cannot be found given the data collected. All variables load principally on component 1 for the two component solution, with 5 of these showing secondary loadings on component 2. This supports the earlier visualisation and scree plot, which suggested that approach-avoidance in this context should not be considered as a multi-dimensional construct suggested in earlier research (Donovan & Rossiter 1982), but instead as an overarching uni-dimensional indication of patronage approach (potentially, patronage intention). Reliability testing returned a Cronbach's alpha of .943, suggesting this uni-dimensional measure of approach-avoidance is also reliable. This uni-dimensional latent variable shall be computed based on loadings of individual variables, and shall be taken forward to hypothesis testing, where it shall be considered as the dependent variable.

Learning History Construct Factor Analysis

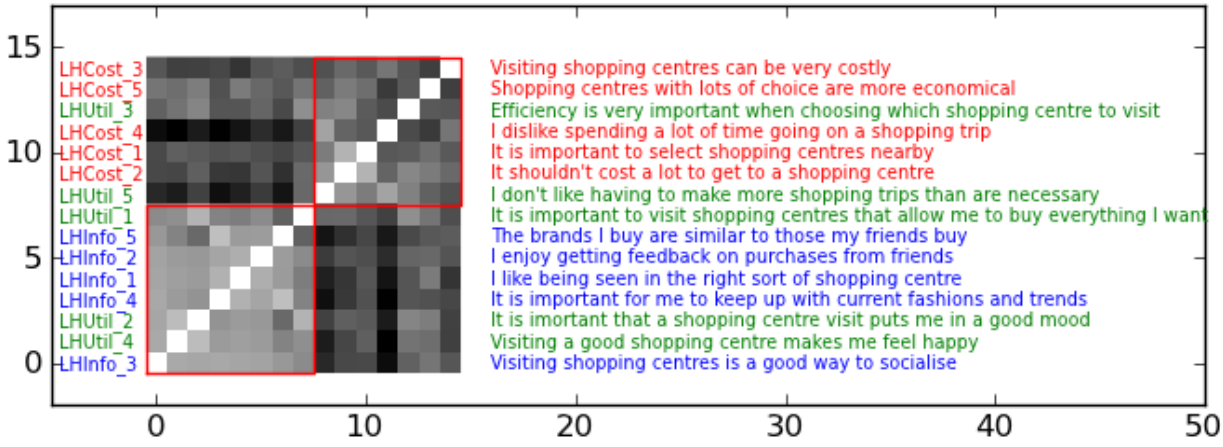
For learning history, it would appear from looking at both the Kaiser-Meyer-Olkin measure of sampling adequacy (.812) and Bartlett's test of sphericity ($p<.001$) that factor analysis is appropriate. The covariance matrix (figure 3.7) indicates that there is sufficient cross correlation for factor analysis to be meaningful. Initial PCA reports that three components have eigenvalues of over 1 (explaining 31.2%, 17.8% and 8.5% of variance respectively), while the scree plot is not completely clear (see appendix K), but suggests two or at most three components for learning history. From table 3.16 below it appears that two factors should be considered, though the parallel analysis comes close to suggesting thee components as acceptable.

Table 3.17: Comparison of Eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for Learning History construct

Component Number	Actual Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	4.446	1.4239	Accept
2	1.875	1.2975	Accept
3	1.134	1.1961	Reject

Interpretation of the covariance visualised in figure 3.7 below agrees that there are two identifiable components to the learning history construct, rather than the theoretically anticipated three.

Figure 3.7: Covariance- Learning History



As with 'consequences', PCA shall be considered for 'learning history' for a two factor solution shall be considered, as well as the theoretically anticipated three factor solution (see table 3.19 below and appendix K). Examination of the varimax rotated three factor solution for 'learning history' shows that component 1 appears to represent importance of informational reinforcement, though several variables anticipated to represent importance of utilitarian reinforcement and importance of minimising cost appear to load on this component also. Component 2 seems to represent importance of utilitarian reinforcement, though some variables load more strongly onto 'informational' and 'cost'. Component 3: 'cost' appears to be comprised of only two variables, with all other variables loading on 'cost' doing so as secondary loadings. A two factor solution, as suggested by the parallel analysis shall be presented in table 3.18 below.

Table 3.18: Rotated Component Matrix for two factor solution for Learning History

	Component	
	1 Informational Learning History	2 Utilitarian Learning History
I like being seen in the right sort of shopping centre	.771	
I enjoy getting feedback on purchases from friends	.721	
Visiting shopping centres is a good way to socialise	.774	
It is important for me to keep up with current fashions and trends	.797	
The brands I buy are similar to those my friends buy	.659	
It is important to visit shopping centres that allow me to buy everything I want	.537	.454
It is important that a shopping centre visit puts me in a good mood	.718	.302
Efficiency is very important when choosing which shopping centre to visit		.571
Visiting a good shopping centre makes me feel happy	.766	
I don't like having to make more shopping trips than are necessary		.758
It is important to select shopping centres nearby		.606
It shouldn't cost a lot to get to a shopping centre		.792
Visiting shopping centres can be very costly		.307
I dislike spending a lot of time going on a shopping trip	-.436	.480
Shopping centres with lots of choice are more economical.	.324	.400
Percentage of variance explained	31.2%	17.8%
Cronbach's α	.806	.676

The two component rotated solution suggests two more clearly defined components, with far fewer secondary loadings. Component 1 can be clearly identified as relating to the importance of informational reinforcement to an individual, and component 2 to the importance of utilitarian reinforcement. Variables initially developed with the intention of measuring the importance of minimising cost have largely been enveloped into Component 2. This is not entirely surprising. In retrospect, the 'cost' items relate to aspects of utility for consumers. 'Cost' variables focus strongly on the importance of minimising cost, so it is little surprise that it bears strong

resemblance to aspects of utility such as the importance of being efficient (Utilitarian3) and not having to make more trips than necessary (Utilitarian5).

Of note is that some variables developed to measure 'utilitarian' have loaded more strongly on 'informational' Component 1 than 'utilitarian' Component 2. It seems variables relating to the importance of being put in a good mood (Utilitarian2) and feeling happy (Utilitarian4) load principally on informational reinforcement. The two component solution for learning history is by far more convincing than the three factor solution, with only a few secondary loadings, and grouping of variables that do share strong similarity. Two latent variables shall therefore be computed based on the loaded variables identified above, and taken forward for hypothesis testing.

Emotional Response Construct Factor Analysis

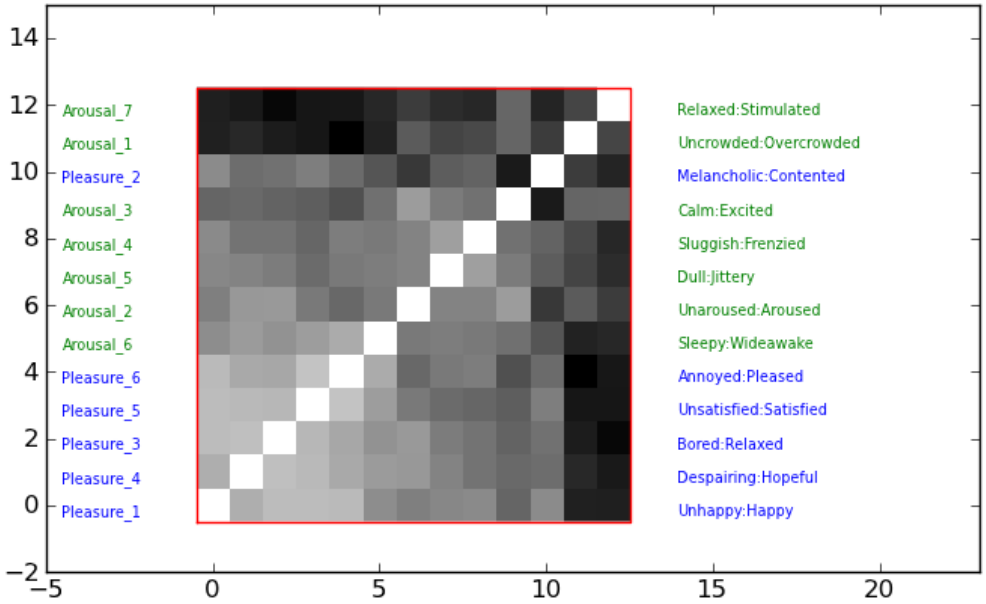
Finally, emotional response was examined first for its suitability for PCA, then to identify its components. PCA is appropriate according to the Kaiser-Meyer-Olkin measure of sampling adequacy (.872) and Bartlett's test of sphericity ($p<0.001$). The covariance matrix (figure 3.8) for emotional response showed sufficient indication of reasonably strong item relationships. Initial PCA suggests retaining three components (eigenvalues > 1) for the PCA solution, explaining 66.6% variance with component 1 (43.3%), component 2 (14.2%) and component 3 (9.1%). The scree plot for emotional response suggests retaining one, or at most two components, while parallel analysis (table 3.19 below) strongly suggests considering two components.

Table 3.19: Comparison of Eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for Emotional Response construct

Component Number	Actual Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	5.198	1.4488	Accept
2	1.705	1.3237	Accept
3	1.086	1.2422	Reject

Cross-covariance between emotional response items (visualised in figure 3.8) also indicates one or possibly two components for the emotional response construct. A two factor PCA shall therefore be carried out.

Figure 3.8: Covariance- Emotional Response



The rotated (varimax) component matrix for the two factor solution can be seen in table 3.20 below.

Table 3.20: Rotated Component Matrix for two factor solution for Emotional Response

	Component	
	1 Pleasure	2 Arousal
Unsatisfied:Satisfied	.845	
Annoyed:Pleased	.837	
Unhappy:Happy	.833	
Bored:Relaxed	.821	
Despairing:Hopeful	.798	
Sleepy:Wideawake	.670	
Jittery:Dull	.490	.480
Contented:Melancholic	.487	
Frenzied:Sluggish	.473	.454
Calm:Excited		.786
Unaroused:Aroused	.450	.642
Overcrowded:Uncrowded		.594
Relaxed:Stimulated		.431
Percentage of Variance Explained	40.1%	14%
Cronbach's α	.883	.655

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

This solution looks slightly different from those uncovered in previous studies. 'Pleasure' items load best on the pleasure construct, and largely speaking 'arousal' items load best on the arousal construct, but this is not always the case. Several variables previously developed as part of

'arousal' have stronger loadings on Component 1 'pleasure' than on Component 2 'arousal'. Arousal 5 (Jittery-Dull) and Arousal 4 (Frenzied-Sluggish) load fairly equally between both components. Arousal 6 (Sleepy-Wideawake) rather surprisingly, loads strongly on Component 1, and not at all on Component 2. Loaded variables shall be used to compute the two latent variables: 'pleasure' and 'arousal'.

To summarise the sections above, latent variables shall be developed for hypothesis testing, with PCA used to ensure that the variables taken forward for hypothesis testing shall yield meaningful and valid results. First however, these variables shall be tested for their reliability. Variables identified to contribute to a latent variable shall be examined for internal consistency. Table 3.21 summarises the latent variables identified from factor analysis.

Table 3.21: Summary of Latent Variables for each Construct

Construct	Components (number of items contained)
Situation	Surroundings (12 items) Temporal Perspective (6 items) Regulatory Forces (5 items)
Reinforcement	Utilitarian Reinforcement (6 items) Informational Reinforcement (8 items) Aversive Consequences (6)
Approach-Avoidance	Approach-Avoidance (18 items)
Learning History	Utilitarian Importance (10 items) Informational Importance (9 items)
Emotional Response	Pleasure (10 items) Arousal (6 items)

3.3.7 Preparing Data for Analysis

This final section of scale development is included to discuss the different strategies possible for using the data collected, using information gleaned from the PCA above.

Hair et al (1998) offers some insight into how decisions should be made regarding significance of factor loadings, for samples with a size of 100 or above. In considering 'practical significance', Hair et al (1998) suggest that a simple rule of thumb is to consider factor loadings greater than ±0.3 as the minimal practical level of significance (explaining around 10%). For this reason, factor loadings of less that ±0.3 were suppressed from the factor analysis tables included in this chapter, though full factor loadings can be found in appendix K. Factor loadings over ±0.4 are considered as more important, and loadings of more than ±0.5 as the most practically

significant (explaining around 25%). If a factor loading exceeds ±0.7, it is said to account for around 50% of the variance.

The output of factor analysis can be used in several ways for data reduction purposes (Hair et al 1998). Factor analysis outputs can be used to create fewer variables (Hair et al 1998 p111). In several ways- one, to use the factor matrix to select a single variable with the highest loading to "act as surrogate representative for a particular factor dimension", and the other to create a smaller set of variables based on those identified in the process of conducting factor analysis, of which two alternative approaches may be applied.

The first approach entails summating the loaded variables together, and using either the total, or the average value. This has benefits twofold (Hair et al 1998). This approach mitigates the impact of measurement error from any one variable, by using multiple indicators to ensure there is no need for reliance on a single variable. It also gives a more holistic representation of a concept, representing its many facets.

The second approach suggests instead using the factor scores to calculate the new variables to replace the original set. Variables which load higher have a greater contribution to the overall component, so the 'factor score' is the aggregate of all variables multiplied by their factor loading. A crucial limitation of this advanced approach is that it is more complex to replicate, as different factor matrices will inevitably entail for different studies.

In summation, the factor loadings of all variables on the factor contribute to the factor score, whereas only selected variables are added up with equal weightings to create the summated scale. Each approach has its own strengths and weaknesses, though the factor calculated score is more precise.

3.4 Analytical Tests

The principal means of analysing the data gathered from the two studies was through the use of inferential tests and visual confirmation of patterns in the data. Inferential statistics are typically used in scientific research to establish whether certain connections (relationships or variations) exist between a dependent variable (DV), and one or more independent variables (IV). From inferential tests such as Pearson's Product Moment Correlation, ANOVA, chi-square or

regression, statistical values are returned along with a significance value *p*. This significance value is used to determine whether the independent variable has a predicted effect upon the dependent variable. A significant result ($p<0.05$) confirms that there is a real connection between the dependent and independent variables. However, inferential tests are named so, as they are also used in most research to infer the observed connection between the dependent and independent variables in the sample to the wider population (Burns and Bush 2003; Coolican 2004; Pallant 2005).

Pearson's Correlation, Regression, ANOVA and T-tests were used in this investigation to determine the probability that the independent variables impact upon the dependent variables of interest. The following paragraphs address the issues which may arise when certain assumptions are violated, which bring into question the validity of the tests, and how these issues may be overcome to re-establish validity and enable analysis to proceed.

Correlation and Regression

Where hypotheses seek to test relationships between two continuous variables, correlation is appropriate. The significance, strength and direction of correlations will give a very powerful initial indication of whether there are linear relationships between variables, but on its own, makes it difficult to prove the direction of causality between variables. Interpretations shall be offered, using relevant direction (Cohen 1988) and in the context of the underpinning theoretical models. Where relationships are found to exist, multiple regression, which explores the relationship between one continuous dependent variable and one or more (usually continuous) independent variables (Pallant 2010), giving greater confidence in causal effects. Where correlations are tested to examine the strength of the association between two variables, reports of direction and magnitude of the coefficient will be reported for significant results, with magnitude interpreted according to Cohen's (1988) guidelines:

Coefficient	Interpretation
r= .10 to .29 or r= -.10 to -.29	Small
r = .30 to .49 or r = -.30 to -.49	Medium
r = .50 to 1.0 or r = -.50 to -1.0	Large

ANOVA and T-test

For those hypotheses where the independent variable is nominal, independent samples T-test or one-way between groups ANOVA shall be used to examine the dependent variable for differences across the independent variable groups. T-tests will be used when the independent variable has just two groups of interest, and ANOVA used where the independent variable has three or more groups of interest. Both tests look for significant differences in the mean score for the dependent variable, across the different groups. The mean score for the dependent across independent variable groups will be very similar if the independent variable has no effect. ANOVA seeks to determine whether the variance between groups is significantly more pronounced than the variance within each group. With all ANOVA tests conducted in this study, Levene's test of homogeneity of variance was first examined to determine whether it was possible to proceed with ANOVA, or whether a more robust test was required.

Where significance is determined by ANOVA, effect size shall be calculated using eta squared calculation, where

$$\eta^2 = \frac{\text{Sum of Squares Between Groups}}{\text{Total Sum of Squares}}$$

The η^2 value is then interpreted based on Cohen's recommendations (1988), where .01 is classified as a small effect, .06 is a medium effect and .14 is a large effect. Subsequent to ANOVA tests, post hoc comparisons are used to determine which centres are significantly different from others.

Where ANOVA is used and significance determined, post-hoc comparisons shall be run to identify which of the independent groups are significantly different from others. Multiple independent samples T-tests and Tukey's honestly significant difference (HSD) tests were considered for this, then Tukey's HSD chosen. Though Tukey's HSD and the t-test are similar, Tukey's test corrects for experiment wise error rate (Keselman, Cribbie et al. 1999). While t-tests on their own are powerful, there is always a small probability (a 5% chance for a test considering the .05 significance level) of making a type 1 error (incorrectly rejecting the null hypothesis), and when used for multiple comparisons, the probability of making a type 1 error at some point increases. While the probability of getting a type 1 error for a single t-test is 5%, the probability of getting a type 1 error at some point when running pairwise comparison tests goes up

significantly. Even pairwise comparisons between four categories would require six t-tests, which would equate to a 30% (6 * .05) chance of a type 1 error. The smallest number of shopping centres to examine differences between is six shopping centres (in study 1). This would require fifteen paired comparisons, so the chance of a type 1 error occurring would be 75% (15*.005). Tukey's HSD corrects for this per comparison error rate, but is itself somewhat less powerful than t-tests, but is argued to overall have good power while controlling for type 1 error rate (Field 2009).

3.5 Chapter Summary

The preceding chapter presented the philosophical and methodological perspectives adopted for this research, and discussed procedures carried out to ensure the research methodology was robust and would provide data meaningful to test the hypotheses derived from the literature in chapter 2. This chapter also discussed specifics of the study- the sample and sampling procedure, how the data was collected for testing. The next chapter (Results and Analysis) will present the results of the hypothesis testing based on the data collected using the measures and procedures described in this chapter, with a brief analysis of what this means in terms of support for the hypotheses.

In the literature review chapter a review of prevailing theories in the field of consumer behaviour and retail patronage were reviewed. Suitable theoretical models were selected and pulled together to provide conceptual models for testing. In the methodology chapter that followed an overview of the empirical process was provided, to give confidence that the conceptual models could be explored in a robust and rigorous fashion through appropriate hypothesis testing. The methodology for two studies were put forward, with preliminary results from metric creation reported to ensure confidence in the metrics brought forward to the hypothesis testing stage, and discussion provided of how the data was collected. The results of that hypothesis testing will be reported in this chapter, first for study 1, then study 2. This chapter intends to present the results, with minimal analysis to determine whether hypotheses are supported.

4. Results and Analysis

4.1 Study 1

Study 1 was developed to enable the exploration of a Stimulus-Organism-Response model to explain preference for a type of shopping centre, with situational stimulus measured on four dimensions identified through PCA, organism considered in terms of personality traits, and response in terms of the shopping centre they were visiting when sampled. Initial results on the sample extracted for study 1 will be presented first, before results of hypothesis testing are provided.

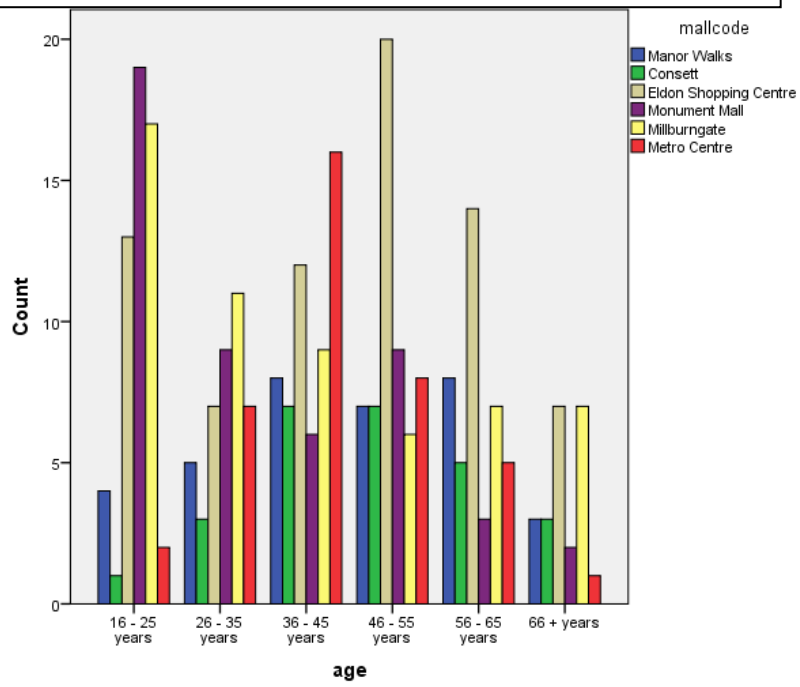
4.1.1 Initial Results

Six shopping centres were visited. The number of responses extracted from each centre is presented in table 4.1, with breakdown of age categories by shopping centre provided below in figure 4.1.

Table 4.1 Sampling Locations & Summary

Shopping Centre	Responses	Sex
Consett	26	69.2% Female/ 30.8% Male
Eldon Square	74	80.6% Female/ 19.4% Male
Manor Walks	35	60% Female/ 40% Male
Metro Centre	40	68.4%Female/ 31.6% Male
Millburngate	57	57.9% Female/ 42.1% Male
Monument Mall	48	62.5% Female/ 37.5% Male

Figure 4.1: Study 1 Age Category by Shopping Centre



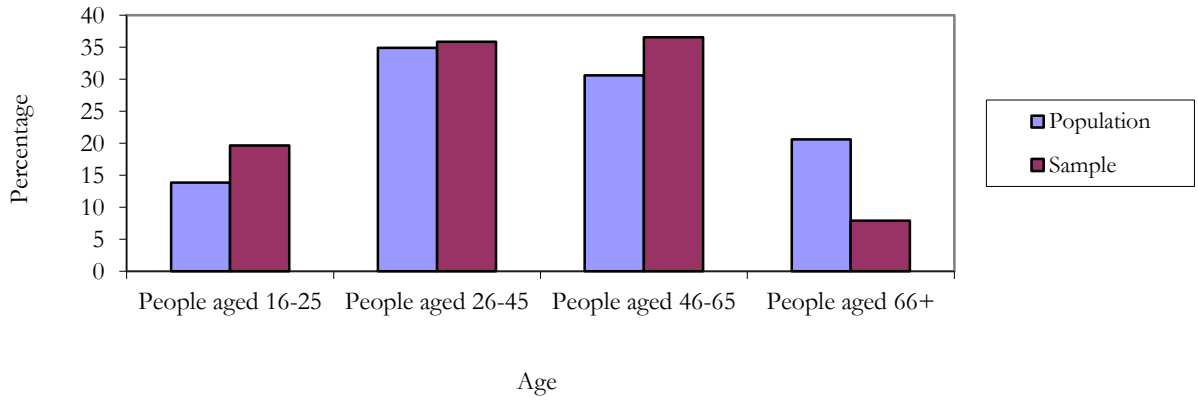
There are some differences in demographic composition at the different shopping centres. Females comprised 66.9% of the total sample taken with males making up the remaining 33.1% of the sample, which is fairly representative of the population within the shopping centres. Though the usual distribution is around 51% female/49% male in the general

population of the UK, the north east of England, shopping centres tend to have a higher proportion of female patrons to male patrons with some retailers reporting 73 % of their customers to be female, and 27% male (anon 2005). The greatest disparity between sexes appeared from the data sampled from Eldon Square, where 80.6% of the sample were female, and 19.4% male, while the smallest disparity came from the sample from Millburngate, where 57.9% were female and 42.1% male. Age distribution also varied somewhat between shopping centres, with far more younger patrons represented in malls like Monument Mall, and more middle aged patrons at Eldon Square and Metro Centre.

To validate the overall sample, the demographic breakdown was compared with census figures for the local population. This seemed to give an adequate level of accuracy, although this does not take into account respondents who came from outside the catchment area of the shopping centres (the study area), or the fact that the population of the shopping centres would have differences from the population at large. This may contribute to differences between the sample obtained and census data for the study area.

In terms of age, the sample gave a reasonably good cross-section of the population (potential shopping centre patrons), with no age-group drastically under-represented. Figure 4.2 below compares the age composition of the sample compared with the age composition of residents of the north east of England, using census data to represent the local population. As the research was only concerned with customer behaviour of the adult population, the age category for those aged 15 and under was removed. From the figure it is apparent that only those aged 65 and over appear under-represented.

Figure 4.2: Study 1 Sample Age compared with North East Population Age



4.1.2 Hypothesis H1: Shopping Centre response is affected by situational variables

The direct effect of situational stimuli on response forms the basis for hypothesis 1. Four situational stimuli were retained for analysis, based on findings from PCA, yielding the more specific hypotheses:

H1a: Salience of Physical Surroundings vary between Shopping Centre Visited
H1b: Salience of Social Surroundings vary between Shopping Centre Visited
H1c: Salience of Temporal Perspective varies between Shopping Centre Visited
H1d: Salience of Regulatory Forces vary between Shopping Centre Visited

As the dependent variable is categorical in nature, ANOVA was applied to examine the variance between shopping centres on the four situational stimuli dimensions. For this hypothesis, none of the independent variables achieved significance with Levene's test of homogeneity of variance, so ANOVA was appropriate. A summary of the findings of the ANOVA tests conducted for this hypothesis can be found in table 4.2 below.

Table 4.2: ANOVA for Study 1 Situational Stimuli across shopping centres

Variable	*df*	*F*	η^2	*p*
Situational	5, 274			
• Physical Surroundings		.232		.949
• Social Surroundings*		2.992	.052	.012
• Temporal Perspective		.866		.504
• Regulatory Forces		.653		.660
** p<0.01 * p<0.05				

In examining the influence of situational stimuli on choice of shopping centre, it appears that only Social Surroundings vary significantly (p<.05) between shopping centres. Post-hoc comparisons using Tukey HSD indicates that for Social Surroundings, the mean score for Consett (mean=.846, SD=1.084) was significantly different from Eldon Square (mean=2.155, SD=1.765) and Millburngate (mean=2.219, SD=2.202). Hypothesis H1b, that *Salience of Social Surroundings vary between Shopping Centre Visited* is therefore supported, but reject the other specific

hypotheses and the overarching ***Shopping Centre response is affected by variables in the behaviour setting*** is partially supported.

4.1.3 Hypothesis H2: Organism traits relate to salience of situational stimuli

The third overarching hypothesis for study 1 is the expected influence of traits upon salience of situational stimuli. It is anticipated that personality dimensions will impact upon the awareness of situational stimuli. As such, four more specific hypotheses are proposed:

H2a: Extraversion relates to salience of situational stimuli

H2b: Neuroticism relates to salience of situational stimuli

H2c: Psychoticism relates to salience of situational stimuli

Arguably, these hypotheses could be broken down to look at the direct impact of the different traits upon the different types of situational variable, but only four are examined, for brevity. Results of correlations between situational forces and personality dimensions are found in table 4.3 below.

Table 4.3: Correlations between Situational stimuli and Organismic Traits

		Physical	Social	Temporal	Regulatory
Extraversion	Pearson Correlation	.109	.165**	.047	.191**
	Sig. (2-tailed)	.069	.006	.431	.001
	N	282	282	282	282
Neuroticism	Pearson Correlation	.147*	.239**	.231**	.295**
	Sig. (2-tailed)	.014	.000	.000	.000
	N	282	282	282	282
Psychoticism	Pearson Correlation	.048	-.049	-.099	.006
	Sig. (2-tailed)	.426	.411	.096	.919
	N	282	282	282	282

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

With the exception of Psychoticism, which does not appear to correlate with any of the situational stimuli measured, all other organism traits were found to impact the salience of two or more situational dimensions. Extraversion correlates with Regulatory Forces ($r=.191$, $p<.001$) and Social Surroundings ($r=.165$, $p<.006$). Neuroticism correlates with all four situational

stimuli, Regulatory Forces (r=.295, p<.000), Social Surroundings (r=.239, p<.001), Temporal Perspective (r=.231, p<.000) and Physical Surroundings (r=.147, p<.014).

Multiple linear regressions were also run to establish the extent to which personality variable predict salience of situational cues. Of greatest interest of course is the predictors of social surroundings, the one variable found to vary across shopping centre visited, but all variables are considered, and findings summarised in table 4.4 below.

Table 4.4: Regressions for Prediction of Situational Salience by Personality Dimensions				
	Physical	**Social**	**Temporal**	**Regulatory**
R squared	.047*	.117**	.112**	163**
Sig (ANOVA)	.009	.000	.000	.000
Constant B	4.101	2.273	4.953	3.496
Extraversion Beta	**.143** (P<.019)	**.231** (P<.001)	**.125** (P<.033)	**.265** (P<.001)
Neuroticism Beta	**.149** (P<.015)	**.249** (P<.001)	**.202** (P<.001)	**.306** (P<.001)
Psychoticism Beta	.022 (P<.713)	-.088 (P<.126)	**-.136** (P<.019)	-.039 (P<.487)

The R squared values for the contribution of personality dimensions to situational stimuli are really small, but significant, only explaining between 4.7% (for physical surroundings) and 16% (for regulatory forces) of stimuli variance.

Hypotheses H2a, H2b, and H2d, that *Extraversion relates to salience of situational stimuli* and *Neuroticism relates to salience of situational stimuli* are supported, but H1H2c is rejected. This means overarching hypothesis that ***Organism traits relate to salience of situational stimuli*** can be partially supported.

4.1.4 Hypothesis H3: Shopping Centre response is affected by organism traits

Hypothesis H2 seeks to examine the influence of organismic traits on shopping centre preference.

H3a: Extraversion scores vary between Shopping Centre Visited

H3b: Neuroticism scores vary between Shopping Centre Visited

H3c: Psychoticism scores vary between Shopping Centre Visited

As with H1, the dependent variable is categorical, so the study seeks to determine whether organismic traits are likely to vary between shopping centre visited- i.e. do personality traits determine preference for type of shopping centre. Levene's test of homogeneity allowed for ANOVA tests to be conducted and summarised in table 4.5 below.

Table 4.5: ANOVA for Study 1 Organismic across preferred type of shopping centre.

Variable	*df*	*F*	η^2	*p*
Organismic	5, 274			
• Extraversion		1.156		.331
• Neuroticism**		4.593	.077	.000
• Psychoticism*		3.226	.056	.008
** p<0.01 * p<0.05				

Neuroticism and Psychoticism personality traits varied significantly between shopping centres visited, with post hoc comparisons suggesting that for Neuroticism, there were significant differences between Manor Walks (m=6.086, SD=3.311) and Consett (m=3.615, SD=2.743) and Eldon Square (m=3.885, SD=3.098). Furthermore, Eldon Square differed significantly from Monument Mall (m=5.656, SD=2.928). Psychoticism was only found to vary significantly between Eldon Square (m=2.304, SD=1.292) and Monument Mall (m=3.188, SD=1.861). Hypotheses H3b and H3c, that *Neuroticism scores vary between Shopping Centre Visited* and *Psychoticism scores vary between Shopping Centre Visited* are therefore supported, and the other specific hypotheses are rejected. The overarching hypothesis that ***Shopping Centre response is affected by organism traits*** is partially supported.

2.1.5 Logistic Regression

Finally, logistic regression was conducted to determine whether together the situational and personality variables significantly predict shopping centre choice. Tables presenting information coming out from logistic regression can be found in appendix L.

The difference in -2 Log Likelihood (2LL) between intercept only (2LL=972.532) and final model (2LL=897.826) suggest that adding the situational and personality variables into the model improve the amount of variability being explained (see table 4.6). The difference between the baseline and the new model is 74.706, and this change is significant at p<.002.

Table 4.6: Logistic Regression Model Fitting Information

	Model Fitting Criteria			Likelihood Ratio Tests		
Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	982.532	1000.706	972.532			
Final	987.826	1151.391	897.826	74.706	40	.001

The goodness of fit for the model suggests that the model is a good fit- the non-significant returns for Pearson and Deviance suggests both tests confirm that the predicted values are not significantly different from observed values.

Examination of the pseudo R-square measures show that both Cox & Snell (.234) and Nagelkerke (.242) seem to represent small but decent sized effects.

Now the model has been tested, and appears to explain variance in the data, it is possible to examine the independent variables, to determine whether they are significant predictors to the model. The model showed that only social surroundings (X^2 (5) = 14.33, p<.015), neuroticism (X^2 (5) = 25.576, p<.001) and psychoticism (X^2 (5) = 12.967, p<.025) predict shopping centre choice.

Table 4.7: Logistic Regression Likelihood Ratio Tests

	Model Fitting Criteria			Likelihood Ratio Tests		
Effect	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	982.277	1127.669	902.277	4.451	5	.486
Physical	978.133	1123.525	898.133	.307	5	.998
Social	992.158	1137.550	912.158	14.332	5	.014
Temporal	981.756	1127.147	901.756	3.930	5	.559
Regulatory	981.667	1127.059	901.667	3.842	5	.572
Extraversion	985.601	1130.992	905.601	7.775	5	.169
Neuroticism	1003.402	1148.793	923.402	25.576	5	.000
Psychoticism	990.793	1136.185	910.793	12.967	5	.024

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

When each shopping centre is compared with reference category 'Consett', which was selected as the reference category as it tended to represent the lowest mean category score in ANOVA testing. It appears, not surprisingly given information from the likelihood ratio tests already

discussed, that physical surroundings, temporal perspective, regulatory forces, and extraversion do not significantly predict shopping centre choice, considering the Wald X^2 in the parameter estimates table. What is more surprising is that, despite being identified as significantly predicting shopping centre choice in the preceding analysis, psychoticism does not significantly predict whether a consumer will choose reference shopping centre 'Consett' or an alternative one. Social surroundings and neuroticism, however, do. Social surroundings significantly predicts whether consumers visit Consett or Eldon Square (b = .585, Wald X^2 (1) = 7.917, p<.006), or Monument Mall (b = .495, Wald X^2 (1) =5.347, p<.022), or Millburngate (b = .596, Wald X^2 (1) =7.982, p<.006). Neuroticism significantly predicts whether consumers visit Consett or Manor Walks (b = .3003, Wald X^2 (1) =9.726, p<.003) or Monument Mall (b = .190, Wald X^2 (1) =4.4, p<.037).

2.1.6 Study 1 Results Summary

Both ANOVA and logistic regression confirmed the presence of impact of independent variables social surroundings, neuroticism, and to a lesser extent psychoticism on shopping centre choice.

A summary of the results for study 2 can be found in table 4.8 below. All overarching hypotheses can be partially supported, though specific links are not established between all dimensions anticipated with the specific hypotheses.

Table 4.8: Study 1 Results Summary

Hypothesis	Outcome
H1: Shopping Centre response is affected by situational variables.	Partially Support
H1a: Salience of Physical Surroundings vary between Shopping Centre Visited	Reject
H1b: Salience of Social Surroundings vary between Shopping Centre Visited	Support
H1c: Salience of Temporal Perspective varies between Shopping Centre Visited	Reject
H1d: Salience of Regulatory Forces vary between Shopping Centre Visited	Reject
H2: Organism traits relate to salience of situational stimuli	Partially Support
H2a: Extraversion relates to salience of situational stimuli	Support
H2b: Neuroticism relates to salience of situational stimuli	Support
H2c: Psychoticism relates to salience of situational stimuli	Reject
H3: Shopping Centre response is affected by organism traits	Partially Support
H3a: Extraversion scores vary between Shopping Centre Visited	Reject
H3b: Neuroticism scores vary between Shopping Centre Visited	Support
H3c: Psychoticism scores vary between Shopping Centre Visited	Support

4.2 Study 2 Results and Analysis

Study 2 sought to examine whether the BPM can be applied to explain shopping centre patronage, and whether it can be augmented by considering constructs (emotional response) which prevail in environmental psychology models of retail behaviours, including patronage. Constructs, both newly developed and old were subjected in the previous chapter to PCA to inform the statistically valid dimensions for each of these constructs, and these dimensions tested for reliability and validity. The model was based around the interactions between five constructs- situational stimuli, (PCA identified four components), reinforcement (PCA identified three components), learning history (PCA identified two components), emotional response (PCA identified two components) and finally the dependent variable approach-avoidance (PCA identified just one component). Initial results on the composition of the sample, and the shopping centres reportedly visited are fist presented, before results of hypothesis testing around the conceptual model are provided.

4.2.1 Initial Results

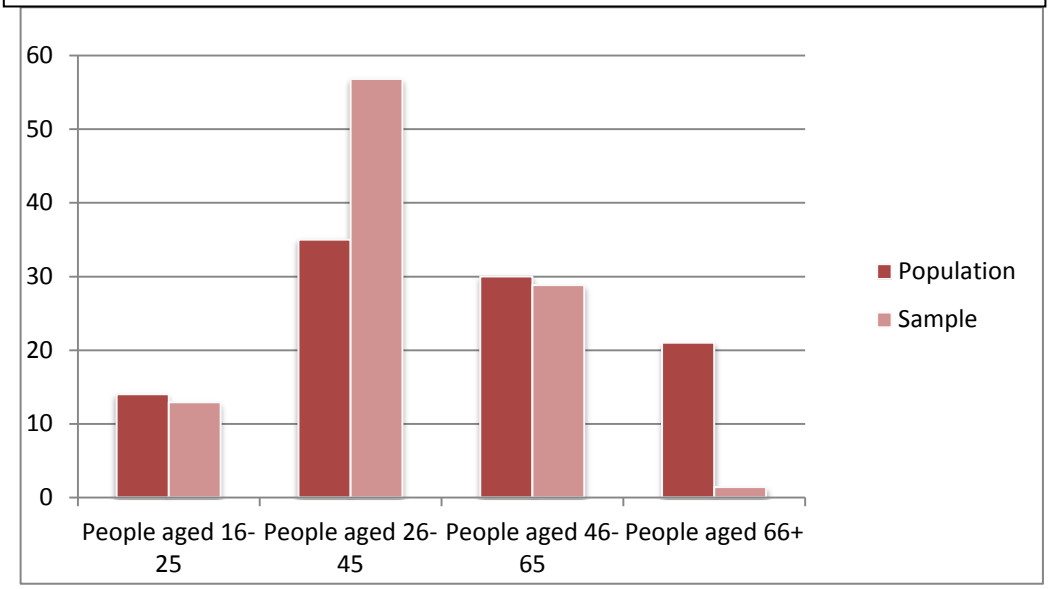
One of the dependent variables (response) of interest was the shopping centre consumers most recently visited, and had in mind for questions measuring situational stimuli, reinforcement, emotional response and approach constructs. Though an open ended question, it appeared that some shopping centres were visited more often by the sample respondents. Table 4.9 provides an overview of the distribution of the sample between different shopping centres most recently visited.

Table 4.9: Shopping Centre Visited

	Frequency	%
Metro Centre	74	42.3
Eldon Square	40	22.9
Dalton Park	12	6.9
Durham City	15	8.6
Durham Prince Bishops	3	1.7
Durham Gates	10	5.7
Durham Arnison	2	1.1
Teeside Park	3	1.7
Blaydon Precinct	2	1.1
Galleries Washington	4	2.3
Consett	3	1.7
Sunderland	3	1.7
Darlington	2	1.1
Cleveland Centre, Middlesbrough	2	1.1
Total	175	100.0

The sample for study 2 was gave a good cross section of different ages (M=39.04, sd=12.738) with a range of 16-68. The ratio of males to females was less well balanced, with 85.1% of the sample being female, and 14.9% male. Figure 4.3 confirms the age distribution is approximately in line with that of the population of the study area.

Figure 4.3: Study 2 Sample age compared with North East Population age



4.2.2 Hypothesis Testing

Five general hypotheses were developed for study 2 in the literature review, at the level of the construct. After conducting principal component analysis (PCA) and reporting on the dimensions identified for these constructs in the previous chapter, more specific hypotheses could be generated, based on the extant literature. For example, H2H1 suggests that shopping centre response is affected by situational factors. Principal Component Analysis identified three situational dimensions (surroundings, temporal perspective and regulatory forces), and a uni-dimensional approach response. Based on the extant literature three dimensional level hypotheses could therefore be considered, considering the anticipated link between the independent variables and the dependent.

To test hypotheses developed for study 2, analysis of relationships between independent variables and approach behaviours (dependent variable) were examined, along with variation of dependent variables between different shopping centres. The tables below present overarching findings, which will be discussed in further detail in the sections that follow. Each of these sections is devoted to testing a different general hypothesis, and within each section, the more specific dimension level hypotheses will be presented.

The following tables summarise the key findings of the analysis for study 2. These figures will be revisited in the specific sections relating to the hypothesis.

Table 4.10 presents the findings from the ANOVA analysis, seeking to determine the extent to which the model components (dependent variables) vary depending on shopping centre visited. It will be of interest to determine if situational stimuli, reinforcement and emotional response levels vary between shopping centres. Learning history, which are the predispositions toward importance of consequences are not expected to vary directly for the different shopping centres, and so are not included here. All paired comparisons for significant ANOVA returns can be found in appendix M.

Table 4.10: ANOVA for Model Construct across shopping centre visited

Variable	*df*	*F*	η^2	*p*
Approach**	13, 131	3.271	.245	.000
Situational	13, 143			
• Surroundings**		5.768	.344	.000
• Temporal		1.448	.116	.145
• Regulatory**		9.148	.454	.000
Consequences	13, 137			
• Utilitarian Reinforcement		1.106	.095	.359
• Informational Reinforcement*		2.001	.16	.025
• Aversive Consequences		.877	.077	.578
Emotional Response	13, 128			
• Pleasure		1.028	.095	.428
• Arousal		1.137	.104	.334

** p<0.01
* p<0.05

Initially, correlations between the principal dependent variable (approach) and the independent variables were examined. Full correlations between all latent variables can be found in appendix N.

Table 4.11: Correlation with Approach-Avoidance for shopping centre visited

Variable	Correlation Coefficient	*P*	Effect size
Surroundings	.627**	.000	Large
Temporal Perspective	-.198*	.012	Small negative
Regulatory Forces	-.010	.902	
Utilitarian Reinforcement	.620**	.000	Large
Informational Reinforcement	.600*	.018	Large
Aversive Reinforcement	-.151	.055	
Utilitarian Learning History	.217*	.007	Small negative
Informational Learning History	.525**	.000	Large
Pleasure	.741**	.000	Large
Arousal	-.032	.696	

** p<0.01
* p<0.05

As there are clear and significant correlations between the independent variables and approach-avoidance level, it is appropriate to consider a regression to see how much of approach-avoidance is explained by these variables, and identify which of the eight variables with significant correlations actually predict approach-avoidance behaviour. Multiple linear regression analysis was therefore carried out to develop a model to predict shopping centre approach behaviour based on situational, consequence, learning history and emotional response.

Regression assumptions were first checked to ensure regression was suitable given the data. Beyond dependent-independent correlations, independent variables were checked for multicollinearity, with returns of between .3 and .7 suggesting sufficient levels (Pallant 2010). Collinearity diagnostics also showed acceptable levels of tolerance (T < .10) and variance inflation value (VIF < 10) suggesting the multicollinearity assumption is not violated. Normal probability plot suggests no major deviations from normality in the data. Finally, the presence of outliers was checked by examining calculated Mahalanobis distances for each case. Two cases exceeded the critical level of 29.59 for 10 independent variables (Tabachnick, Fidell et al. 2001) which is not unusual for datasets of this size (Pallant 2010). Casewise diagnostics did not show standardised residual values outside of the accepted -3.0 to +3.0 range (Pallant 2010). Full figures are presented in appendix O. The overarching model summary can be found in table 4.12 below with coefficient details in table 4.13.

Table 4.12: Study 2 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.791	.777	6.37842

a. Predictors: (Constant), Arousal, Pleasure, Regulatory, LHUtil, ReinfAvers, LHInfo, Surroundings, Temporal, ReinfUtil, ReinfInfo

Table 4.13: Study 2 Regression Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.147	5.827		.197	.844		
Surroundings	.515	.064	.379	7.988	.000	.658	1.519
Temporal Perspective	-.035	.114	-.017	-.304	.762	.466	2.145
Regulatory Forces	.163	.225	.029	.728	.468	.938	1.066
Utilitarian Reinforcement	.139	.200	.050	.694	.489	.289	3.456
Informational Reinforcement	.183	.272	.049	.671	.503	.272	3.672
Aversive	-.386	.118	-.171	-3.269	.001	.538	1.857
Utilitarian Learning History	.197	.149	.054	1.323	.188	.900	1.111
Informational Learning History	.375	.091	.194	4.101	.000	.660	1.515
Pleasure	.894	.123	.433	7.249	.000	.414	2.413
Arousal	-.160	.239	-.030	-.669	.505	.740	1.351

a. Dependent Variable: Approach-Avoidance

Seven out of the ten independent variables had a significant correlation with approach, with regulatory forces, aversive consequences and arousal not correlating significantly. However, research suggests including such items in regression analysis (Pandey and Elliott 2010) as correlation looks at the association between two variables (how close the data fits to the line) and regression to the amount of the dependent variable that can be predicted by the independent variable, so all items went into regression analysis with the findings of this presented across tables 4.10 and 4.11 above, F (8, 143) = 67.275 p<.001, η^2 =.791. The model returned was significant, and yielded a healthy R squared value of .791. Although seven independent variables had significant correlations with approach, only surroundings (*t* (df=141) = 7.99, β=.379, p<.001), pleasure (*t* (141) = 7.25, β=.433, p<.001), informational learning History (*t* (141) = 4.1, β=.194, p<.001) and aversive consequences (*t* (141) = -3.269, β=.-.171, p<.002) returned significant *t* and coefficient values. Based on the tables presented above, each hypothesis will now be considered in turn, with the relevant levels of significance and coefficients presented, along with considerations of effect size, where applicable.

4.2.3 Hypothesis H4: Shopping centre response is affected by consequences of the visit

Hypothesis H6 suggests that shopping centre response is affected by the construct consequences. Results of PCA confirmed the presence of the three anticipated consequences dimensions: utilitarian reinforcement, informational reinforcement and aversive consequences, enabling the following specific hypotheses to be put forward:

H6a: Shopping centre approach is positively affected by utilitarian reinforcement
H6b: Shopping centre approach is positively affected by informational reinforcement
H6c: Shopping centre approach is negatively affected by aversive consequences

Correlation confirmed initial expectations about relationships between reinforcement levels and approach. Utilitarian reinforcement had the strongest correlation with approach (.620), a large correlation (Cohen 1988) which was significant at p<.000. Informational reinforcement showed a large significant (P<.018) correlation of .600, and aversive consequences showed a marginally non- significant (P<.055) negative correlation of -151. However, only aversive consequences returned a significant beta and *t* value (3.269).

For the standardised coefficient (beta) value of Aversive Consequences (Beta=-.171), a one standard deviation (5.94) increase will lead to a decrease in Approach-Avoidance of -.171 standard deviations. As one standard deviation for Approach-Avoidance is 13.38, an increase of 5.94 in Aversive consequences would lead to a decrease in Approach-Avoidance of 2.29 (-.171*13.38) (Fields 2009).

However, it was only Aversive Consequences that returned a significant beta (β=-.171, p<.001), so none of the specific hypotheses can be fully supported. However, the significant correlations of Informational Reinforcement and Utilitarian Reinforcement with Approach-Avoidance, and the significant, if small beta for Aversive Consequences in the regression suggest that each specific alternative hypothesis and overarching hypothesis ***Shopping centre response is affected by consequences of the visit*** can be partially supported.

4.2.4 Hypothesis H5: Different Shopping Centres will yield different levels of consequences

It was further hypothesised that levels of consequences affecting consumer would vary between different shopping centres (H6), yielding three further dimension level hypotheses:

H7a: Different shopping centres will yield different levels of utilitarian reinforcement
H7b: Different shopping centres will yield different levels of informational reinforcement
H7c: Different shopping centres will yield different levels of aversive consequences

The results of ANOVA no significant differences for only Informational Reinforcement between shopping centres visited, with a large effect size (η^2 = .16).

Table 4.14: ANOVA for Consequences across shopping centre visited

Variable	*df*	*F*	η^2	*p*
Consequences	13, 137			
• Utilitarian Reinforcement		1.106	.095	.359
• Informational Reinforcement*		2.001	.16	.025
• Aversive Consequences		.877	.077	.578

Because informational reinforcement returns significantly different scores depending on the shopping centre visited, paired comparisons were conducted to determine where these differences specifically lie. Paired comparisons were conducted using Tukey's HSD, as discussed

in the methodology chapter. Full tables can be found in appendix M. However, to summarise, informational reinforcement scores at Eldon Square (M=18.438, SD=3.299) were significantly higher than at Durham City (M=14.448, SD=4.8526).

As a result, the specific hypothesis that *Different shopping centres will yield different levels of informational reinforcement* can be supported, and the overarching hypothesis ***different shopping centres will yield different levels of consequences*** is partially supported.

4.2.5 Hypothesis H6: Shopping centre response is affected by variables in the behaviour setting.

The first general hypothesis, H4 hypothesised that variables in the behaviour setting would affect shopping centre response. Emergence of three dimensions through PCA and review of extant literature relating to these suggests that each dimensions is expected to affect approach behaviours.

H4a: Surroundings positively affect shopping centre approach
H4b: Temporal perspective negatively affects shopping centre approach
H4c: Regulatory forces affect shopping centre approach

To test these specific variables, and how they impact upon shopping centre approach, correlation and regression were considered, with the presence of significant correlations suggesting the suitability of regression. Correlation suggested that Surroundings are significantly ($p<.001$) correlated with approach to shopping centre (hereafter referred to as 'approach-avoidance'), and that this correlation (.625) is a large positive correlation. Temporal perspective was significantly ($p<.012$) correlated with approach-avoidance, though by contrast this is a small and negative correlation. Regulatory forces do not appear to significantly correlate ($p<.902$) with approach. This correlation suggests that it is worth taking forward surroundings and temporal perspective for regression purposes, and rejecting the alternative hypothesis H4c and supporting the null, that *Regulatory Forces do not affect Shopping Centre Approach*.

When considered within the regression model with all other independent variables, only Surroundings achieved a significant beta value (β=.379) and so have a significant effect on approach behaviour in the context of shopping centre choice.

For Surroundings, the standardised coefficient (Beta) value of .379 indicates that as the influence of surroundings increases by one standard deviation (9.99), Approach-Avoidance increases by .379 standard deviations. The standard deviation for Approach-Avoidance is 13.38, so this means a change of 5.07 (.379*13.38) in Approach-Avoidance for an increase in Surroundings score by 9.99 (Fields 2009).

This means that the alternative hypothesis H4a that *Surroundings affect shopping centre approach* is supported, but alternative hypothesis H4b that *Temporal perspective affects shopping centre approach* is only partially supported. Early indications show that the alternative hypothesis for the overarching H4- ***shopping centre response is affected by variables in the behaviour setting*** is partially supported.

4.2.6 Hypothesis H7: Variables in the Behaviour Setting vary in strength across shopping centres.

Furthermore, ANOVA was used to examine whether situational stimuli have a significant differential impact on consumers at the most frequently visited shopping centres in the study, allowing for the examination of the following:

H5d: Surroundings vary in salience depending on shopping centre visited
H5e: Temporal perspective varies in salience depending on shopping centre visited
H5f: Regulatory forces vary in salience depending on shopping centre visited

Examining variance in response to situational variable across different shopping centres suggested that some situational stimuli do not vary, while others to so significantly. ANOVA results summarised in table 4.15 show that both Surroundings and Regulatory Forces vary significantly (P<.001)

Table 4.15: ANOVA for Behaviour Setting across shopping centre visited.

Variable	*df*	*F*	η^2	*p*
Situational	13, 143			
• Surroundings		5.768	.344	.000
• Temporal Perspective		1.448	.116	.145
• Regulatory Forces		9.148	.454	.000

between shopping centres visited, and they do so to a large extent. Calculations of effect size using η^2 returned values .344 for Surroundings and .454 for Regulatory Forces, both of which exceed Cohen's recommended level of .14 signifying a large effect size (Cohen 1988). According to the η^2 values, 34.4% of variation in Surroundings is explained by shopping centre visited, while 45.5% of variation in Regulatory forces is explained by shopping centre visited. Temporal perspective was not found to significantly vary between shopping centres visited. As both Surroundings and Regulatory Forces varied significantly depending on shopping centre visited, independent samples t-tests were conducted to determine which centres varied most, and the summary of these findings presented in tables 4.16 and 4.17 below.

Table 4.16: Mean difference for Surroundings between Shopping Centres

	1	2	3	4	5	6
1 Metro Centre (M=49.917, SD=7.6)	0	-1.047	10.073*	10.637	22.589*	23.943*
2 Eldon Square (M=50.565, SD=11.203)		0	11.12*	11.684*	24.636*	24.99*
3 Durham City (M=39.844, SD=8.152)			0	.564	12.516	13.87
4 Durham Arnison (M=39.28, SD=4.97)				0	11.952	13.306
5 Blaydon Precinct (M=27.329, SD=5.124)					0	1.354
6 Consett (M=25.974, SD=5.702)						0
* mean difference is significant at the .05 level, based on Tukey's HSD						

It appears that respondents give significantly smaller scores on surroundings for Durham City, Blaydon Precinct and Consett compared to the Metro Centre and Eldon Square. Eldon Square surroundings scores are also significantly higher than for Durham Arnison Centre.

Table 4.17 : Mean difference for Regulatory Forces between Shopping Centres

	1	2	3	4	5	6
1 Metro Centre (M=.885, SD=1.837)	0	-3.426*	-.378	-4.113*	-1.168	-3.389
2 Eldon Square (M=,4.211 SD=1.765)		0	3.048*	-.687	2.258	3.868*
3 Dalton Park (M=1.263, SD=2.486)			0	-3.735*	-.79	.82
4 Durham City (M=4.998, SD=2.05)				0	2.945*	4.555*
5 Durham Arnison (M=2.053, SD=1.157)					0	1.611
6 Consett (M=.443, SD=2.173)						0
* mean difference is significant at the .05 level, based on Tukey's HSD						

It would seem that consumers rate regulatory forces significantly lower for the Metro Centre than for Eldon Square and for Durham City, significantly lower for Dalton Park and Consett than for Durham City, significantly lower for Durham Arnison Centre than for Durham City and significantly lower for Consett than for Eldon Square.

We therefore reject hypothesis H5e, and support hypotheses H5d and H5f, that *Surroundings vary in salience depending on shopping centre visited* and *Regulatory forces vary in salience depending on shopping centre visited*.

4.2.7 Hypothesis H8: Shopping centre response is affected by the consumer's learning history

The presence of two dimensions- Utilitarian Learning History and Informational Learning History through PCA lead to the two specific hypotheses:

H8a: Shopping centre approach is positively affected by utilitarian learning history
H8b: Shopping centre approach is positively affected by informational learning history

Examination of the relationships between these dimensions and 'approach' indicated that both have a significant relationship with approach, with Utilitarian Learning History showing a small correlation ($r=.217$, $p<.007$) and Informational Learning History showing a large positive correlation ($r= .525$, $p<.001$). When both are considered in terms of the regression model however, only Informational Learning History yielded significant beta and *t* values ($\beta=.194$, $p<.001$). With Informational Learning History, the Beta value of .194 means that a one standard deviation (6.99) increase in Informational Learning History leads to an increase of 2.6 (.194*13.38) in Approach-Avoidance (Fields 2009).

Therefore, only alternative hypothesis H8b can be *Shopping centre approach is positively affected by informational learning history* fully supported, but H2H5a can be partially supported, as can the overarching hypothesis ***Shopping centre response is affected by the consumer's learning history***.

4.2.8 Hypothesis H9 Emotional Responses relate to variables in the behaviour setting

Previous studies suggesting a link between situational stimuli and emotional response, with the confirmation of a three component situational construct and two component emotional response construct leading to the following hypotheses:

H9a: Pleasure is positively affected by surroundings.
H9b: Pleasure is negatively affected by temporal perspective.
H9c: Pleasure is affected by regulatory forces.
H9d: Arousal is positively affected by surroundings.
H9e: Arousal is positively affected by temporal perspective.
H9f: Arousal is positively affected by regulatory forces.

When examining the effect of the situational stimuli on Pleasure, only Surroundings were determined to have a significant (P<.001) relationship, with a medium correlation of .454, given suggested interpretive guidelines (Cohen 1988). Both Temporal Perspective and Regulatory Forces returned non-significant results. When the effect of the three situational stimuli on pleasure is examined with regression (tables 4.18 and 4.19), an R^2 of .215 is returned, so situational stimuli explain 21.5% of the pleasure emotional response though only the model confirmed that only Surroundings have a significant impact on pleasure, returning a significant beta and *t* (β=.455, *t*=6.327 p<.001). As surroundings increases by one standard deviation (sd=9.99), pleasure (sd=6.51) increases by .455 standard deviations, which is 2.9 (.455*6.51).

Table 4.18: Pleasure- Behaviour Setting Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464[a]	.215	.200	5.82978

a. Predictors: (Constant), Regulatory, Surroundings, Temporal
b. Dependent Variable: Pleasure

Table 4.19: Pleasure- Behaviour Setting Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.149	2.335		9.486	.000
	Surroundings	.288	.046	.455	6.327	.000
	Temporal	-.085	.070	-.088	-1.217	.225
	Regulatory	-.089	.194	-.033	-.462	.645

a. Dependent Variable: Pleasure

Both surroundings and temporal perspective had significant correlations (surroundings .157, P<.050; temporal perspective .370 p<.001) with arousal, though regulatory forces did not. Regression analysis for the effects of the three situational stimuli on arousal confirm this, and yield a significant model, with an R^2 of .165 (see table 4.20).

Table 4.20: Arousal- Behaviour Setting Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.407[a]	.165	.149	2.32128

a. Predictors: (Constant), Regulatory, Surroundings, Temporal
b. Dependent Variable: Arousal

Examination of the coefficients show that both surroundings (β=.154, *t*= 2.078, p<.039) and temporal perspective (β=.363, *t*= 4.883, p<.001) have a significant impact on arousal (see table 4.21 below). So as surroundings increases by one standard deviation (sd=9.99), arousal increases by .154 standard deviations, or .38 (.153*2.52.) When temporal perspective is one standard deviation higher (sd=6.69), arousal increases by .363 standard deviations, which is .91 (.363*2.52).

Table 4.21 Arousal- Behaviour Setting Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.177	.930		1.266	.208
	Surroundings	.038	.018	.154	2.078	.039
	Temporal	.136	.028	.363	4.883	.000
	Regulatory	.071	.077	.068	.915	.362

a. Dependent Variable: Arousal

As a result, alternative hypotheses H9a, H9d and H9e, that *Pleasure is positively affected by surroundings*, *Arousal is positively affected by surroundings.* and *Arousal is positively affected by temporal perspective* are confirmed, and the other hypotheses are rejected. As such the overarching hypothesis that ***Emotional Responses relate to Situational affects*** is partially supported.

4.2.9 Hypothesis H10 Shopping centre response is affected by emotional responses.

Principal component analysis confirmed the presence of the two anticipated emotional response dimensions, yielding the specific hypotheses:

H9a: Shopping centre approach relates positively to pleasure.
H9b: Approach behaviours is highest for 'exciting' situations, followed by 'relaxing' situations, with the lowest approach behaviours for 'distressing' situations.

H9b is presented as such because extant literature suggests that though arousal has no direct linear impact on approach, it is likely to multiply the effect of pleasure, so classifying each consumer's response to the shopping centre in terms of their pleasure and arousal levels as 'exciting', 'relaxing', 'boring' and 'distressing', in line with Russell's model of affect should allow this to be examined.

Results of correlation are as anticipated, with pleasure yielding a significant ($p<.001$) large positive correlation (.741) with approach-avoidance and arousal yielding an insignificant ($p<.696$) correlation. Pleasure, which has yielded the largest correlation with approach-avoidance also yielded the largest significant beta value ($\beta=.331$, $p<.001$) in the model. For pleasure, whose beta value.433, an increase of one standard deviation (6.52) increases approach-avoidance (sd=13.38) by .433 standard deviations, which is 5.78 (.433*13.38) (Fields 2009).

As expected, arousal does not correlate significantly with approach-avoidance, nor does it provide a significant prediction to the regression model.

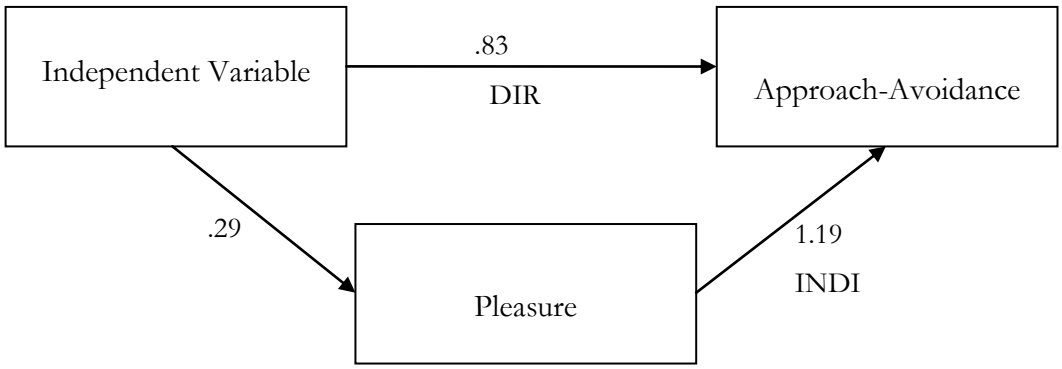
To test hypothesis H9b pleasure and arousal scores were used to generate a new categorical variable based around Russell's model of affect, classifying responses with low levels of pleasure and arousal as 'boring', low pleasure and high arousal as 'distressing', low arousal and high pleasure as 'relaxing' and high levels of both pleasure and arousal as 'exciting'. ANOVA was then used to examine whether Approach response varies considerably between environments perceived as 'distressing'. After considering Levene's test of homogeneity of variance, ANOVA showed that there was a significant difference ($P<.001$) for the four classes established in Russell's model of affect [F (3, 152) = 23.693, $P<.001$)] with an effect size of $\eta^2 = .31$, which as

a large effect size. Post hoc comparisons essentially show that Approach varies significantly between all groups (with mean and standard deviation scores shown in table 4.22 below), with two noticeable exceptions- 'distressing' and 'boring' environments do not vary significantly from each other, and 'relaxing' and 'exciting' environments do not vary significantly from each other. While the hypothesis that *Approach behaviours is highest for 'exciting' situations, followed by 'relaxing' situations, with the lowest approach behaviours for 'distressing' situations* can be supported given these findings, it appears that it is the impact of pleasure that returns the significant findings, not arousal.

Table 4.22: Summary for Approach between Russell's categories	
Russell's categories of affect	Approach score Mean (SD)
Distressing	57.813 (12.222)
Boring	59.489 (14.352)
Relaxing	72.843 (9.363)
Exciting	74.519 (9.010)

Leading on from this, it is apparent from findings in hypotheses H6a and H9a and H2H7a that Approach-Avoidance is affected by both surroundings and pleasure, which are also associated. It is therefore of benefit to determine the extent to which Surroundings are effecting Approach-Avoidance directly, or indirectly via Pleasure. Table 4.23 shows the main regression results when considering the mediating effect of pleasure on the Surroundings → Approach-Avoidance relationship.

Table 4.23 Regression Analysis Results considering mediating effect of Pleasure on Surroundings and Approach-Avoidance	
Regression coefficient for association between IV and DV	.830
Standard error of c	.0914
P value of c	.000
Regression coefficient for association between IV and Mediator	.290
Standard error of a	.046
P value of a	.000
Regression coefficient for association between Mediator and IV on DV	1.192
Standard error of b	.110
P value of b	.000



As we can see table 4.24 and the associated figure above, there is a significant regression coefficient between Surroundings and Approach-Avoidance (.830, p<.001), Surroundings and Pleasure (.290, p<.001) and between Pleasure and Approach-Avoidance (1.192, p<.001), suggesting that it is worth examining mediation using an appropriate test.

Table 4.24 Sobel and two Goodman tests for mediating effect of Pleasure on Surroundings and Approach-Avoidance

Sobel	5.440070
P value	.000000
Percentage of the total effect that is mediated	41.382256
Ratio of the indirect to the direct effect	.705968
Goodman test	5.422783
P value	.000000
Goodman II test	5.45232
P value	.000000
Created with the help of Introduction to SAS. UCLA: Academic Technology Services, Statistical Consulting Group. from http://www.ats.ucla.edu/stat/sas/notes2/ (accessed September 14, 2012).	

It is also important to note that the two main contributors, pleasure and surroundings are strongly linked, with 29.4% of the effect of surroundings on approach being direct, and the remaining 70.6% indirect according to Sobel's test of mediation.

4.2.10 Hypothesis H11 Different shopping centres will yield different levels of emotional response

It was also of interest to examine whether different shopping centres are able to yield significantly different levels of emotional response in their customers, looking specifically at Pleasure and Arousal:

H10a: Different shopping centres will yield different levels of pleasure

H10a: Different shopping centres will yield different levels of arousal

Examination of ANOVA outputs (see table 4.23) suggest that neither Pleasure or Arousal vary significantly across shopping centres visited in this study. The overarching hypothesis that ***Different shopping centres will yield different levels of emotional response*** is therefore rejected.

Table 4.25: ANOVA for Emotional Response across shopping centre visited.

Variable	*df*	*F*	η^2	*p*
Emotional Response	13, 128			
• Pleasure		1.028	.095	.428
• Arousal		1.137	.104	.334

4.2.11 Additional tests

Priming effects of Learning History of Situational Stimuli

When all behaviour setting variables were correlated with utilitarian and informational learning history, the only apparent association was between informational learning history and surroundings (.340) which was significant (p<.001) and a medium positive correlation.

Approach-Avoidance variance between Shopping Centres

Though not a specific hypothesis, Approach-Avoidance was also examined for its variance across shopping centres. It returned a significant result for ANOVA F (3, 131) = 3.271, P<.001) with an η^2 of .245, suggesting that 24.5% of Approach-Avoidance variance can be explained by shopping centre visited. Tukey's HSD was used for paired comparisons to determine, of the most frequently visited shopping centres in the sample, which vary significantly from each other. A summary of these findings can be found in table 4.26 below.

Table 4.26: Mean difference for Approach-Avoidance between Shopping Centres				
	1	2	3	4
1 Metro Centre (M=70.338, SD=11.617)	0	-2.887	29.826*	10.007
2 Eldon Square (M=73.225, SD=14.638)		0	32.712*	12.895
3 Durham The Gates (M=40.513, SD=6.594)			0	-19.818
* mean difference is significant at the .05 level, based on Tukey's HSD				

From above, it appears that consumers score approach significantly lower for The Gates Durham (Millburngate) than for either the Metro Centre or Eldon Square.

4.2.12 Study 2 Summary

A summary of the findings from hypothesis tests for study 2 can be seen in table 4.27 below. Of interest, only two overarching hypothesis is rejected completely, that different shopping centres will yield different levels of consequences and that different shopping centres will yield different levels of emotional response. All other overarching hypotheses are partially supported, though none are supported outright.

Table 4.27: Summary of Hypotheses Outcomes for Study 2	
Hypothesis	**Outcome**
H4: Shopping centre response is affected by consequences of the visit	Partially Support
H4a: Shopping centre approach is positively affected by utilitarian reinforcement	Partially Support
H4b: Shopping centre approach is positively affected by informational reinforcement	Partially Support
H4c: Shopping centre approach is negatively affected by aversive consequences	Partially Support
H5 Different shopping centres will yield different levels of consequences	Reject
H5a: Different shopping centres will yield different levels of utilitarian reinforcement	Reject
H5b: Different shopping centres will yield different levels of informational reinforcement	Reject
H5c: Different shopping centres will yield different levels of aversive consequences	Reject
H6: Shopping centre response is affected by variables in the behaviour setting.	Partially Support
H6a: Surroundings positively affect shopping centre approach	Support
H6b: Temporal perspective negatively affects shopping centre approach	Partially Support
H6c: Regulatory forces affect shopping centre approach	Reject

H7: Variables in the behaviour setting vary in salience depending on shopping centre visited	Partially Support
H7d: Surroundings vary in salience depending on shopping centre visited	Support
H7e: Temporal perspective varies in salience depending on shopping centre visited	Reject
H7f: Regulatory forces vary in salience depending on shopping centre visited	Support
H8: Shopping centre response is affected by the consumer's learning history	Partially Support
H8a: Shopping centre approach is positively affected by utilitarian learning history	Partially Support
H8b: Shopping centre approach is positively affected by informational learning history	Support
H9: Emotional Responses relate to variables in the behaviour setting	Partially Support
H9a: Pleasure is positively affected by surroundings.	Support
H9b: Pleasure is negatively affected by temporal perspective.	Reject
H9c: Pleasure is affected by regulatory forces.	Reject
H9d: Arousal is positively affected by surroundings.	Support
H9e: Arousal is positively affected by temporal perspective.	Support
H9f: Arousal is positively affected by regulatory forces.	Reject
H10 Shopping centre response is affected by emotional responses.	Partially Support
H10a: Shopping centre approach relates positively to pleasure.	Support
H10b: Approach behaviours is highest for 'exciting' situations, followed by 'relaxing' situations, with the lowest approach behaviours for 'distressing' situations.	Support
H11: Different shopping centres will yield different levels of emotional response	Partially Support
H11a: Different shopping centres will yield different levels of pleasure	Partially Support
H11b: Different shopping centres will yield different levels of arousal	Partially Support

Figure 4.4 below attempts to map the results of study 2 hypothesis testing onto the conceptual model.

As a result of the findings above, the conceptual model is revised to reflect the degree to which hypotheses are supported, indicating the influences within the model, and can be found below.

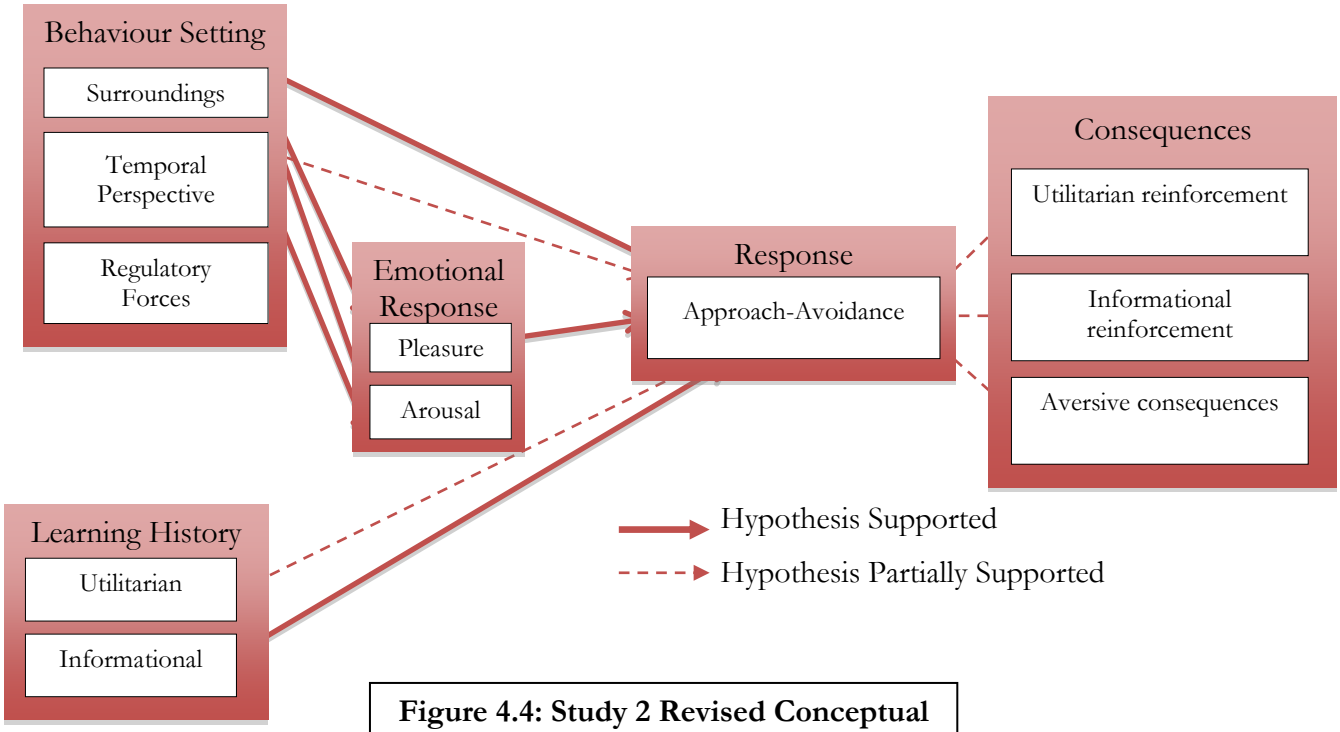


Figure 4.4: Study 2 Revised Conceptual Model

4.3 Chapter Summary

Both models show some potential for explaining shopping centre choice, though study 2 was able to yield more interesting examination of theoretically hypothesised relationships and patterns. The results from study 1 mainly formed a basis on which to design the research programme for study 2. The basic results of the two studies, with key findings highlighted will now be taken forward to the following 'discussion' chapter, which will offer further interpretation of the findings, reflection on findings with respect to previous studies, and discuss the consequences of these results for both practitioners and theoreticians.

5. Discussion

The previous chapters have been devoted to setting up the context of the thesis, identifying gaps in previous research and reviewing relevant theories. The methodological approach to the empirical work was covered in chapter 3, with the results that came out of that empirical work presented along with brief analysis in the preceding chapter. Analyses were used to illuminate direction and interpret results to determine whether hypotheses are supported or not. This chapter is devoted to providing discussion of these analysis, and has three key aims. This first is to satisfy the research objectives initially outlined in the Introduction chapter. The second is to offer reflection on the analyses with respect to the theories and findings outlined in previous research. The third aim of this chapter is to discuss the key implications of these findings for both practitioners and theoreticians, which can be taken forward to the final conclusions chapter, to illuminate recommendations for future research and for practitioners. Limitations associated with each study shall also be presented within this chapter.

5.1 Study 1

Study 1 was conducted in 2005 to investigate whether a simple SOR model could be applied to examine the personal and situational influences on behaviour.

5.1.1 Hypothesis H1 Shopping Centre response is affected by situational variables

To recap the situational variables were comprised of items intended to illuminate the salience of situational cues to consumers based on extent of recall. This was of relevance in the context of study 1, which sought to examine the effect of situational variable salience on choice of shopping centre directly, but also sought to examine whether salience of situational variable is related to personality factors, both of which are long term 'trait's, which tend not to vary considerably over time.

Hypothesis	Outcome
H1: Shopping Centre response is affected by situational variables.	Partially Supported
H1a: Salience of physical surroundings vary between Shopping Centre Visited	Reject
H1b: Salience of social surroundings vary between Shopping Centre Visited	Supported
H1c: Salience of temporal perspective varies between Shopping Centre Visited	Reject
H1d: Salience of regulatory forces vary between Shopping Centre Visited	Reject

The first hypothesis for study 1, H1 was partially supported, as consumer may choose a shopping centre based on their experience and recall of social surroundings previously. Despite receiving a good deal more attention in theoretical journals, salience of physical surroundings don't appear to in any way determine the shopping centre consumers select.

Physical surroundings, temporal perspective and regulatory forces don't vary between shopping centres visited

Although the influence of physical surroundings on consumer behaviour has received much attention by academic research in the past, perhaps more so than any other area of situational research, general understanding is that physical aspects of the behaviour setting has a sizeable (Belk 1975; Foxall 1998), if not the greatest impact on consumer behaviour of all the situational variables. Studies have looked at many aspects of physical surroundings and their impact on consumers senses (visual, aural, olfactory and haptic), specifically looking at 'atmospheric' effects such as music, lighting, noise, temperature, colour and scents.

The shopping centres visited in this study were very diverse (see appendix P), in terms of composition of stores and entertainment venues, physical composition (some were enclosed spaces, others were not), and aesthetics. It was of interest to see whether consumers visiting these shopping centres reported being susceptible to the different situational cues of interest. Consumers who reported a high awareness of physical cues do not appear to favour any particular shopping centres above others in the study area, so physical surroundings are not as great a predictor of behaviour as previous research suggests. In this respect, the findings of this study are contrary to those from previous investigations, and in fact suggests that this area of research, given much attention in the wide range of studies into atmospherics, store and shopping centres design, and weather affects, etc., is perhaps being over-estimated in its impact.

In other respects, physical surroundings are still important to consumers, though the link to behaviour cannot be established. Overall, compared with other dimensions, respondents scored higher on physical surroundings (M=3.9, SD=1.4), despite the fact that it was the shortest scale measured (six items), suggesting that respondents have the highest level of recall of the effects of physical surroundings. In the study area, at least, physical surroundings appear to be one of the most important to consumers at the level of the shopping centre, which is in line with the research in this area (Babin, Darden et al 1994; Babin and Attaway 2000).

It is difficult to reflect on the findings with respect to temporal perspective and regulatory forces, as compared with physical surroundings and social surroundings, there is little research into the effects of the temporal perspective. Arnold Oum et al (1983) examined the effects of seasonal, temporal and other variables on retail patronage, but did not present conclusive findings of whether patronage varied significantly based on these factors. Regulatory forces have received even less attention, though some aspects, like accessibility, parking and security have (Yavas and Babakus 2009).

Social surroundings vary between shopping centre visited

Social surroundings seem to be the only situational variable that had any great impact on the respondents choice of shopping centre, though this impact was small-medium in strength.

Research into social surroundings has frequently looked at the impact of interpersonal influence, and reference groups in particular on consumer decisions, though prior research has usually focussed on purchase decisions. While some studies have looked at individual sensitivity to social cues and interpersonal influence as a mediator of purchase choice (Bearden & Rose 1990), others have looked at interpersonal influence more directly. Bearden & Etzel (1982) suggested that when looking at the influence of social forces on consumer choice, these social forces tend to have a greater impact for brand choices than for product choices. Store choice would appear most closely comparable with brand choice than with product, if we consider Kotler's assertion that part of the store atmosphere is to communicate the image of the store with the consumer, something which is at the heart of branding.

Other studies have suggested that the influence of social forces has the strongest impact on choice for conspicuously consumed products than for inconspicuous ones (Prinberg &

Plimpton 1986). Choice and use of retail space is one of the most publicly conspicuous consumption settings. While the context and manner in which the present study was conducted is hard to directly compare with these studies, it seems apparent that, like the present study, earlier research found that social influence has a direct impact on patronage behaviour and wider decision making.

The findings here suggest that social surroundings, of all situational variables, are the ones worthy of further examination, despite the prevalence of research on physical surroundings suggesting the contrary.

Social surroundings, with their direct and indirect effect have, for a long time, been discussed as being one of the most influential determinants of human behaviour, with early studies suggesting that advice, opinions and image perceptions form the most important discriminative stimuli to influence behaviour (Burnkrant and Cousineau 1975), influencing, amongst other things, mood, attention and motivation. The vast array of research done in the area is testimony to the suggested importance it plays in behaviour, both in consumer research and beyond (Burnkrant and Cousineau 1975; Bearden and Etzel 1982; Brinberg and Plimpton 1986; Bearden and Rose 1990; Lord, Lee et al. 2001; Mourali, Laroche et al. 2005; Clark and Goldsmith 2006). Studies have looked at the varying attention to, and influence of social surroundings on consumers, the influence of referent groups on behaviour (normative influence) and the role of credible others in communicating quality of a product (informational influence).

While social surroundings were the only situational variable to show variance between shopping centres, this dimension also represented the lowest mean score (M= 1.89, SD=1.85), suggesting that compared with other dimensions, it is not a factor that influences consumers in the study area strongly, as they recall it less than other situational dimensions. However, the present study found that social surroundings, of all situational factors examined, is actually the least salient to consumers in the study area, with a mean score far below that of temporal perspective, task definition and even physical surroundings. Social surroundings appear far less important to consumers than previous studies have suggested. This may partially be due to the differing context of this study from those previously. Studies in the marketing domain have looked at the influence of social surroundings on purchase behaviours, rather than the role in the choice of shopping centre. A further interpretation may be that customers surveyed had a high likelihood of visiting one of their most preferred shopping centres, so the shopping centre itself would

drive the salience of the situational variable. It is possible that though shopping centres may be physically very different, consumers do not notice this variation, but shopping centres can be very different in terms of the social interactions they facilitate.

Implication: Study 1 is limited

A key implication from this study is to develop further research into the social facets of shopping as well as physical ones. The findings from study 1 were quire limited, but suggested that moving on to study 2, the focus should consider to examine the effects of social forces on behaviour. It also confirmed why it would be important to move towards the BPM, for all it may be difficult to measure some of the constructs like learning history. It also suggested that physical surroundings are reported more by consumers than other behaviour setting variables, so it is worth continuing research in this area also.

5.1.2 Hypothesis H2: Shopping Centre response is affected by organism traits

Examination of the effect of organism traits on shopping centre choice yielded mixed and interesting results. The hypothesis could not be fully upheld, as surprisingly neither Extraversion appeared to have any impact on shopping centre choice, though Neuroticism, and surprisingly Psychoticism did. The stimulus-organism-response theoretical model formed the basis for this research.

Hypothesis	Outcome
H2: Shopping Centre response is affected by organism traits	Partially Supported
H2a: Extraversion scores vary between Shopping Centre Visited	Reject
H2b: Neuroticism scores vary between Shopping Centre Visited	Supported
H2c: Psychoticism scores vary between Shopping Centre Visited	Supported

Extraversion does not vary between shopping centre visited

The finding that extraversion level does not effect shopping centre choice seems surprising. On one level, it is surprising simply by the difference in the type and composition of the shopping centres considered. Considering the composition of the shopping centres in terms of functional stores (supermarkets), restaurants, bars, etc., one would imagine those shopping centres with (or

near to) multiple social venues would be a draw to more extraverted individuals, given they would have increased opportunity for social interaction. It is doubly surprising considering that social surroundings, which measures how much a respondent has been aware of social surroundings previously varies between shopping centres, but extraversion does not. One would expect extraverts to be more overtly aware of and willing to enter into social situations (Snyder 1983).

Neuroticism varies between shopping centres

Results found neuroticism to vary between shopping centres, suggesting that consumer may choose shopping centre partly on the basis of this personality variable. Consumers who were more emotionally stable (low neuroticism) appear to favour shopping centres like Eldon Square and Consett, while the more emotionally unstable (high neuroticism) were significantly more likely to favour centres like Manor Walks and Monument Mall. Interpretation of this findings is rather difficult, as Eldon Square and Consett are comparatively very different types of shopping centre. Similarly, Manor Walks and Monument Mall are very different also. Neuroticism has been found to be related to experiential motivations, supposedly reflecting the individual's mood management strategies (Mooradian and Olver 2006). Perhaps it is down to the ability of centres to facilitate experiential aspects of shopping that drives the choice of shopping centre.

Psychoticism varies between shopping centres

The only notably significant difference in psychoticism between shopping centres is between Monument Mall and Eldon Square. Consumers with a higher psychoticism score seem significantly more likely to visit Monument Mall than the neighbouring Eldon Square. This may be related to the tenant mix of the two centres, and the previously observed relationship between psychoticism and innovation motivation (particularly the need to be different) (Joy 2008). At the time the survey was conducted, Monument Mall housed a mix of independent stores, galleries, JJB sports, TK Maxx and the Newcastle United Football Club (NUFC) store, while Eldon Square was largely home to chain retailers. Respondents seeking the distinguish themselves from others in terms of products and fashion might favour Monument Mall, which offered greater potential for different products. Even TK Maxx, a chain retailer, tends to focus on high end brands at a bargain price, something which again would appeal to consumers motivated to be different from others.

Implications

It may be that we should not draw too many conclusions from these findings. Personality may be an enduring trait, but if consumers face different goals for different shopping trips, personality is not likely to be the main driving force behind shopping centre choice. The small and insignificant variations in personality variables between shopping centre appear to suggest this.

5.1.3 Hypothesis H3: Organism traits relate to salience of situational stimuli

Hypothesis	Outcome
H3: Organism traits relate to salience of situational stimuli	Partially Supported
H3a: Extraversion relates to salience of situational stimuli	Supported
H3b: Neuroticism relates to salience of situational stimuli	Supported
H3c: Psychoticism relates to salience of situational stimuli	Reject

Extraversion may have a very small indirect effect on shopping centre choice via social surroundings

Multiple linear regressions carried out and presented in chapter 4 indicated that social surroundings, the only situational variable to vary significantly across shopping centres, is partially predicted by extraversion and by neuroticism, which together predict around 11.7% of its variance. This is marginally in line with previous studies that suggest that extraversion is related with social interaction motives (Mooradian and Olver 1996; Howard 2007).

While neuroticism also varies between shopping centres, extraversion does not, but these findings indicate that it may have some small impact on physical surroundings and therefore indirectly have some (albeit small) impact on shopping centre choice.

The other situational variables did not significantly vary across shopping centres visited, but multiple linear regressions showed that they were predicted, to a small extent, by personality variables. Regulatory forces have the highest percentage of its variability explained by personality variables, with extraversion and neuroticism showing significance. The percentage of variance is still very small, however, at 16.3%.

In all instances, correlations reported similarly small associations between personality traits and situational variables.

5.1.4 The Logistic Regression for Study 1

Logistic regression was carried out to investigate the relative contribution of personality and situation variables to shopping centre choice, with one situational dimension- social surroundings, and two personality dimensions- neuroticism and psychoticism predicting choice of shopping centre. It was important to look at the relative contributions of each in a suitable regression, because proponents of situationism have argued that the low correlations between personality and behaviour were due to the overriding impact of the situation. Research in this area compared the relative impact of situation on behaviour, and personality on behaviour, and discovered that situation and personality seemed to predict a similar amount of variation of behaviour (Funder and Ozer 1983). In essence, the present study confirms again that in the context of shopping centre choice, situational and personality variables seem to offer a similar level of predictive capacity.

If we are to view the findings from an interactionist stance (Ekehammer 1974; Endler and Magnusson 1976; Pervin 1983), which supposes that it is the interaction of 'traits'- personality, and situational variables which influence behaviour, and that combined, personality and situation give a greater explanation of behaviour than either one does in isolation, then do a limited extent this seem to be the case. When logistic regression is carried out for situational predictors on shopping centre choice, the model returned is insignificant. When logistic regression is carried out for personality predictors, the model is significant, but the pseudo R-square values are very small (Cox & Snell = .153, Nagelkerke= .158).

The findings contradict certain streams of research, which do not believe that personality directly influences behaviour. Research has shown that personality does not provide a perfect prediction of actual behaviour. At best, researchers have found that personality only correlates modestly with actual behaviour, at around 0.3-0.4 (Vernon 1964; Mischel 1968), which in real terms, only accounts for 10% of the variation of behaviour.

5.1.5 Study 1 Wider Discussion

In summation, though Study 1 was limited, it did show potential for a cognitive-behavioural model to be applied to examine the drivers of shopping centre choice. It showed that there is potential for both situational and personality variables to predict shopping centre choice, though showed some variables to be more useful than others.

The main outcomes of study 1, however, was the evidence it provided to move forward to a more advanced model of consumer behaviour to explain shopping centre choice. Study 1 indicated that there needed to be a shift in the theoretical basis for further research, and also a shift methodologically also. It highlighted social surroundings and neuroticism as the two main drivers of shopping centre choice. The apparent effect of emotional stability dimension (neuroticism) on shoppers suggested that study 2 should seek to determine the extent to which emotional forces effect consumers in their choice (and approach towards) shopping centres, though moving forward, it was decided to examine 'emotional response' as a state, rather than 'emotional stability' as a trait.

5.1.6 Limitations of Study 1

It is clear that study 1 is quite limited in terms of both the theoretical model adopted and methodology used. The model adopted was very simple, scales themselves somewhat flawed and analyses limited by the use of a nominal dependent variable. Original scales designed to measure Belk's situational dimension, though based on previous studies and run through PCA were flawed. The questions themselves looked at recall of past experience of the situational cues, and the choice of dichotomous scale (comparable with Eysenck's personality inventory) was a poor one, limiting the range of potential responses, and subsequently the data analysis. Recall itself is prone to cognitive or retrospection bias, as respondents have difficulty remembering previous occasions accurately (Coxton 1999). Semantic differential or Likert-type scales would have allowed a larger range of responses, and the potential for more useful results. Even original scales were potentially inadequate. Eysenck's personality inventory was adopted in this study to measure personality dimensions, though studies have suggested that limited findings in the past may be because of this (Brody and Cunningham 1968). A better approach might have been to design a new inventory for specific use in this study. Though Eysenck's personality inventory is

considered to be a strong measure of personality dimensions, grounded in biological bases, it is a rather aged scale, and not specific to consumer research.

Study 1 was also a rather aged study, with data collected at the end of 2005, and subsequent changes in the shopping centres visited suggesting practical recommendations would have little direct relevance today. With data collection for study 1 being conducted in the latter months of 2005, the data collected is quite old. It is not expected that the dimensions measured (particularly personality dimensions) would change dramatically over the intervening years. However, it is acknowledged that some of the shopping centres visited for data collection have themselves changed in the period since data was collected. Eldon Square has moved and rejuvenated the integrated bus interchange, demolished an old covered market area and replaced it with a modern atrium with high end retailers. The Metro Centre has revamped the flooring, extended and updated two wings which changing the use of one of the wings to predominantly entertainment venues. Monument Mall has arguably seen the biggest change, with a major 12 month project to change the internal layout of the space away from a traditional shopping centre format, towards large outward facing shops which will increase the lettable footprint of the shopping centre by around 35% (anon 2012), though this work only started at the beginning of 2012. Millburngate rebranded as 'The Gates', and has seen changes in tenant mix, but ultimately has changed little since data collection. However, the findings from study 1 provided useful indicators of concepts most relevant for further investigation in Study 2, but cannot be used to draw definitive conclusions and recommendations for practitioners.

Overall, it appears that there is some merit to SOR models as models of patronage behaviour, but considering the organism in terms of their personality is somewhat limiting. Other studies, which have preferred the 'state' consideration of the organism, have seemingly been more successful in explaining behaviour (Chang, Eckman et al. 2011). Also, personality is a difficult variable to make direct use of. As personality it is made up of enduring traits, there is little retailers can do to manipulate this domain. Its usefulness seems to be limited to allowing retailers to know which types of customers it currently appeals to most.

Limitations from study 1 are somewhat mitigated in that no direct practical implications and recommendations were discussed. Rather, findings from study 1 were used to illuminate theoretical directions and allow reflections on methodological practice for study 2.

5.2 Study 2

Study 2 was conceived out of reflection of the key limitations of study 1, with further reflection on literature to determine a more suitable approach to examine patronage behaviour from a psychological domain. Though the findings were very weak, the model adopted for study 1 hinted at the potential that might be held in a suitable behavioural model in explaining patronage behaviour. As such, the BPM, a more sophisticated and (largely) consumer focussed model was applied for study 2.

5.2.1 Hypothesis H4 Shopping centre response is affected by consequences of the visit

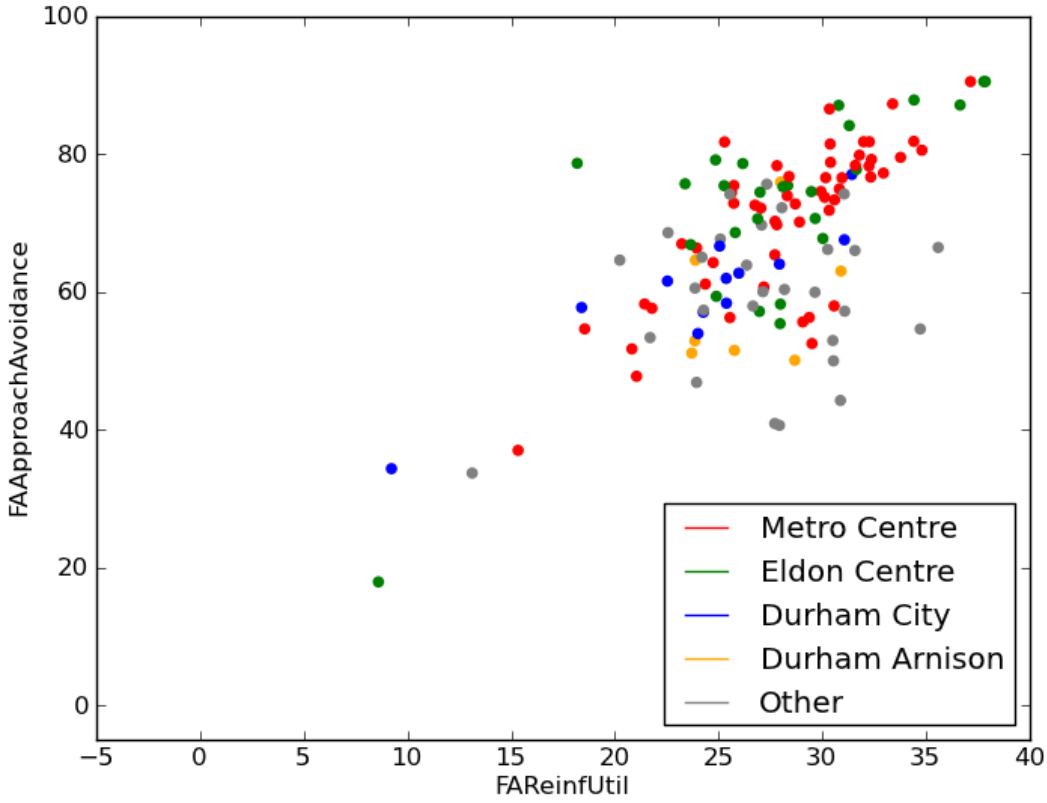
Hypothesis H4 was conceived to test the assertion of the BPM that it is the effects of utilitarian and informational reinforcement that influence consumer behaviour (Foxall 1998), with these outcomes making behaviour more likely in the future (positive reinforcement).

Hypothesis	Outcome
H4: Shopping centre response is affected by consequences of the visit	Partially Supported
H4a: Shopping centre approach is positively affected by utilitarian reinforcement	Partially Supported
H4b: Shopping centre approach is positively affected by informational reinforcement	Partially Supported
H4c: Shopping centre approach is negatively affected by aversive consequences	Partially supported

Utilitarian reinforcement is strongly associated with approach

Utilitarian reinforcement, which considers the functional and enjoyable reinforcing elements of visits, in terms of productivity, efficiency, satisfaction and effectiveness displays a large correlation with approach, which can be visualised in figure 5.1 below showing a good linear fit. This suggests that consumers who report higher levels of such reinforcement are likely to be more willing to approach the centre, encompassing likelihood of patronage, exploration in store, willingness to communicate with others, and performance satisfaction. This would appear to be congruent with previous studies which have examined the influence of consequences on behaviour (Foxall 1998).

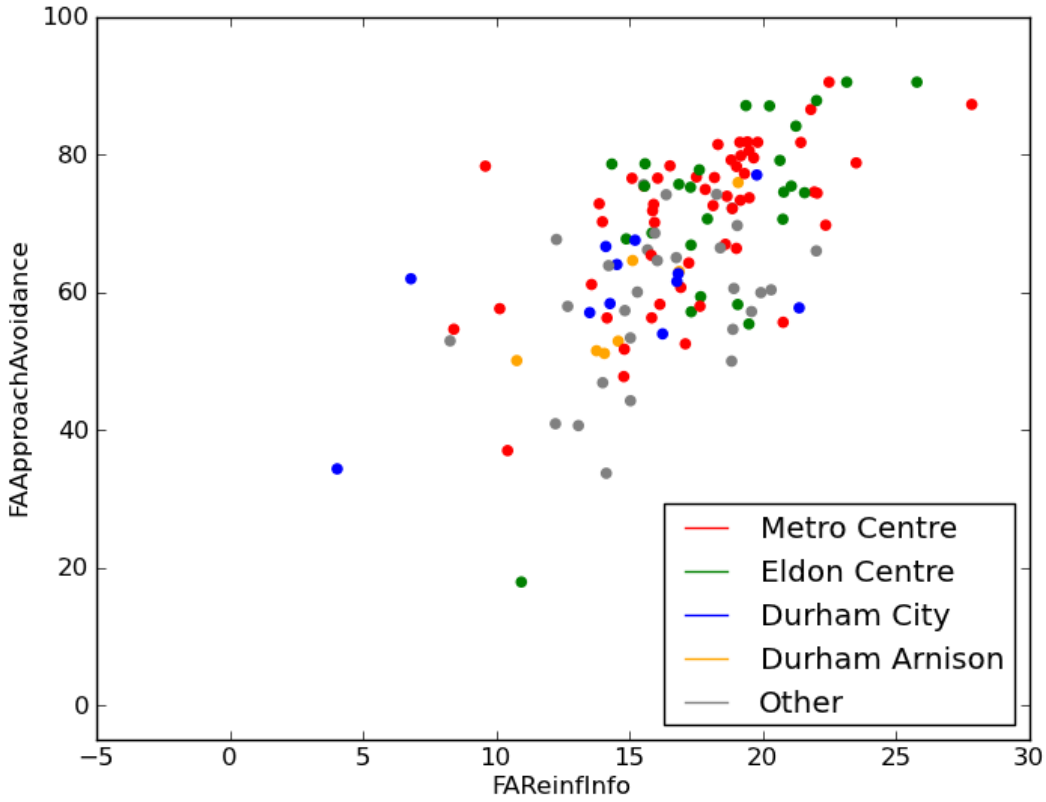
Figure 5.1: Scatter for Utilitarian Reinforcement by Approach



Informational reinforcement is strongly associated with approach

Like utilitarian reinforcement, informational reinforcement returns a large significant correlation with approach, suggesting to an extent the receipt of informational reinforcement increased the likelihood of the behaviour happening again in the future, which confirms previous findings in other areas of consumer behaviour. This is demonstrated well in figure 5.2 below, given the typical cigar shaped spread of points. Like behaviours like purchase (Sigurdsson, Engilbertsson et al. 2010), consumption (Leek, Maddock et al. 2000), and response to a store (Foxall and Yani-de-Soriano 2005) it appears that informational reinforcement increases likelihood of shopping centre approach, which encompasses likelihood of patronage, exploration in store, willingness to communicate with others and performance satisfaction.

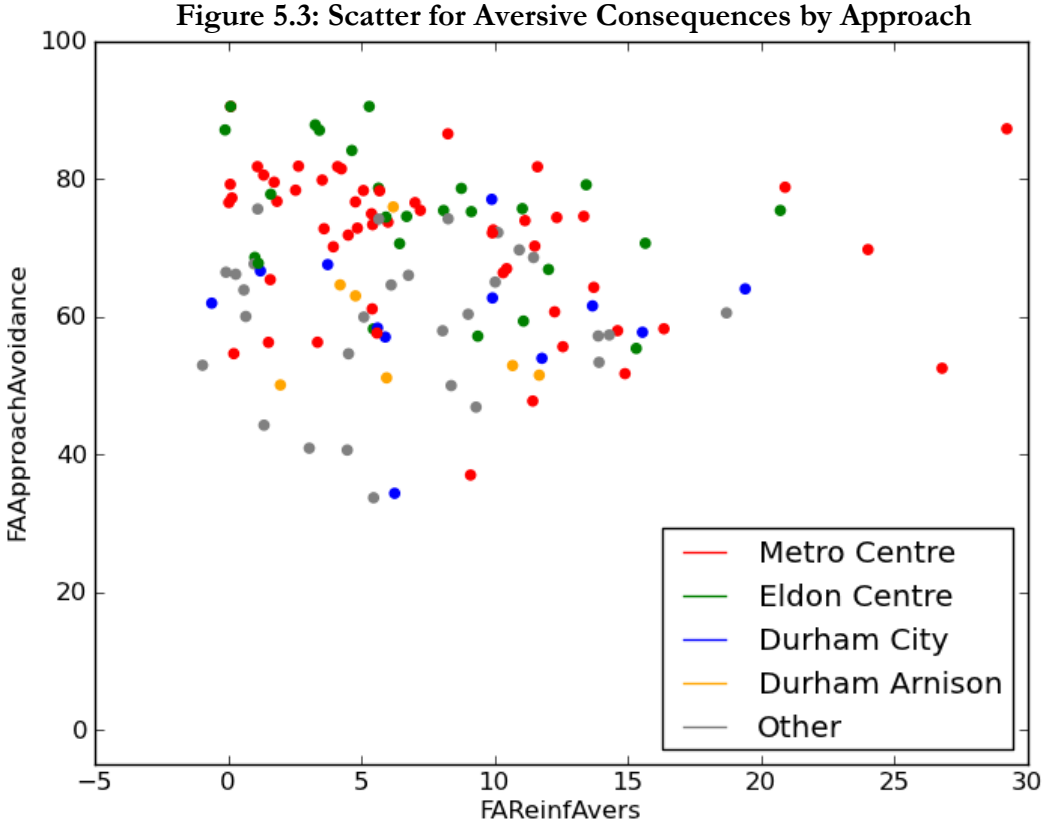
Figure 5.2: Scatter for Informational Reinforcement by Approach



Aversive consequences are not directly associated with approach

Aversive consequences considers the costly aspects of the behaviour- time, effort, energy and resources required for the behaviour and to acquire the other reinforcers (Foxall 1998). Unlike utilitarian reinforcement and informational reinforcement, aversive consequences did not return a significant correlation, though this was marginal ($p<.055$) and a small negative correlation ($r=-.151$). This can be confirmed in figure 5.3 below, which shows there is a poor linear fit between the two variables. However, in the regression model discussed below, it did significantly predict (though only a small amount) approach-avoidance behaviour.

Figure 5.3: Scatter for Aversive Consequences by Approach



So far, the associations shown by the correlations have been discussed, and discussion has indicated that findings are mostly in line with expectations based on previous theory, which suggests that utilitarian reinforcement and informational reinforcement are likely to have a greater impact on behaviour than aversive consequences (Foxall 1995). This relates to theory relating to schedules of reinforcement, which largely suggests that the more regular and immediate the reinforcement, the stronger its impact upon behaviour. Reinforcement tends to occur immediately upon the behaviour, like the utility or pleasure a consumer derives from making or using a purchase. Foxall suggests that Utilitarian reinforcement is most immediate, informational reinforcement, which relates to feedback on behaviour, is more intermittent, so has a less strong impact upon behaviour than utilitarian reinforcement. Some aversive consequences are often subject to a considerable delay (Foxall 1995), like payment of credit card bills, etc., (Meoli, Feinberg et al 1991) so may be subject to temporal contiguity, though others, like bad experiences or time and difficulty getting to the centre, are more immediate. Looking at the correlations, it appears that the findings in the current study are very much in line with theory, not just that associations exist, but that the size and direction of the association also matches. The direct association between aversive consequences and approach-avoidance are insignificantly small, however, so it does diverge from previous research in this respect.

Findings relating to the effect of reinforcement on approach are complex, with results of straightforward correlations between the reinforcement variables and approach contradicting the results of regression analysis. An attempt to account for this will be provided in the following section.

When considered in the unifying regression model, utilitarian reinforcement does not appear to significantly predict approach-avoidance behaviour, so in the grander picture, though it displays a significant and sizeable association with approach, it does not have much effect when compared with other variables like surroundings and pleasure.

Informational reinforcement, when considered in the regression model, does not appear to contribute significantly to the regression model compared with other variables. This suggests that while it may be of benefit to retailers to ensure consumers leave their centre with positive feelings, ensure positive image to ensure friends approve of the visits, it is not as important as other factors.

Within the context of the unifying regression model, when all other variables are taken into consideration, Aversive Consequences do provide significant though small prediction of approach-avoidance, while utilitarian and informational reinforcement did not. This relationship is only significant in the context of the regression, with an increase in Aversive Consequences predicting a small decrease in approach-avoidance. Given the hypothesis, and prevailing theory, that aversive consequences are essentially the punishing consequences of behaviour, and anticipated to reduce likelihood of that behaviour, it seems the findings of this study are mostly in line with that of previous studies (Foxall 1998).

So all in all, when considered on their own, utilitarian and informational reinforcement do provide strong linear fits with approach-avoidance, but not within the regression model. In isolation aversive consequences do not have a strong association with approach-avoidance, but within the context of regression model, when all other variables are considered, it does appear to predict approach avoidance.

Central to Foxall's neo-Skinnerian theory of situational influence on consumer behaviour (Foxall 1990) is the idea, in line with Skinner's work, that "responses of consumers are determined by the contingencies of reinforcement under which they are emitted" (Foxall 1998

p571). This seems true to an extent, as utilitarian reinforcement and informational reinforcement are both associated strongly with approach-avoidance behaviour (through correlations) and aversive consequences related with approach-avoidance in the regression. However, in terms of the regression model, which takes other dimensions from BPM constructs into consideration, it appears that aversive consequences have the smallest impact on approach avoidance. So in many ways, though the overarching hypothesis was partially supported, and consequences having some impact upon behaviour, the findings are not in line with Skinner's original assertions that behaviour is fundamentally "shaped and maintained by the consequences of that behaviour" (Skinner 1963 p513). However, the findings fit far better with Foxall's BPM, which consider consequences of consumer behaviour as just one of the shaping influences of that behaviour.

Theoretical Implication

This shows potential as a means of measuring the reinforcing consequences of visiting a shopping centre, and examining their significance in explaining shopping centre response. Orthogonal variables were identified using PCA, and associations shown with correlation, and a level of prediction offered via a regression model. This suggests that future studies might be able to move away from using forced rankings to examine reinforcement. Especially considering that reinforcement may be felt differentially- different consumers experience different levels of reinforcement, even in the same shopping centre. Previous studies (Foxall, Oliveira-Castro et al 2004, p242) have acknowledged that there are "no general units to measure utilitarian and information reinforcement levels", and instead used a forced ranking system with which to classify different product categories. This system worked reasonably for the consideration of supermarket food products, with utilitarian reinforcement largely determined by the degree to which (expectedly) desirable attributes had been added to the product, and informational reinforcement largely determined by brand differentiation. However, such an approach may be difficult to apply to behaviour like shopping centre patronage. To an extent the number and diversity of stores could be used for utilitarian reinforcement ranking, and desirability of brand could be partly considered in terms of desirability of brands of store within the centre. However, a shopping centre with many desirable stores will not necessarily offer more reinforcement to a consumer who is primarily motivated to visit the cinema. The individual level measures of reinforcement are perhaps more relevant when considering behaviours like patronage. As there is the potential to develop a measure of individual reinforcement effect for shopping centre

visit, it should be possible to develop one for other studies too.

5.2.2 Hypothesis H5 Different shopping centres will yield different levels of consequences

Hypothesis	Outcome
H5 Different shopping centres will yield different levels of consequences	Partially supported
H5a: Different shopping centres will yield different levels of utilitarian reinforcement	Reject
H5b: Different shopping centres will yield different levels of informational reinforcement	Support
H5c: Different shopping centres will yield different levels of aversive consequences	Reject

The previous hypothesis was used to examine whether reinforcement levels have a significant effect on approach behaviour, which has important implications for identifying areas in which retailers should focus their attention to encourage approach. The findings of the previous hypothesis were conflicting and complex, but hinted that to some extent, utilitarian and information reinforcement and aversive consequences have some impact on approach behaviour. It was therefore of interest whether shopping centres visited vary in any way in the levels of reinforcement they deliver to visitors, as the anticipated effect of reinforcement on behaviour is in the form of frequency (choice) as well as magnitude (approach). As indicated in previous studies, utilitarian and informational reinforcement "make the behaviour that produced them more likely in future" (Foxall 1998, p594), while aversive consequences make the behaviour less likely in future. Results suggested that for informational reinforcement only was there any difference between shopping centres, suggesting that while reinforcement measured in this study relates with approach behaviour, there are no differentiable differences between shopping centres on these components, except for informational reinforcement.

Utilitarian reinforcement does not vary across shopping centres

Rather surprisingly there was no variation in terms of utilitarian reinforcement (levels of productivity, efficiency, etc.) between the shopping centres respondents reported visiting. This was somewhat counter to expectations (Foxall 1998), as the shopping centres visited in the study were very different in nature and size. Some shopping centres are sizeable ones indeed, with a very broad assortment of stores and products within them- stores that should be better able to ensure consumers can do everything intended on their shopping trip. The lack in

difference in utilitarian reinforcement between shopping centres in the study area is surprising, but may be possible to attribute to the context of the shopping trip. In order to maximise utility for a shopping trip, consumers are likely to have considered alternative shopping centres which could facilitate the purpose of the shopping trip, and selected the shopping centre which best facilitates their needs. As such, each shopping centre may deliver a level of utilitarian reinforcement which matches the consumer's expectations. Consumers with very few goals may visit a small shopping centre where they can do everything they wish within a small space and amount of time. A consumer with many goals may choose a shopping centre with a larger selection. Both consumers have chosen a centre which best facilitates their requirements in terms of productivity and efficiency, and so levels of utilitarian reinforcement does not vary considerably between them.

Informational reinforcement varies across shopping centres

Informational reinforcement was the only reinforcement found to vary significantly between shopping centres. Relating to social approval, positive feedback from others, etc., it seems that different shopping centres are better able to provide this reinforcement than others, and that shopping centre visited accounts for 16% of variance in informational reinforcement, which Cohen suggests is a large effect. This may be because of the ways in which the composition of the mall may act as reinforcers. Making and analogy to the Byrne's reinforcement-affect model (Byrne 1971), in which recognition of comparable attitudes in a stranger act as a reinforcer to attraction, Meoli, Feinberg et al (1991, p442) suggest that "attraction to a mall would be a function of the proportion of reinforcing stimuli in a mall", and this reinforcement can be partially based on the stores which compose the mall. When a consumer likes shopping in a store it acts as reinforcing stimuli which makes the mall more attractive to consumers.

Examination of the post-hoc tables from Tukey's HSD suggested that the key differences were between shopping centres Eldon Square (M=18.44, SD=3.3), Newcastle (M=19.77, SD=1.95) and Teeside Park (M=18.7, SD=1.80) and centres Durham City (M=14.45, SD=4.85) and The Gates, Durham (M=13.44, SD=1.06), though the only significant difference raised by Tukey's HSD was between Eldon Square and Durham City. The difference between Eldon Square and Newcastle with Durham City and The Gates, Durham is not too surprising. Newcastle is a large cosmopolitan city with a very large variety of retail, leisure and cultural spaces, while Durham is a small historic city with a smaller range of shopping areas and stores. According to Meoli,

Feinberg et al's (1991) revised retail gravity model, attraction can be considered in terms of the number and proportion of stores acting as reinforcers. If number of stores is an indication of level of reinforcement, then this seems to be confirmed. Newcastle and Eldon Square have long been favoured by younger generations (Townshend and Madanipour 2008) and offer great opportunity for comparison shopping across both mainstream and boutique stores and entertainment spaces and a broad range of experiences. Durham is comprised of mainly high street retailers and otherwise mainly functional retailers such as grocers, butchers, etc., and more recently charity shops. While the mix is similar, the proportion of charity shops is considerably higher in Durham than in Newcastle.

Researchers have previously highlighted that "being seen and recognised as shopping in more exclusive stores may be a means of expressing pride" (Shim and Eastlick 1998, p155) and that urban regional shopping malls "may be seen as a source of higher-order goods congruent with ... self image". Essentially, larger shopping malls, particularly urban ones tend to have sufficient mix of stores that they also provide higher end retail experience within their mix. Interestingly the present study found that the urban area of Newcastle was as much able to facilitate informational reinforcement as Eldon Square, which can specifically be characterised as one of Shim & Eastlick's 'urban regional shopping mall'. The shopping of Newcastle certainly spreads beyond this mall however. While Eldon Square houses the more exclusive department stores in the city, many of the more boutique luxury stores are located elsewhere in the shopping district.

Aversive consequences do not vary across shopping centres

Shopping centres in study 2 did not appear to vary significantly in terms of aversive consequences. Again, this is somewhat surprising, given the variety of shopping centres reportedly visited in study 2. Aversive consequences in this study primarily related to costs and access issues related to getting to the shopping centre. As with utilitarian reinforcement, access and access costs may be issues consumers consider when selecting an appropriate shopping centre to meet their shopping needs, and thus only unanticipated consequences might lead to differences in aversive consequences.

Implication: Reinforcement as a potential means of differentiation

No shopping centre seems to currently focus on delivering reinforcing behaviour, which, according the H4 is a worthwhile endeavour. It may be that it is not possible to differentiate in terms of reinforcement, or that shopping centres have not attempted to do so yet. To an extent it seems that number and diversity of stores may affect level of informational reinforcement, with the larger shopping areas represented in this study providing its consumers with the highest levels of informational reinforcement. This may be due to the mix of customers and activities facilitated by a larger shopping centre, so it may not be possible for smaller shopping areas to deliver informational reinforcement. It seems, however, that shopping centres like the Metro Centre, one of the largest shopping centres in the Europe is not managing to deliver the potential levels of informational reinforcement as one might expect from a centre of this size and diversity of stores. Eldon Square continues to outperform expectations, perhaps because it is able to deliver higher levels of informational reinforcement. Referring back to earlier discussion of forced rank approaches to reinforcement, it may be that, in the same way Heinz has stronger brand differentiation, and therefore anticipated informational reinforcement, Eldon Square, which houses many high street retailers, and a mix of low, middle and high end stores also provides a stronger brand differentiation than its competitors (Foxall, Oliveira-Castro et al. 2004). Smaller shopping centres like Millburngate and town high streets perhaps suffer partly because they do not house the sorts of stores with strong brand differentiation with which to attract customers. Lack of such stores means the peers of customers have no credible basis with which to approve of their shopping centre choice. Focus upon attracting tenants that will satisfy informational reinforcement needs may improve performance of such centres.

Theoretical Implication

Meoli, Feinberg et al considered (1991) that attraction could by considered in terms of the number and proportion of stores acting as reinforcing stimuli. It seems apparent that either shopping centres in the area do not vary considerably in terms of utilitarian reinforcement and aversive consequences, or that only informational reinforcement acts to attract consumers. Informational reinforcement certainly seems more comparable with Byrne's reinforcement-affect model of interpersonal attraction (1971), which formed a basis for Meoli, Feinberg et al's research, in that it is the feedback and comparable attitudes that act as reinforcers in this model, not what others can do for us.

5.2.3 Hypothesis H6 Shopping centre response is affected by variables in the behaviour setting

Hypothesis	Outcome
H6: Shopping centre response is affected by variables in the behaviour setting	Partially Supported
H6a: Surroundings positively affect shopping centre approach	Supported
H6b: Temporal perspective negatively affects shopping centre approach	Partially Supported
H6c: Regulatory forces affect shopping centre approach	Reject

In analysing the relationship between variables in the behaviour setting, some mixed results suggest that variables in the behaviour setting do indeed impact on approach behaviour directly, but that this impact varies between the different types of behaviour setting variable. As reported in the preceding chapter, 'surroundings' were found to significantly impact on shopping centre approach, the temporal perspective has some limited level of impact, while regulatory forces did not appear to have any impact on consumer's intention to approach or avoid a shopping centre. The results are to a large extent in line with previous studies.

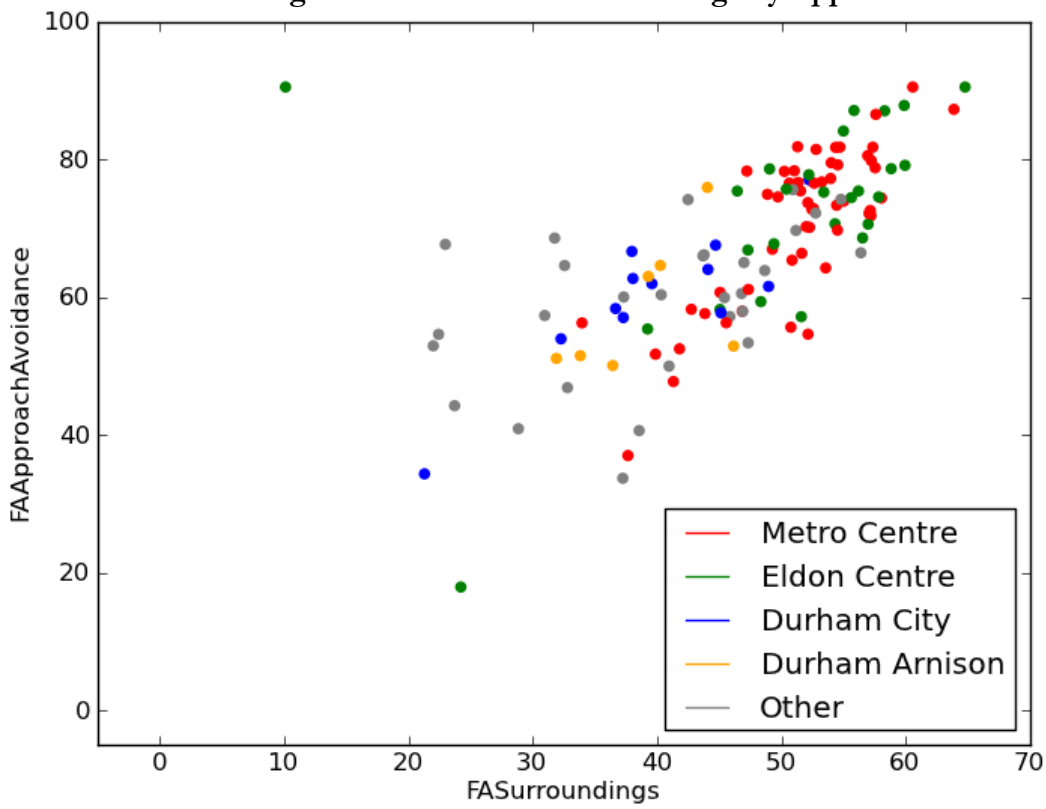
Surroundings (physical and social) strongly affect approach

Research has long discussed the need to better understand "the atmospherics-behaviour relationship" to ensure optimal design of retail spaces (McGoldrick and Pieros 1998 p173).

In the present study, factor analysis suggested that items introduced to measure 'physical surroundings' and 'social surroundings' instead measured an all encompassing 'surroundings' variable, which covered elements of each, encompassing good lighting, pleasant odours, nice look, enjoyable music, modern feel, visibility of security, social opportunity, shopping centre popularity, place to see new fashions, sales personnel trust and well known stores. This was to ensure a more holistic approach to examining effects of forces in the behaviour setting affect decision making, as studies have long called for an examination of how cues work together rather than in isolation (Baker, Parasuraman et al. 2002). The grouping of physical surroundings and social surroundings into an encompassing variable may lead to loss in detail, but is not too far removed from considerations of the behaviour setting found in previous literature. Though Foxall suggested a taxonomy of four factors, at times he has described the behaviour setting as comprising of just two sets of stimuli; "physical and social surroundings" (Foxall 1998 p574) which drive consumer behaviour.

Findings suggested that, of all behaviour setting variables, surroundings has the most significant, sizeable and definitive impact on approach behaviour with a significant large correlation. This is generally in line with suggestions in previous studies, that factors like store design and atmosphere encourage behaviours such as browsing (Babin, Darden et al 1994), which is an important element of 'approach'. These physical cues can also lead to loyalty, an indicator of long term patronage behaviour (Babin and Attaway 2000).

Figure 5.4: Scatter for Surroundings by Approach



When Kotler (1973) first coined the term 'atmospherics', he suggested that this encompassed elements of the design of retail environments which assault the senses (visual, aural, olfactory and tactile) to elicit the most positive response (patronage and purchase) through enhancing the buyer's information and affective state. Kotler's work suggested that atmospheric effects are three fold. Firstly, they work as an attention-creating medium to make them stand out from alternative retailers. They also work as a message-creating medium, allowing retailers to communicate their store image to consumers, and further encourage consumers to identify their store as one that is suitable to meet their needs (patronage). Finally, atmospherics serve as an affect-creating medium, intended to arouse 'visceral reactions' intended to increase probability of purchase. Findings of this study seem to confirm that the physical aspects of surroundings do indeed encourage patronage behaviour.

It is also possible to consider specific components of 'surroundings' and reflect on the findings with respect to more specific studies carried out on single aspects of physical and social surroundings. By far, in research on behaviour settings, the majority of work that has been conducted is in the realm of physical surroundings, considering specific cues in the environment, some of which were touched upon in the present study. Previous research has looked at (among other things) lighting, music, odour, colour, etc. Though there have been many diverse findings, many of these studies show that favourable conditions tend to impact on consumer behaviour favourably. Some of these shall be briefly discussed, and their findings considered in relation to the present study. Spangenberg, Crowley et al (1996) showed scented environments increased patronage intention, which is an aspect of approach considered in the present study. However, they showed that perceptions of time spent in store were lower in scented environments, though actual time spent in store was not. Caldwell & Hibbert (2002) suggested that music preference affects time spent (approach) in stores, while Chebat, Chebet et al (201) showed that music fit impacted behaviour, both suggesting that music consumers regard as 'enjoyable', as it was considered in the present study, is likely to have positive impact on approach behaviour. Summers & Herbert's (2001) work on lighting suggested that lighting contributes to consumer approach. Though it is not possible to draw definitive conclusions from comparison of these earlier considerations of specific physical cues with the broad consideration used in the present study, it does appear that both approaches highlight the relevance of positive physical cues on a range of approach behaviours.

In the present study, social aspects of surroundings were examined quite broadly, considering influence of friends, sales personnel and wider social influences. Previous consumer research into social influences on behaviour has examined the role of social influence in the consumption process for many years, largely focussing on the effects of social interaction between customers and salespeople or each other on a number of responses. Crowding has received attention (Eroglu and Machleit 1990), as has the influence of reference groups on purchase and brand purchase decisions, with research noting that some types of decision (brand purchase) are affected to a greater extent by reference groups than other decisions (Bearden and Etzel 1982).

Other studies have sought to look at the more passive influence of mere presence on consumers' (Dahl, Manchanda et al. 2001) emotions and behaviours. In their study, Dahl Manchanda et al (2001) examined whether the social size and proximity of mere presence

influenced consumers in store behaviour, finding that both emotions and behaviours are effected, with moderate levels of presence promoting the most positive responses from consumers.

Earlier Baker Grewel et al's research (1994) on the effect of store employee perceptions on patronage intentions through perception of interpersonal service quality was discussed, with a notable output of their study being that social surroundings were significant, but ultimately their effect on store patronage intentions via interpersonal service quality was smaller than effects of physical cues via other types of store choice criteria perceptions. Study 2 seems to have shown, like study 1, that social forces, (albeit now encompassed with physical forces in 'surroundings') have a demonstrable affect on purchase intentions.

Earlier discussion of social impact theory conceived by Latane & Wolf (1981) and later revised by Dahl, Manchanda et al (2001) showed that study 1 confirmed the impact of social forces on behaviour, with respect to choice of shopping centre. Study 2 focussed on surroundings, which encompassed social forces, and showed surroundings to have a strong effect on approach behaviour. As with physical aspects it is not possible to definitively say whether social surroundings are having an impact on approach behaviour, but this would seem to be the case.

The analysis in the previous chapter suggested a substantial direct impact of surroundings on approach behaviour, which conflicts with findings of earlier studies, which suggest that the impact of surroundings on approach is not a direct one. Donovan & Rossiter had suggested that earlier research establishing links between physical cues and behaviour were overstating the relationships, and that it was through the effect of physical cues on emotional response that behaviour was being amended. This shall be explored further in subsequent sections, to discuss the extent to which the impact of surroundings on approach in this study are direct, or indirect, with emotional response to surroundings acting as a mediator.

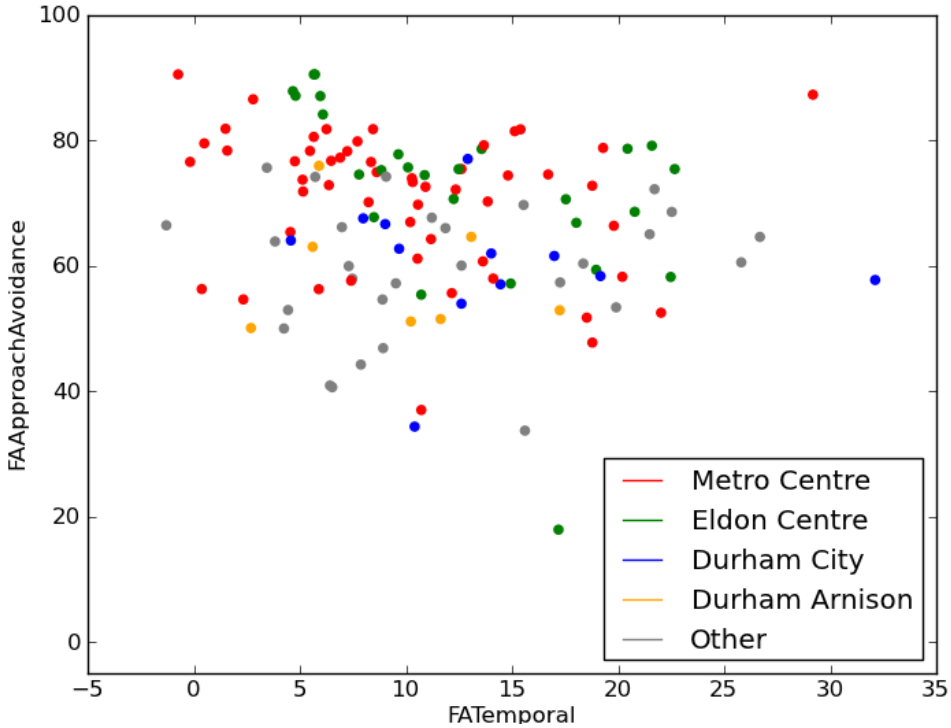
Temporal constraints negatively impact approach

In this study, the impact of temporal cues on consumers was examined in terms of the level of temporal constraint consumers felt they were under in the shopping centre they visited, which is quite different from the way it was examined in study 1, which looked more at how consumers observed seasonal and other such temporal effects. This temporal constraint comes from

pressure exerted by the shopping centre, but also encompasses an element of temporal constraint inherent in the context of the consumer's shopping trip (e.g. going to the same centre, one visitor may be killing time, while the other looking for goods on a lunch break). The centre exerts the same amount of temporal pressure on consumers in terms of the pacing, distance between stores, etc. while the time pressure consumers report may be associated with this or with their own temporal constraint.

Only when considered in a correlation did temporal constraints appear to have a direct impact on approach behaviour, and as expected, this was a negative impact. Consumers at shopping centres providing higher levels of temporal constraint were less willing to approach the shopping centre. When faced with complex decision making, time constraints can speed up consumers decision making, or cause them to switch to simpler decision strategies (Edland and Svenson 1993) in Weenig Maarleveld (2002), shortening the time spent on each item which therefore impacts on time spent in store.

Figure 5.5: Scatter for Temporal by Approach



Other research suggested that temporal constraints affect consumer behaviours like its negative effect on unplanned purchasing (Iyer 1989). A further study by Park Iyer et al examined the influence of time availability on other types of consumer behaviour, like intended purchasing, unplanned purchasing, brand and product class switching and purchase volume deliberation (Park, Iyer et al. 1989). The focus of their research was on grocery shopping, which they identify as being quite different from other buying contexts in that consumers usually have many buying

goals when grocery shopping. Most interestingly, this study found that the high time pressure condition lead to significantly less time being spent in the store compared with the no time pressure condition, though they also found that time pressure increased frequency of failure to make intended purchases and purchase volume decisions. Studies have found that in high time pressure situations many customers even defer making decisions (Lin and Wu 2005) especially when there is a great variety, and the selection decision is difficult (Dhar and Nowlis 1999). The findings of the present study seem to be in line with those reported by Iyer's work, essentially showing that when consumers report time pressure, they report less intention to stay in store and browse.

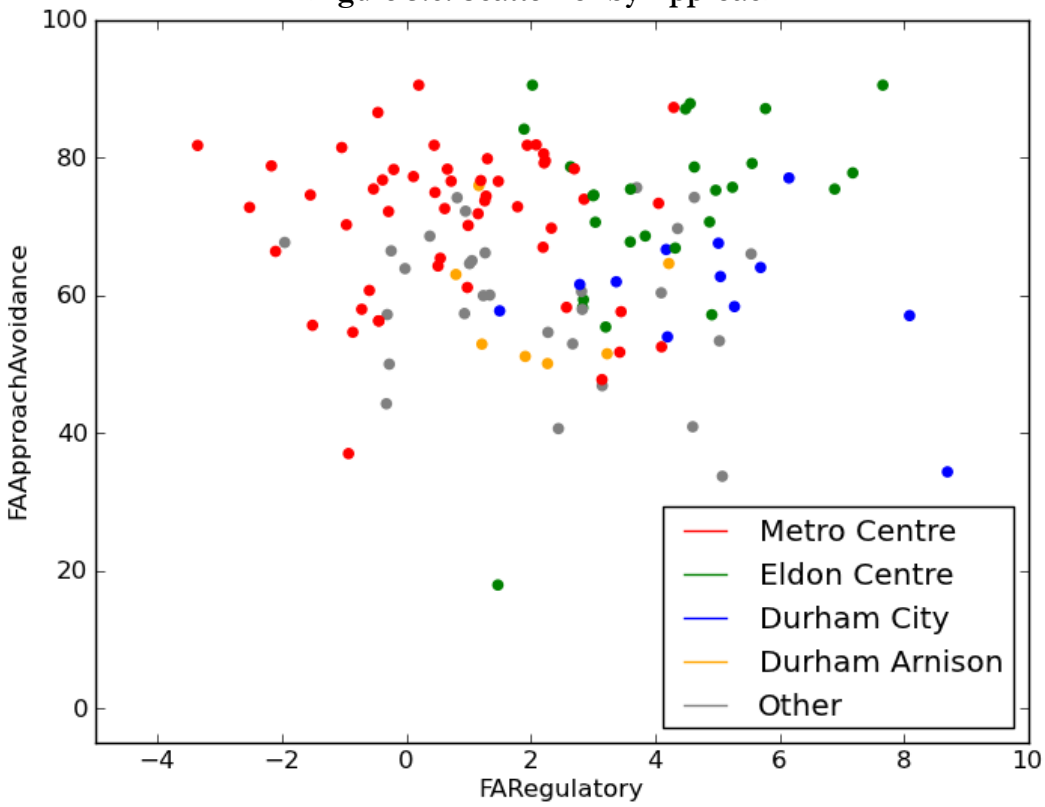
When time pressure is high, particularly in unfamiliar environments, impulse purchasing goes down. Retailers and shopping centre managers would do well to ensure customers facing high time pressure can find what they are looking for quickly, and store retailers have adopted this with a fair amount of success. The popularity and success of many chain retailers is perhaps testimony to the success of engineering retail experiences to be familiar. Chains like Marks and Spencer's are aware that some of their customers might be time short, and ensure the layout of their stores are similar, so a customer new to a particular branch should be able to intuitively find what they are looking for. Supermarket chains realise that moving merchandise around the store and regularly changing the layout of the whole store is an unpopular and frustrating event for customers, though this is still common practice in many supermarkets, to encourage browsing and increase impulse purchasing (Spies, Hesse et al. 1997), though there has been little academic research in this area.

Regulatory forces do not impact approach

In this study, regulatory forces examined related to restrictions and costs associated with parking, requirements to queue and time limited offers in stores. Findings showed that these forces had no discernable impact on approach in the sample. Little research exists that looks at the impact of 'regulatory forces'. It has mainly been mentioned in literature relating to taxonomies of the behaviour setting within studies using the BPM, but the effect of regulatory forces on behaviour has not been examined explicitly. Previously, studies have looked at regulatory forces in terms of accessibility, which Yavas and Babakus (2009) presented as comprised of parking facilities, security, ease of access to the mall, congestion and crowding and traffic flow into and out of the mall (Yavas and Babakus 2009), which they found to be

significant predictors of patronage, which contrasts with the present study. They made recommendations that include improvement and extension of parking provision, use better signage, maps, increase visibility of security. It may be that in the present study the computed regulatory forces variable, which PCA described to explain just 7.2% of variance, just does not have a strong enough impact compared with other variables in the construct, and other constructs.

Figure 5.6: Scatter for by Approach



The specific hypothesis devised to examine the impact of regulatory forces was quite generally worded, to reflect the gaps in knowledge in terms of the direction of the impact of regulatory forces on consumer behaviour. While it is reasonable to assume that things like restricted opening hours and costly and difficult parking are likely to impede approach, in fact regulatory forces are put in place to ensure customers are aware of rules governing their behaviour within the centre, and may in fact increase behaviour.

Implication: Focus on manipulating surroundings

The analyses presented in the previous chapter indicated that only surroundings have a sizeable and definitive impact on consumer approach behaviour, yielding a large significant correlation,

and a significant contribution to the regression model when other independent variables considered. Considering the physical aspect of surroundings is also the most readily manipulable to retail managers, this means that retailers should focus on creating the most attractive space to consumers possible, and suggests that retail spaces can still be engineered to ensure a proposition that is potentially more attractive to consumers than alternative spaces, and crucially, alternative retail provision online also. Ensuring an attractive retail environment may enable consumers to enjoy the experiential aspects of shopping that online alternatives cannot deliver.

Implication: Enhance visibility of security personnel

When it came to scale validation in chapter 3, it became apparent that one of the regulatory forces items, which related to the 'visibility of security personnel' loaded a great deal more strongly on 'surroundings' than it did on regulatory forces, and that along with the other surroundings items, it contributes positively to approach behaviour. Though it is not possible to draw definitive conclusions based on the findings of a single item, it is interesting that an item, which was devised as part of a construct which may impede consumer behaviour. This confirms with recommendations made by Yavas and Babakus (2009).

Implications: Minimise impact of temporal constraints where possible

Considering the apparent impact of temporal constraints on approach behaviour, it would appear that finding ways to minimise issues associated with temporal constraints may be of some benefit. Where possible, maintaining ease of access and flow around the shopping centre may help mitigate the negative impact of consumers who are in a rush on their approach behaviour. This may include ensuring areas of heavy foot traffic remain uncluttered to minimise disruption of the flow and annoyance for consumers, and ensuring optimal way finding through the use of clear signage. This is comparable with Park, Iyer et al's (1989) suggestions for mitigating impact on time pressure customers by avoiding changing self arrangements. Though previously they had suggested that changing shelf arrangements would turn the locus for consumer to external forces, the current study suggests the impact may be negative, as consumers with limited available time struggle to find the products they require, spending more time on search for fewer products in the time available. When considered along with other forces however, the impact of temporal constraints on consumer approach is negligible.

5.2.4 Hypothesis H7: Variables in the behaviour setting vary in salience depending on shopping centre visited

Hypothesis	Outcome
H7: Variables in the behaviour setting vary in salience depending on shopping centre visited	Partially Supported
H7d: surroundings vary in salience depending on shopping centre visited	Supported
H7e: Temporal perspective varies in salience depending on shopping centre visited	Reject
H7f: Regulatory forces vary in salience depending on shopping centre visited	Supported

Surroundings vary significantly between shopping centres

If we are to consider the earlier discussion on Kotler's (1973) 'atmospherics' effects, then along with encouraging approach to a store, 'atmospherics' are an important differentiator of retail space, when the consumer is faced with a variety of choice. As attention-creating medium these physical cues allow a retailer to stand out from the alternatives, communicate image (through message creating medium) and encourage patronage above alternatives by communicating their suitability to meet consumer needs. If we are to consider surroundings as means of differentiating retail spaces from each other, then the present study confirms that surroundings do vary significantly between shopping centres. They vary to such an extent, that findings suggest as much as 34.4% of the variability in surroundings scores in the sample could be attributed to which shopping centre was being visited, suggesting that some shopping centres, such as Eldon Square and the Metro Centre are better at engineering their environments than others (like Consett and Blaydon precinct).

Temporal constraints do not vary between shopping centres

Temporal constraints were not found to vary at all between shopping centres. In accordance with theory developed by Park, Iyer et al (1989), this may be down to familiarity with the shopping centre and the potential overlap of this dimension with time availability- time will go further for consumers in familiar shopping centres. Of the consumers that provided details of where they lived, 99.9% of those who provided postcode details reported living in the study area, and so are likely to have a high level of familiarity with the shopping centre they were visiting, with consumers surveyed living a mean distance of 10.6 miles (SD=9.9) and mean computed travel time of 26.3 (SD=18.4) minutes travel time (accounting for transport mode)

from the shopping centre they were visiting. Furthermore, approximately 47.9% of consumers who indicated their shopping centre preferences were visiting their most preferred shopping centre, and 88.6% of these consumers were visiting one of their top five shopping centres. Consumers with a high level of familiarity with shopping centres are likely to feel (relatively) less rushed for time than people who have a low level of familiarity, where time must be taken to achieve a base level of familiarity to find stores, etc., before considering purchase behaviour.

Rather interestingly, shopping centres, stores and other retail spaces around the world may have already picked up on the importance of minimising time pressure, through engineering shopping centres, and ensuring tenant mix which is comparable with other retail spaces, even in other parts of the world. Global retailers like Marks and Spencer's, Apple, Hollister and H&M have stores in city centres and retail malls all around the world, and adopt very much a uniform layout and aesthetic across the globe, partly to create this sense of familiarity, as well as to work with a concept that they know works for them. Apple in an interesting example of a retailer that works with a fairly typical format in their mall stores, but tend to work with the architecture of carefully selected stores in cities around the world, while putting their own personal touches (glass staircases) to the stores to make them iconically Apple. At the level of the mall, around the world, malls may have different shapes, but have adopted a similar set of techniques to encourage patronage behaviour, both at the level of shopping centre, but also of the stores within it. Anchors have long been favoured since their success was lauded in the mall formats which emerged from the United States. It is familiar territory, around the world for consumers in enclosed malls to walk down avenues lined with shops on either size, to reach a department store or retail destination at the end. Yet excitement is achieved at the same time for new visitors through differences in details and aesthetics.

Regulatory forces vary between shopping centres, but do not impact approach

The lack of impact of regulatory forces on approach discussed in the earlier section appeared to suggest that retail managers can impose regulations which would otherwise be expected to be unpopular among customers, (such as parking charges or restrictions), without expecting a significant negative impact on approach behaviour. When visiting familiar stores, consumers are likely to have weighed up their options, considered the potentially costly aspects of visiting a store, and made a decision accordingly. Despite the Metro Centre, which offers free parking, being located just a 4.7 miles and ten minutes drive from the centre of Newcastle, Newcastle has

managed to maintain its popularity in the central parts of the retail district, though some small arcades have suffered in recent years (Henderson 2010).

Implication: Surroundings are a means of differentiation

This adds to discussion in the earlier section, again emphasising the need to create an attractive and differentiable environment for consumers (Kotler 1973). In line with discussion regarding the use of retail cues to communicate image of a store as well as manipulate behaviour, it appears that it is worthwhile for retailers to invest in physical and social surroundings to make them as attractive to consumers as possible. Crucially, findings from both study 1 and study 2 emphasised the importance of social surroundings on choice of shopping centre. From this, retail managers must consider how they can engineer the shopping centres to deliver not just the best possible service from staff in stores and the wider shopping centre, but otherwise improve the social aspects of the shopping experience.

In their consumer centric study (Baker, Grewal et al. 1994) sought to look at the effect of social cues provided by store employees on customers perception in terms of time/effort cost, psychic cost, monetary price, service quality and merchandise quality. Previous research had suggested that where there are too few employees in stores, both customers perception and responses change (Wicker 1973). Baker Grewel et al (1994) found that only interpersonal service quality was found to be significant, and this was found to significantly contribute to store patronage intentions. Other perception forces were also found to significantly contribute to store patronage intentions however, and interpersonal service quality perceptions were found to be (slightly) the smallest contributor. This is quite different to the findings of the present study, which finds that social surroundings, more than any physical cues, (which Baker Grewel et al (1994) explored as store design and ambient (music) factors) have the greatest impact on shopping centre choice. A prime candidate for explaining this difference appears to be the contrasting ways in which the this study and Baker, Grewel et al's (1994) study sought to look at the store environment cues and the outcome variable. The current study attempted to take a holistic perspective on the retail environment, considering numerous cues across not just the physical and social dimensions, but also accounting for the temporal perspective and regulatory forces, while Baker Grewel et al (1994) looked at one type of social cue (store employee perception), and two aspects of the physical dimension- store design and store ambience (specifically focussing on music only). Another reason for the difference is that Baker Grewel et

al (1994) looked at the impact of store environment factors on store patronage via perceptions of factors important to store choice, whereas the current study looked at the direct and indirect impact of situational forces on actual choice of shopping centre, considering personality as a potential mediator. Baker, Grewel at al (1994) themselves recognised a key limitation of their study to be the limited set of cues on social and other dimensions, suggesting that other social dimensions should be explored for their influence on consumer behaviours, such as presence of other customers, crowding, waiting lines, etc. Other studies have examined whether social interaction in the form of sales personnel affect consumer approach, finding that sales personnel with attractive characteristics (e.g. being knowledgeable) improve approach (Darian, Wiman et al 2005).

More broadly researchers have discussed the impact of social forces on behaviour and perceptions. Social impact theory is "any of the great variety of changes that occur in an individual as a result of the real, implied or imagined presence of other individuals", (Latane & Wolf, p440), with Latane and Wolf (1981) focussing on the relative impact of the majority and the minority on behaviour. Their theory suggests that "as social presence increases, it should have an increasing impact on one's emotions and behaviours" (Dahl, Manchanda et al. 2001). If we consider social presence broadly as it was in the present study, in terms of the different players and potential for social presence, then it seems that findings of the present study agree with that of social impact theory, that whether real, implied or imagined, social effects have the potential to influence behaviour, in this instance, choice of shopping centre.

5.2.5 Hypothesis H8: Shopping centre response is affected by the consumer's learning history

Hypothesis	Outcome
H8: Shopping centre response is affected by the consumer's learning history	Partially Supported
H8a: Shopping centre approach is positively affected by utilitarian learning history.	Partially Supported
H8b: Shopping centre approach is positively affected by informational learning history	Supported

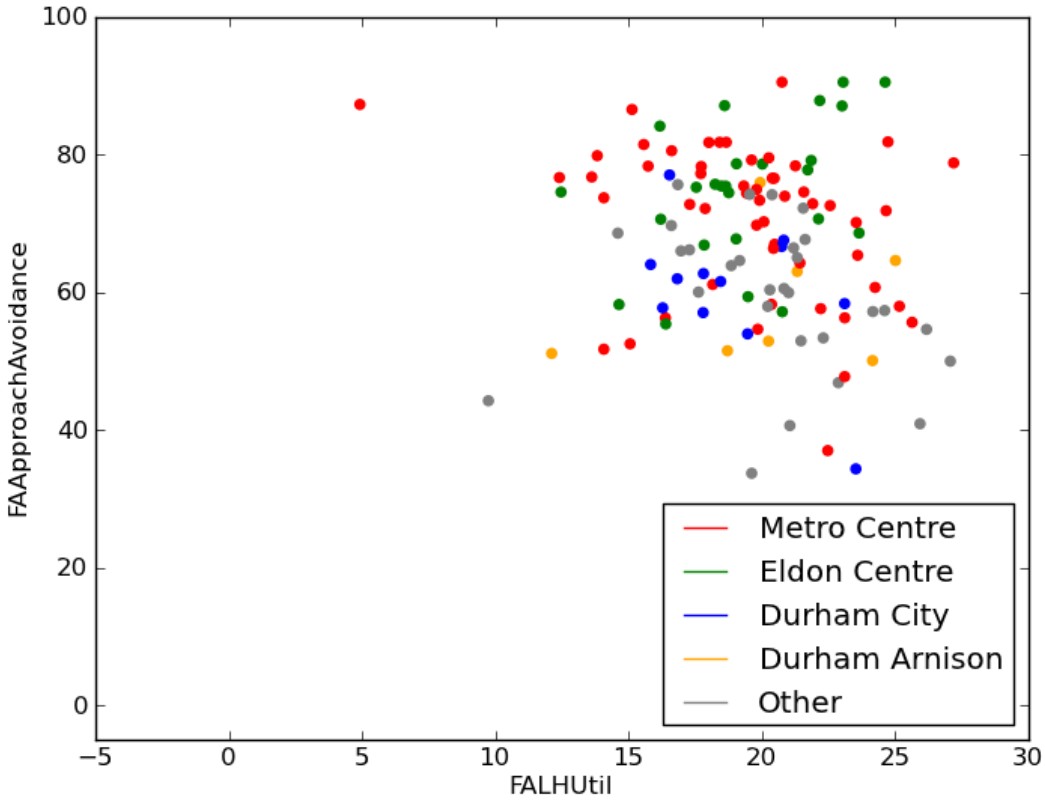
A central part of the BPM is that it considers that consumer behaviour is determined by some combination of the behaviour setting and "the consumer's learning history of reinforcement and punishment in a given situation" (Foxall, Oliveira-Castro et al. 2006, p105), the interaction of

which drive the likelihood of the behaviour in a given time, and will shape future behaviour also. In this study, learning history was examined in terms of relative importance of types of reinforcement to consumers, based on previous experience. Though three dimensions were originally envisaged, relating to the types of reinforcement suggested by Foxall, only two dimensions emerged from PCA, utilitarian learning history (the importance of functionality, efficiency, economy and enjoyment) while minimising associated costs like access and access costs. informational learning history related to the general importance consumers placed on getting positive feedback from others through the shopping centre visited, the importance of being seen in the right shopping centre, of keeping up with trends.

Utilitarian learning history has a small association with approach

Though the correlation between utilitarian learning history and approach-avoidance is significant, it is very small. The scatterplot below does not make this association clear, and emphasises how weak the association is. It is difficult to compare this finding directly with previous studies, due to a lack of published empirical findings on the impact of learning history on response.

Figure 5.7: Scatter for Utilitarian Learning History by Approach



Informational learning history significantly effects approach

By contrast, informational learning history does appear to show a large significant correlation with approach-avoidance. People who score higher on the informational learning history component value acquisition of positive feedback, keeping up with current fashions and believe it is important to be seen in the right sort of places. People who score highly on this dimension also tend to score highly on approach-avoidance scores also, so consumers may be more likely to approach shopping centres they believe will yield high levels of informational reinforcement. It is incredibly difficult to draw direct comparisons between this analysis and that of previous studies, as few studies have found direct measures of learning history, as previous theorists have suggested that learning history cannot easily be measured, even through questioning the individual (Foxall 1990, ch4), though it is acknowledged that verbal behaviour may offer some opportunity for measure.

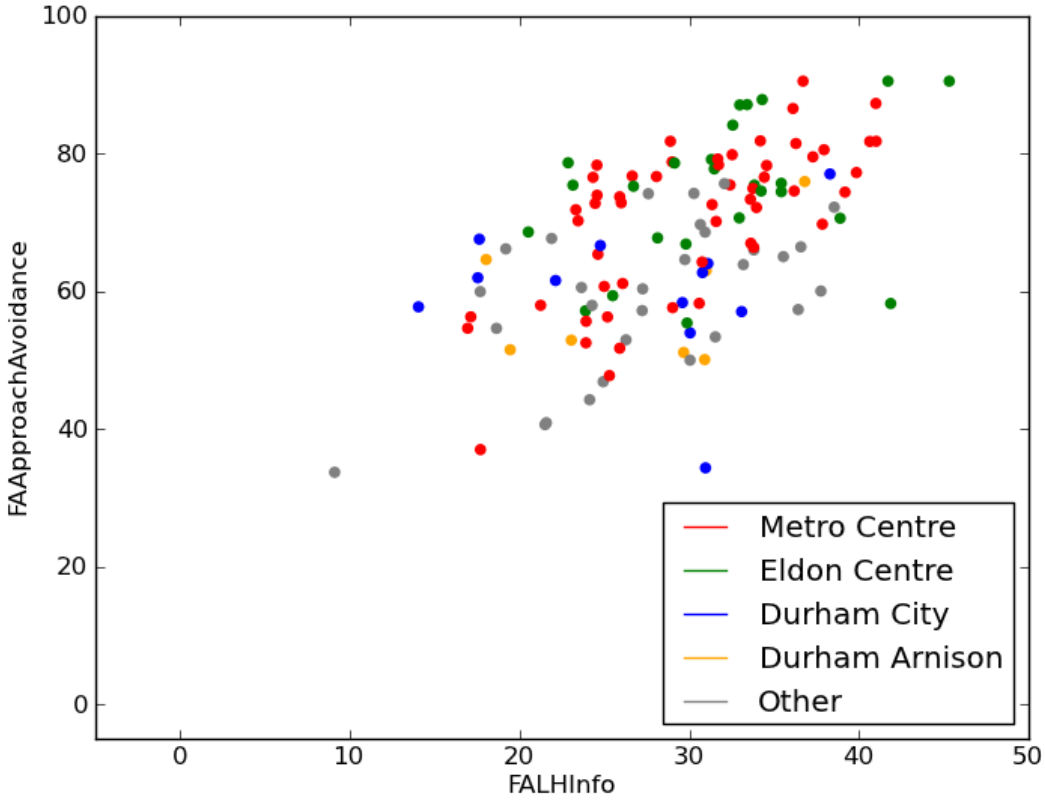
Somewhat unconventionally, it is a description of learning history that offers some indication of how we might expect the measure to inform behaviour. If learning history is to be considered as the "encouraging/ inhibiting propensities to respond based on utilitarian, informational and aversive consequences of prior responding" (Leek, Maddock et al 2000 p23), then it is expected that higher scores on the measures of utilitarian and informational learning history should correspond to increases in likelihood of responding.

It is somewhat surprising, therefore, if we are to reflect on the findings regarding the small association between utilitarian learning history and approach-avoidance with respect to theory relating to importance of types of reinforcement, to see that informational learning history is associated more with approach-avoidance than utilitarian learning history is. From discussion mentioned earlier, utilitarian reinforcement, which is typically immediate, should be expected to have a greater impact than informational reinforcement, which is typically delayed (Foxall 1995). One might expect the importance that consumers place on types of reinforcement to be similar. It is possible that it is the sample that yields the stronger link between informational learning history and approach. Earlier studies have determined that there are gender differences in shopping motivations and beliefs, with females significantly favouring hedonic motivation (of which social shopping is a dimension) when shopping than males (Reynolds and Beatty 1999; Arnold and Reynolds 2003). Past research suggests that men tend to be more needs-driven and motivated by purchase than females, who find satisfaction in the enjoyment of shopping as well

as the purchase (Campbell 1997). It is possible that the greater association between informational learning history (importance of informational reinforcement) and approach than utilitarian learning history comes because females, for the sort of shopping that is done on trips to shopping centres, tend to value the importance of the social and enjoyable aspects of shopping more than the utilitarian aspects. A level of self-selection bias is anticipated from online surveys (Wright 2006; Baltar and Brunet 2012), which may have lead to results better reflecting the views of females, who comprised 85.1% of the sample for study 2.

Shopping centres which are best able to satisfy informational reinforcement requirements are likely to appeal more to consumers scoring highly on informational learning history. Over time consumers who value informational reinforcement as important to the (informational learning history) will come to know which centres deliver the highest levels of the informational reinforcement.

Figure 5.8: Scatter for Informational Learning History by Approach



Implication: Retailers should communicate more on their social facilitating abilities than utilitarian functionality

This hypothesis focussed on the impact of learning history, and showed that approach is affected more by the importance consumers place on informational reinforcement than the importance of utilitarian reinforcement. Informational reinforcement is also the main component to come out of PCA, explaining 31.2% of variance. This suggests that communication activity, and anything aimed at projecting the image of the shopping centre should focus not on the functional benefits it facilitates, but the social ones- shopping centres that provide opportunities to acquire positive social feedback from one's peers are more likely to be visited.

Theoretical Implication: A way to consider and measure learning history

It is only very recently that suggestions on considering the learning history have been presented. "Until now, specific factors that shape a learning history, the record of previous behaviour, and its reinforcing and punishing consequences have not been specified, but it is now possible to locate them, at least in part in the emotional responses elicited in the process of reward generation" (Foxall and Yani-de-Soriano 2011, p2531).

The present study took a different approach to considering learning history, in terms of the culmination of previous experience of reinforcement of behaviour, and the subsequent effect of this on the importance of reinforcement to the consumer. The measures developed in this study are intended to measure the "learning history of reinforcement and punishment" (Foxall, Oliveira-Castro et al 2006, p105). As learning history is "the sum of the reinforcing and punishing outcomes of prior consumer behaviour" (Foxall 1994, p29), it is part of the personal element of purchase and consumption. The measures were therefore worded in a general way to be about the importance of gaining these types of reinforcement on a shopping trip, rather than be specifically about the shopping centres being visited. The measures themselves were developed from scratch, using this description as guidance, as there seems to be a lack of published information about how to measure learning history. This is understandable, as it is a construct not measureable through direct observation (Foxall 1990, ch4). Learning history has previously been compared with attitude, in the sense that "attitude towards the act captures the respondents evaluation of the consequences that behaving in the specified manner has produced

in the past" (Foxall and Yani-de-Soriano 2005) p519. Under certain circumstances, statements of belief and attitude may give insight into learning histories (Foxall and Greenley 1997; Foxall 1998).

The measures themselves seem to be a fair indication of the importance consumers place on attaining utilitarian and informational reinforcement on a visit to a shopping centre, and this in some ways could be seen as a general attitude towards reinforcement, which is comparable with concepts of learning history as "individual consumer's predisposition to engage in currently available consumer behaviours" (Foxall 1994, p20). It appears that the current measures of utilitarian and informational learning histories are perhaps suitable to take forward for future research in this area, and to further examine the potential of adapting questions to other consumption behaviours. It seems to work reasonably well for learning history for shopping centre visits, predicting consumer response to shopping centre. It is only recently that attempts have been made to measure learning history in terms of perceptions of the (utilitarian and informational) benefits of brands, based on previous experience (Porto, Oliveira-Castro et al. 2011). They acknowledge that no research has preceded, and that capturing this with verbal behaviour is acceptable. One of the theoretical contributions of this thesis is therefore the measures developed for learning history for shopping centre visits.

5.2.6 Hypothesis H9 Emotional Responses relate to Situational affects

Hypothesis	Outcome
H9: Emotional Responses relate to Situational affects	Partially Supported
H9a: Pleasure is positively affected by surroundings.	Supported
H9b: Pleasure is negatively affected by temporal perspective.	Reject
H9c: Pleasure is affected by regulatory forces.	Reject
H9d: Arousal is positively affected by surroundings.	Supported
H9e: Arousal is positively affected by temporal perspective.	Supported
H9f: Arousal is positively affected by regulatory forces.	Reject

The extent to which consumers feel exposed to such forces can be most appropriately seen in terms of 'load'. Higher 'surroundings' scores suggests higher levels of load. In terms of earlier research by notable researchers like Mehrabian and Russell (1974) and Donovan & Rossiter (1982), who suggested that load significantly impacts approach, albeit indirectly through impacting emotional response. To a limited extent, the amount of situational stimulus, i.e. the

quantity of Surroundings, Temporal Perspective and Regulatory Forces a respondent reports can perhaps be thought of in terms of load, which is the degree of complexity and novelty of an environment.

Surroundings significantly affect pleasure

Examination of the correlation and regression of behaviour setting variables and pleasure showed that only surroundings have a significant impact on pleasure, predicting a significant amount of its variance. The way in which surroundings were measured, considered how attractive consumers found them in terms of physical and social aspects. Looking at previous studies which have examined specific physical stimuli for their impact on consumer emotions, the present study is in line with findings from some studies, but not others. Yalch & Spangenberg (1990), when looking specifically at the effect of music on emotional response found that music had no affect on pleasure. For the most part, research that has looked at various environmental stimuli have used the stimuli-emotional response association to identify what makes the environment so pleasing, suggesting use of unfamiliar music (Yalch and Spangenberg 2000), blues and greens (Bellizzi, Crowlet et al 1983; Bellizzi & Hite 1992), etc. It is therefore of little surprise that this study finds that pleasing environments strongly predict pleasure responses.

Temporal constraints do not negatively impact pleasure

Findings suggest that temporal constraints do not significantly impact pleasure. This suggests that consumers who are short on time are as likely to have a pleasure response as those who have lots of time, even though this intuitively seems quite strange. Research has not previously looked at the impact of time constraints on emotional response, and this finding suggests that, for pleasure at least, it is not necessarily something worth pursuing in future research.

Regulatory forces have no effect on pleasure

Regulatory forces, which have not received a great deal of attention in previous studies, appear not to impact on pleasure responses. People who visit shopping centres with costly or restricted parking, rigid controls such as queuing and time limited offers do not appear any less likely to find the shopping centre enjoyable.

Surroundings have a small effect on arousal

The present study showed that the composite affect of surroundings has an effect on arousal levels, though this effect is small in terms of correlation strength. In terms of regression the amount of arousal predicted by surroundings is also small, but significant. Previous studies have examined the impact of load (novelty and complexity) on emotional response, in particular on arousal (Ng 2003; Donovan and Rossiter 1982). The more that is going on in the surroundings, and the less experience consumers have of these cues, the greater their level of arousal. It is therefore quite surprising that surroundings have so little impact on arousal in the present study, in light of Mehrabian & Russell's assertions (1976) and Dahl Manchanda et al (2001) who suggest that social presence may affect emotional response, with the largest groups having a significant effect on arousal. However, the findings are comparable with those of Donovan and Rossiter's (1982), that did not find stimuli in the environment to impact arousal.

Temporal constraints have a medium effect on arousal

Temporal constraints do appear to affect arousal more than any other behaviour setting variable, though this is a medium size association. This seems reasonable, as environments that rush customers through are more 'frenzied' than slower paced centres. It is probably only worth worrying about making the centre seem less rushed, and facilitating those customers who are time deficient if arousal has a significant impact on approach-avoidance. Otherwise this will be an interesting, but not necessarily meaningful finding for patronage levels.

Implications: Manipulate surroundings for optimal pleasure response

However, it is important to recognise based on findings here that manipulating surroundings to elicit optimal pleasure response is also likely to have a small effect on arousal at the same time. Though previous studies (Donovan and Rossiter 1982) have suggested that environments that elicit high pleasure, high arousal responses elicit the strongest approach behaviours, this was not confirmed in the present study. In improving surroundings it is likely that arousal will increase a small amount, and that this is likely to have either a negligible (according to previous studies) or no impact on consumers.

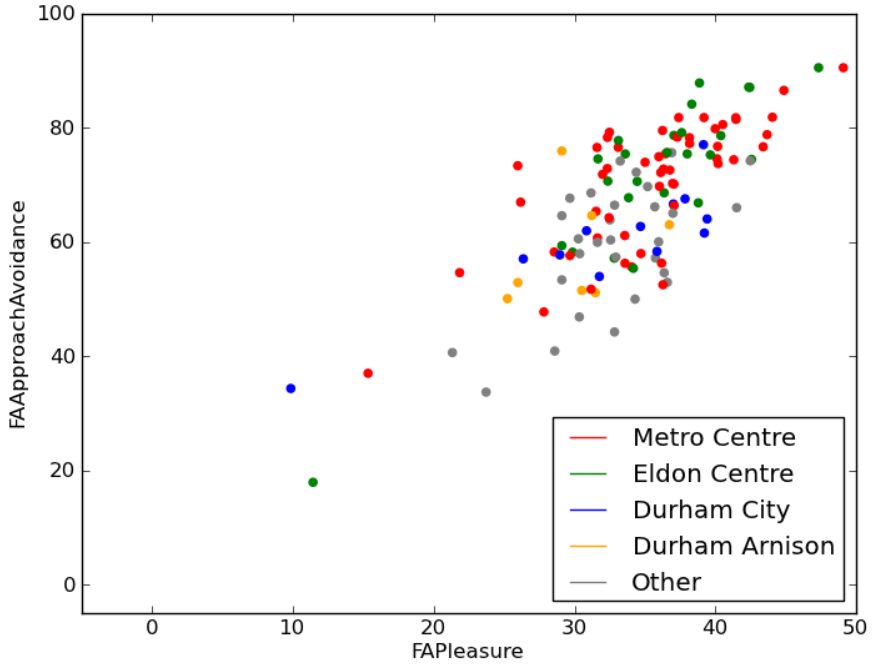
Though the next section will discuss the impact of emotional responses on approach-avoidance and choice, it is worthy of note there that, if previous theory holds, then it is the combination of pleasure and arousal that greatly impact approach-avoidance. If this is confirmed in the present study, then it seems surroundings are an essential area to get right for shopping centres, as it has a medium association with pleasure, and a small association with arousal. It helps to ensure suitable emotional response levels to ensure approach, so would seem to be the most important area to focus upon. As surroundings have already been established to have a substantial direct impact on approach-avoidance, it seems doubly important.

5.2.7 Hypothesis H10 Shopping centre response is affected by emotional response

Hypothesis	Outcome
H10 Shopping centre response is affected by emotional responses.	Partially Supported
H10a: Shopping centre approach relates positively to pleasure.	Supported
H10b: Approach behaviours is highest for 'exciting' situations, followed by 'relaxing' situations, with the lowest approach behaviours for 'distressing' situations.	Supported

Pleasure has greatest effect on approach

Figure 5.9: Scatter for Pleasure by Approach



Pleasure was found to have the greatest relationship with approach, with regression analysis suggesting that pleasure is the strongest influencer of approach.

The findings in this study largely confirm those of studies that proceeded. Donovan & Rossiter (1982) established with their research, that when considering approach-avoidance in the context of consumer in-store and patronage behaviour, pleasure is a large predictor of approach-avoidance, with their research returning a beta coefficient of .67 in a model examining how emotional responses predict approach-avoidance. Though the present study returns a slightly smaller beta value for pleasure, it is still the strongest predictor in the model, and definitely comparable with Donovan & Rossiter's (1982) findings.

Kotler's (1973) seminal introduction of 'atmospherics' provided a suggested 'causal chain' which links the aspects of the atmosphere (behaviour setting) with probability of purchase.

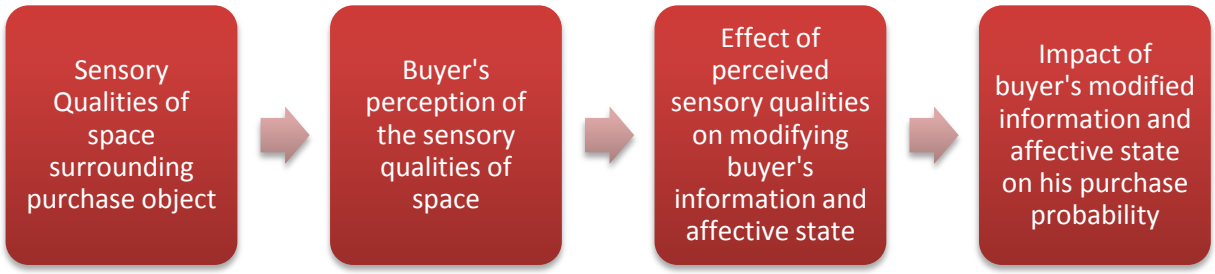


Figure 5.10: Causal Chain Connecting Atmosphere and Purchase Probability
Source: Kotler (1973) Atmospherics as a Marketing Tool

This model takes a significantly cognitive perspective in considering the perception of sensory elements, and impact on information and affective state, but otherwise bears resemblance with the SOR model underpinning part of the study 2 model, with steps 2 and 3 presenting an alternative view of the organism, and step 4 considering purchase rather than patronage.

Rather interestingly, analyses showed that while the 'surroundings' component is related to approach, it is also related to pleasure, and pleasure to approach. This suggests the potential presence of pleasure a mediator on the relationship between surroundings and approach-avoidance.

Findings showed that as expected, arousal has no direct impact on approach-avoidance behaviour on its own, so the combined effect of pleasure and arousal were examined. When the shopping centres respondents were visiting were classified depending on their pleasure and arousal scores, it was found that only pleasant environments significantly differed from unpleasant environments, and arousal did not come into play. This is quite different from findings of Donovan and Rossiter (1982), who determined that arousal increases approach-avoidance in pleasant environments. If this were the case, then the present study should have found a significant difference in approach-avoidance between 'relaxing' (low arousal) and 'exciting' (high arousal) environments. It seems that, for shopping centres at least, the impact of arousal on approach-avoidance in pleasant environments is not apparent.

Implication: Ensuring pleasure response is vital

Pleasure has a significant and large effect on approach-avoidance. Ensuring the most pleasurable responses from consumers is therefore an imperative for shopping centre managers seeking to maintain or improve their patronage levels. There is no way for retailers to directly manipulate pleasure, an internal force, so they must seek to influence it through variables within their domain. Based on findings from H9, it seems that the best way to ensure the highest pleasure response is to focus on (physical and social) surroundings. Discussion earlier focussed on the importance of manipulating surroundings for their direct impact on approach-avoidance, so will not be repeated here.

Implications: Arousal is not essential

Achieving a pleasant environment that is at the same time highly arousing does not appear to be important, given the findings of this study. An earlier section discussed the particular importance of surroundings, which have an impact on both pleasure (medium) and arousal (small). While it is still important to nurture surroundings to elicit pleasure responses in consumers to ensure approach behaviours, it is not so important to engineer them to be arousing at the same time.

5.2.8 Hypothesis H11: Different shopping centres will yield different levels of emotional response

Hypothesis	Outcome
H11a: Different shopping centres will yield different levels of emotional response	Reject
H11a: Different shopping centres will yield different levels of pleasure	Reject
H11a: Different shopping centres will yield different levels of arousal	Reject

A rather interesting outcome of this study is that shopping centres in the area do not appear to vary in terms of the levels of pleasure and arousal they elicit in their customers. This is surprising, in particular considering pleasure and the variability in the shopping centres represented in this study. For example, it is hard to reconcile that shopping centres like Eldon Square and the Metro Centre are comparable in terms of pleasure with shopping centres like Teeside Park and Durham The Gates, especially considering that consumers did report different scores on surroundings between shopping centres.

It is entirely possible that consumers are basing their choice of shopping centre partly in terms of knowledge of which shopping centres they find most pleasurable. Customers are more likely to patronise shopping centres that elicit pleasure responses in them. While ANOVA indicates that there is no significant variance between shopping centres on these dimensions, it is important to remember that it is also suggesting that there is a level of variance within each shopping centre. Earlier discussion suggested that pleasure is an important driver of approach-avoidance, and it seems doubly important for retailers to do what they can to ensure the highest levels of pleasure response, so as to persuade shoppers towards them.

Implications: Cannot differentiate on pleasure response

From earlier discussion it is clearly important to ensure the shopping centre and stores within should be engineered to elicit the more pleasurable results, shopping centres must realise that, at present, they are not differentiating themselves on this basis. There is sufficient variability in emotional response from customers within shopping centres that they do not vary considerably from others. If retailers are to concentrate on improving the emotional response of consumers, they must also concentrate on doing what they can to make this shift a universal one. As pleasure is a subjective emotional response, there is a danger that changing aspects of the

behaviour setting to yield a more pleasurable response may indeed do so for some consumers, but at the expense of others.

5.2.9 Regression Model Discussion

Looking specifically as situation and person, Bowers (1973) reported on several studies that had gone before, which predicted different amount of variance of behaviour across many different types of behaviour, none of which predicted more than 43.6% of behaviour. Studies that have looked specifically at patronage behaviour also, have not typically reported models that predict such a degree of the behaviour. In a study in the US, for example, Ogle, Hylleggard et al (2004) used the theory of reasoned action to examine the effects of attitude and subjective norm on different patronage intentions towards a particular recreational equipment store in Denver, Colorado, looking at intention to shop, intention to make a purchase, intention to shop at flagship store, intention to purchase at flagship store and intention to tell friends about flagship store (Ogle, Hyllegard et al. 2004). All five regressions from this study produced adjusted R-square scores of between .05 and 0.12. In a study again predicting the effects of attitude and subjective norm on consumer behaviour, but this time on fast food chain patronage in Cairo, Egypt, Ibrahim and Vignali (2005) reported a healthier R-square value of .58 (Ibrahim and Vignali 2005), and reported improving prediction of patronage when further dimensions are included, including atmosphere, which returned the largest beta value. Other studies have found theory of reasoned action on its own to predict around 28% of patronage intention, with this improved to 38% by inclusions of further variables (Yan, Hyllegard et al. 2010). Others have attempted to examine the influence of demographic, store brand patronage, shopping frequency and use of coupons on patronage behaviour, with models explaining around 21% of variance in patronage behaviour (Sudhir and Talukdar 2004).

In a recent study (Foxall and Yani-De-Soriano 2011), the influence of emotional response on approach, avoidance and aminusa (the difference between approach and avoidance) showed that on their own pleasure, arousal and dominance are significant predictors of these dimensions, though dominance has a very small effect. The three emotional responses were found to predict 38% of aminusa, the closest measure to the approach-avoidance dimension measured in the present study. In the regression analysis in the present study, only pleasure was found to significantly predict approach, and it had a much larger beta value than that presented by Foxall and Yani-de-Soriano 2011. This may be due to several factors- one, that only part of the

regression in this study is compared with that of Foxall and Yani-de-Soriano (2011). If that regression had include further variables the relative contribution of the emotional response dimensions may have changed. The measure of approach-avoidance is different between the two studies, with Foxall and Yani-de-Soriano favouring the method of measuring approach and avoidance separately, rather than as one continuous measure. Also, the focus of the 'approach' behaviour is different between the two studies, and the way in which the data was collected is very different, and because of this, it is unlikely that significant comparisons would be credible. While this study looked at approach-avoidance with respect to a recently visited shopping centre, Foxall and Yani-de-Soriano looked instead at approach and avoidance (and independent measures) towards eight different types of consumer situation, only some of which relate to patronage.

Findings from the present study are somewhat different from those of previous studies examining effect of psychological, situational and promotional variables on patronage behaviour, in that it suggests it has a much higher predictive capability than applications of and extensions of the theory of reasoned action. The most likely cause of this difference lays in the strength of the BPM, which seems to have a greater capability in explaining behaviour, and as a result of this study, a broader capacity for application. There is also a chance that the difference in findings reflects the difference in subject of interest. These studies typically looked at patronage at the store level, which is different from the focus of this thesis. There may be something inherently different in the application that reflects in the findings.

The regression model in this study had only two main contributors, pleasure and surroundings. Though aversive consequences and informational learning history were also significant they were quite small. Each construct is however represented in some way, behaviour setting by surroundings, emotional response by pleasure, consequences by aversive consequences and learning history by informational learning history. This hints at why only some of the dimensions came back as significant within this model. Each construct was analysed using PCA to identify orthogonal variables, and variables were generated on the basis of their loadings from the PCA. Within each construct then, variables created are as different from each other as they could possibly be. It would be more surprising to find multiple dimensions within a construct as significant within the regression model. The PCA and regression together have yielded a model that clearly shows distinct variables that have a significant impact on approach.

5.2.10 Other Study 2 Discussion

Priming effects of Learning History of Situational Stimuli

If the consumer's learning history also primes stimuli in the behaviour setting, making it discriminative stimuli, then associations between learning history and behaviour setting variables may indicate the extent to which this is true. Learning history transforms stimuli in the behaviour setting into discriminative stimuli which signal the anticipated utilitarian and informational reinforcement consequences of behaving in a particular way (Foxall 1998 p574). Only one correlation was apparent- informational learning history with surroundings (.340**) a medium correlation that is not surprising, given that surroundings encompasses social forces. As expected, consumers who rate importance of feedback from others as important are likely to be more attentive to social aspects of the shopping centre.

Approach-Avoidance variation between Shopping Centres

A final point of interest is that approach-avoidance was found to vary significantly between shopping centres, suggesting that some shopping centres are indeed more attractive to consumers than others. The main differences identified were between The Gates (Millburngate), which gains a significantly lower approach score than the Metro Centre and Eldon Square. Though The Gates typically reflects lower scores across many variables, this variation may just be down to the respondents visiting The Gates, as there were only three respondents who answered regarding this shopping centre.

The BPM applies to patronage studies

The findings of study 2 are more meaningful and decisive than those from study 1. The adopted model (BPM) appears to work as well for studies of patronage as it does for studies of product choice. However, given that the main predictors of approach behaviour are surroundings and pleasure, and that pleasure strongly mediates the influence of surroundings on approach (around 70.6% of the effect), the inclusion of emotional responses in a revised version of the BPM seems to have been appropriate to this application. Without considering pleasure, the influence of surroundings on approach-avoidance may have been much smaller.

5.2.12: Study 2 Limitations

Sampling Limitations

Study 2 suffered somewhat from a somewhat small and potentially spurious sample, with 152 completed returns, but 177 returns partially completed and included for other analyses. To address the issue of size, the main requirements for sample size for the study were to be able to run the constructs through PCA, and to be able to run multiple linear regression on the data collected. For PCA, several guidelines exist for ensuring an adequate sample size. While Tabachnick and Fidell (2007) suggest that it is most comforting to have 300 responses for factor analysis, more recent research has focussed less on an arbitrary total sample size, and more on how many responses are needed per item to include in analysis. Authors like Nunnally have suggested a ratio of 10 responses for each item to include in the factor analysis (Nunnally 1978) while newer discussion suggests a ratio of 5 responses for each item (Tabachnick and Fidell 2007) is sufficient in most cases. Given that the largest construct to be go through PCA in this study was a total of 20 items in length, it appears that the sample size requirements presented by more recent authors on the study have been adhered to.

For regression there are several alternative guidelines on what constitutes and adequate sample size. The main focus here is on generalisability. As an inferential statistic it is important that findings can be generalised beyond the sample (Pallant 2010). Many authors suggest going with a minimum sample size based on the number of predictor variables. Stevens, for example, suggests at least 15 participants for each independent variable in the regression model (Stevens 1996), which in this study with 10 independent variables would need a sample of 150. Tabachnick and Fidell (2007, p123) suggest going with a minimum sample size of 50 plus 8 responses for each independent variable, which would for this study would require a minimum sample of 130 (Tabachnick and Fidell 2007). Both of these guidelines are adhered to, so while the sample size would preferably have been larger, it is adequate for data analysis.

The sampling approach adopted for study 2 was intended to open out the number of shopping centres for examination, in the hopes that a more diverse set of shopping centre formats would be presented. Indeed, this approach was very successful, with 16 shopping centres represented by respondents more than once, and further shopping centres represented by single respondents. However, the decision to go online meant that there were potentially issues of

sampling bias, as only individuals with access online and basic technological skills were captured. The snowball sampling approach made use of the Internet, which has become an efficient tool (Baltar and Brunet 2012), but is not without limitations, the main ones being the limited external validity of the sample (Baltar and Brunet 2012). The snowball sampling approach also meant that while respondents were captured from across the North East, there were noticeable clusters as neighbours referred neighbours to the questionnaire. The use of online survey also has its limitations, with low response rate attributed to perceptions of response requests as spam, selection bias towards internet savvy individual, attraction of proactive participants, and so on (Evans and Mathur 2005). It did appear that the online approach attracted a particularly high proportion of female respondents, though this potentially reflects that females tend to view visiting shopping centres in a more positive light, which is a further limitation. Instructions and questions were checked in advance (as discussed in the methodology) to ensure there were no problems in understanding the requirements of the survey.

Problems with existing scales- Dominance

Study 2 was potentially limited from the decision to discount the dominance dimension after the pilot stage, based on spurious results from reliability results, and in line with dissatisfaction with the scale communicated in previous studies. Though important for keeping down the length of the questionnaire and increasing response rate, it may be that dominance would have successfully passed reliability and PCA checks had data been collected.

Model Limitations

The BPM was conceived as an appropriate model to apply to examine patronage behaviour, but its use in this thesis may be construed as somewhat limited, in that, when the research was originally conceived, it was in light of the more traditional version of the BPM, which has prevailed within consumer research for just over twenty years (Foxall 1990). More recently however, researchers have suggested a newer version of the BPM as appropriate (Foxall, Oliveira-Castro et al 2006), one in which 'aversive consequences' are further refined on the basis of whether they are utilitarian or informational. Rather than look at utilitarian and informational punishment as well as utilitarian and informational reinforcement, instead the punishing consequences were considered in the more traditional way as aversive consequences, so the research in study 2 is somewhat limited in that it does not use the most recent iteration of the

model. The traditional view of three types of consequences have still been discussed in recent studies however (Oliveira-Castro, Foxall et al. 2010), so the current study is still reasonably up to date with recent discussion on the subject.

5.3 Chapter Summary

This chapter picked up on the analyses of results gained through empirical investigation, focusing on how the findings compare with those of previous studies, and what the findings mean for both practitioners, and for scholarly research. The final chapter shall pick up on key implications mentioned above, and suggest recommendations for practitioners seeking to improve or better understand patronage levels, and recommendations for further research to further expand theoretical knowledge.

6. Conclusions

In the final chapter, the main findings of the two studies shall be summarised. Discussion in this chapter builds upon the findings and discussion presented in the preceding chapters. Contributions to knowledge made by this thesis are then presented, to indicate the ways in which this thesis adds to the existing knowledge base. The chapter then presents recommendations for theoreticians, indicating directions for future research, making these recommendations partly out of the limitations presented in the preceding chapter. Recommendations for practitioners will also be presented, to enable them to operate more competitively against each other, and non-store formats too.

The investigation was originally conceived of as a result of an apparent limitation of traditional gravitational models of retail choice that they do not take the individual or their shopping trip requirements into consideration. Consumers visit multiple shopping centres, rather than just one. This can be accounted for partly by the nature of the consumer's requirements for a shopping trip- what they want to buy and want to do, yet spatial interaction models don't tend to attempt to consider trip specific motives. Other psychological and sociological theories of patronage behaviour have looked at patronage from an individual level, and started to address this, but strength of findings have been mixed, and so far, only a small number have come from the behavioural domain, and rarely take a holistic perspective.

6.1 Summary

Chapter 1 presented the background context to the thesis, and indicated why it is of relevance, mainly from a practitioner's perspective, culminating in the presentation of four research objectives.

The first research objective: 'to review the extant literature to determine a suitable approach to examine shopping centre choice' was satisfied through the review of literature presented in chapter 2. The literature review started with discussion of existing patronage models mainly from the retail geographical and psychological domains looking at patronage, and in considering what they explain, and what they do not, presents a gap in existing knowledge. Review of the literature suggested that while a behavioural approach had not been used to explore shopping

centre choice before, its use in explaining consumer choice in the broader context suggested it would have potential to be a suitable stance to consider and enhance current understanding of patronage behaviour. Once a suitable model is discussed, theoretically robust hypotheses are presented throughout the chapter based on previous research, and conceptual model based on these presented at the end of the chapter, to ensure the empirical work would go on to satisfy the remaining research objectives highlighted in chapter 1.

The methodology chapter discussed and justified the methodological perspective taken, before going on to discuss the process through which robust data metrics were designed, data collected, then metrics revised for robust measures of variables necessary to test the proposed conceptual models outlined in the literature review chapter.

The remainder of this chapter will summarise the main findings and outcomes of this thesis, and indicate how the remaining research objectives were satisfied.

This thesis involved research to determine whether existing models of consumer behaviour, usually applied to consider purchase behaviour can also be applied and revised to explain patronage behaviour with respect to shopping centres, to identify the most salient forces within the models to explain patronage and make recommendations on this basis. While study 1 provided important direction for research, study 2 identified a more suitable model to consumer shopping centre patronage, and more insight into the factors affecting patronage behaviour at this level, though both studies identified social factors as important drivers of choice, and areas in which shopping centres could potentially differentiate themselves. Study 2 showed the BPM to be a suitable model for explaining patronage behaviour, especially when revised to consider emotional responses also.

6.1.1 Study 1 Summary of Main Findings

Though the main findings from the thesis come from study 2, study 1 was still useful in determining that models frequently applied to examine purchase and brand choice can also be utilised to examine shopping centre choice. The model used was based on the stimulus-organism-response paradigm which was conceived by Woodworth (Woodworth and Sciilosberg 1954), originally put forward by Belk as a way of examining the interaction between stimulus and organism on consumer behaviour, and still in use in consumer research today (Chang,

Eckman et al. 2011). Study 1 took mainly a trait perspective, seeking to understand how personality traits affect response directly and indirectly through impacting importance of situational cues. Study 1 showed that such an approach offers some insights, but is quite limited. Its main contribution was to determine that a behavioural perspective is appropriate to examine shopping centre patronage behaviour, but that the 'organism' focus should perhaps look instead at the transitory emotional response (state) of consumers, rather than enduring traits. This makes further sense, in light of the fact that recommendations to retailers must be actionable, and there is little retailers can do about personality traits, other than being aware of the types of customers they service. Study 1 did not fully satisfy research objectives 2 and 3 on its own, beyond suggesting the simple trait based SOR approach was inadequate, but did indicate useful direction for further research that would satisfy the research objectives.

Though extraversion was not found to directly predict shopping centre choice, it did seem to have a small effect on social surroundings, suggesting a small, potentially negligible indirect impact on shopping centre choice.

Study 1 suggested that together, the situational variable social surroundings and personality variables neuroticism and psychoticism predict around 24% of variance in choice of shopping centre, which is really quite a small amount. Other situational variables measured in study 1 and extraversion had no impact on choice of shopping centre. Even these findings, however, indicated that social aspects of the retail space and emotion are two of the most salient forces affecting behaviour. Rather than draw any specific conclusions from this older study, and make recommendations, these findings highlighted important factors to concentrate on moving forward into the second study. The identification of emotional impact in study 1 corresponded well with previous environmental psychology research which suggested emotional response is an important mediator of the influence of situational cues on behaviour. It is fair to say that the principal outcome from study 1 was identification of areas suitable for further research, and out of the limitations and reflection study 1 facilitated, study 2 was conceived and carried out.

6.1.2 Study 2 Summary of Main Findings

Findings from study 2 suggest that the behavioural perspective model (BPM) is a strong model for explaining consumer shopping centre patronage behaviour. Overall, applying an extended version of the BPM model, which also encompassed emotional responses predicted 79.1% of

the variance in approach intention. Compared to other studies on patronage behaviour taking a psychological perspective, this explanatory power is much greater than for studies which have applied models like the theory of reasoned action or Mehrabin-Russell model, suggesting that there is significant potential for applications of the BPM to explain patronage behaviour, an area which has so far received only as small amount of attention. It seems to be the surroundings, whose effect is partially mediated by pleasure response, which predicts approach-avoidance response to such a great extent. Informational learning history, which is the importance consumers place on gaining informational reinforcement (based on previous experience) and aversive consequences seem to have a smaller but significant role in predicting approach behaviour. Between correlation and regression tests, it appears that all three variables within the consequences construct are associated in some way, either directly or indirectly with approach-avoidance, so retailers must focus on how they can reinforce the behaviour of consumers while minimising or mitigating the effects of aversive consequences to encourage the highest levels of approach behaviour. Utilitarian reinforcement, and informational reinforcement showed strong association with approach-avoidance, though this did not translate into significant predictive ability in the model.

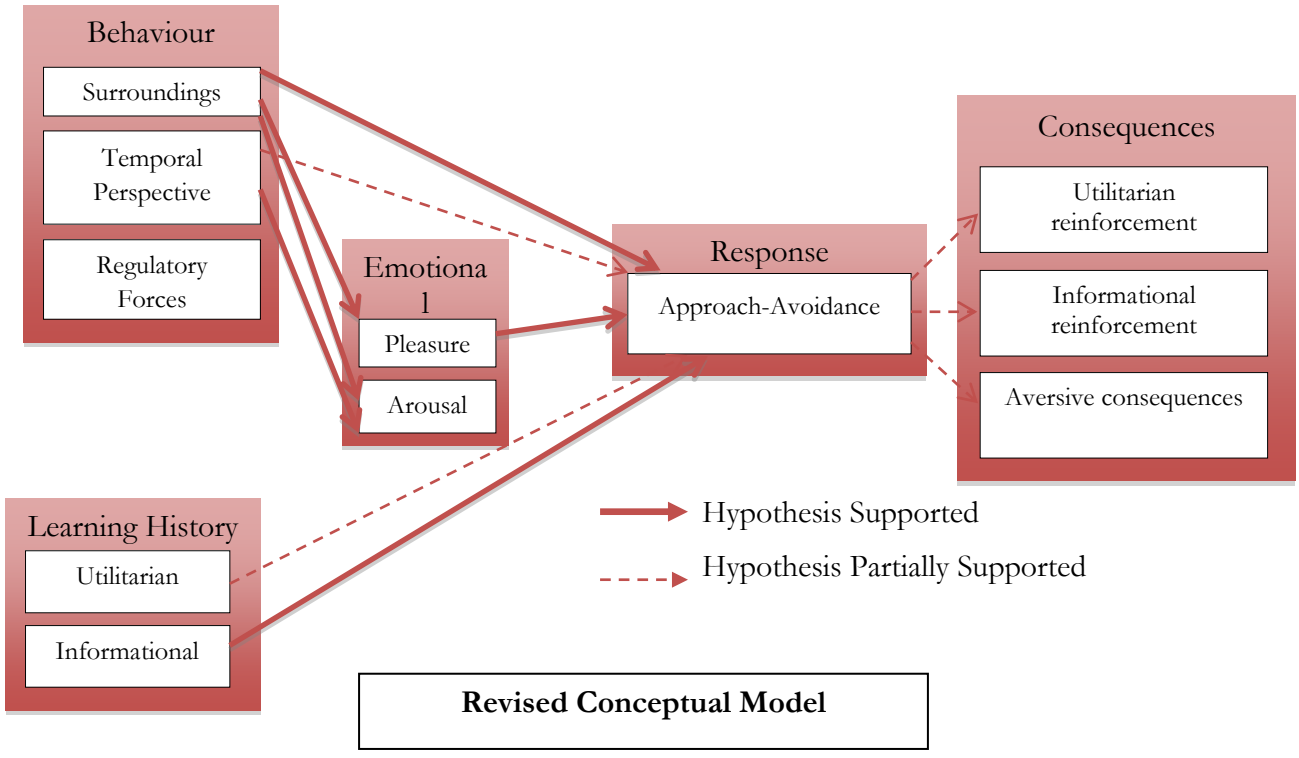
The findings would appear to have direct implications for retailers. Approach-avoidance is largely associated with utilitarian and informational reinforcement, displaying large correlations. Research objectives 2: "to explore whether an existing 'purchase' level theoretical model of consumer behaviour can be adapted to examine consumer behaviour at the level of shopping centre choice" and 3: "to identify the most salient forces affecting patronage behaviour at the shopping centre level" have therefore also been satisfied.

Many of the dimensions identified as significantly predicting approach response are comprised at least in part by some social aspect, with surroundings comprising social and physical surroundings, informational reinforcement relating to feedback from others, and informational learning history relating to the importance of informational reinforcement to the consumer.

Study 2 also examined whether different shopping centres facilitated different levels of the independent variables from the model, as an indication of whether consumers might favour a shopping centre on the basis of the level of independent variable it facilitates. Findings suggested that shopping centres in the study area varied on three dimensions- surroundings (with shopping centre accounting for 34.4% of variance in surroundings), regulatory forces

(with shopping centre accounting for 45.4% of variance) and informational reinforcement (with shopping centre accounting for 16% of variance), which suggested areas in which shopping centre managers are already managing to differentiate their offering, and areas to potentially focus on moving forward. Alternatively shopping centre managers may wish to look at areas presently untapped as ways to differentiate. Study 2 also showed that respondents feel a different level of approach-avoidance to the shopping centre, depending on the shopping centre they are visiting. The shopping centre they are visiting accounts for around 24.5% of variance in approach-avoidance behaviour. This is probably partly because one of the main drivers of approach-avoidance is the surroundings variable, which also varies significantly depending on the shopping centre visited.

The conceptual model was revised on the basis of the findings from study 2, and presented below.



Revised Conceptual Model

6.2 Contribution to theory

Successfully proves applicability of BPM to explain patronage behaviour

A key contribution to theory is the examination of how well an existing, well-established model of consumer behaviour can be expanded to apply to other types of consumption behaviours,

beyond purchase behaviour. Though the BPM has previously been presented in studies that go on to examine patronage behaviour, they have not usually attempted to apply the model in its entirety, as this study has. This study shows its successful explanation to explaining retail patronage behaviour and suggests that the BPM should be considered for its applications to other types of consumption behaviours.

Furthers research into social dimension of shopping centres

This study has furthered research in the area of social impact on patronage behaviour, which had previously focussed on cognitive perspectives, namely Fishbein & Ajzen's theories of reasoned action (Fishbein 1979) and planned behaviour (Ajzen 1991) in examining the impact of subjective norm on patronage intention. Findings had previously been reasonably poor, with some exceptions (Evans, Christiansen et al. 1996). However, no previous studies are known to have examined social impacts from a behavioural perspective. Of interest, many of the direct impacts on approach-avoidance came from variables with social aspects- surroundings in this study encompassed social as well as physical surroundings), informational learning history encompasses the importance of informational reinforcement to consumers. Informational reinforcement which showed large association with approach but was not a significant predictor of variability relates largely to the feedback acquired from friends and family on their behavioural performance.

Identifies and establishes the importance of examining consequences at an individual level

This research creates new and meaningful ways of measuring dimensions across two BPM constructs- consequences and learning history.

The study suggests that dimensions within the BPM do not necessarily have to be considered as broadly as they have previously. Previous studies attempted to classify products on utilitarian and informational reinforcement using forced ranking. While this approach has previously worked well for examination of fast moving consumer goods, it works less well for other applications like shopping centre, as few shopping centres have such established branding practices (used for informational reinforcement ranking), or significantly different levels of utility (used for utilitarian reinforcement ranking). Arguably, the reinforcement gained from a

visit will in part come down to the expectations and requirements of the consumer on their visit. An overarching classification of utilitarian and informational reinforcement works less well, considering two people may visit the same shopping centre, but receive differential reinforcement depending on their motivations and requirements for the visit. Considering the individual measures of reinforcement came out as distinguishable components through PCA, and were found to impact approach-avoidance to shopping centres, it may be possible to apply a similar measurement strategy to other applications also. Consumers may be differentially reinforced when buying the same product or brand, in a similar vein to reinforcement of shopping centre choice.

Introduces a way to examine and individual's learning history

Learning history is also something that has been mentioned in many previous articles, but measurement of learning history has received considerably less attention. Porto, Oliveira-Castro et al (2011) set a notable precedent in suggesting that learning history can be captured in terms of verbal behaviour from individuals, largely in terms of perception (Porto, Oliveira-Castro et al. 2011). The application of cognitive functions and verbal behaviour considered in the present study therefore had a suitable basis, and confirmed that this approach works reasonably well, gives meaningful components in PCA, and impact approach-avoidance behaviour and choice. Though the present study attempted to create measures for three learning history dimensions- importance of utilitarian reinforcement, importance of informational reinforcement, and importance of minimising costs (aversive consequences), PCA identified two meaningful orthogonal variables, which match the utilitarian and informational reinforcement benefits domains suggested by Porto, Oliveira-Castro et al (2011).

6.4 Recommendations for Future Research

It seems from this study, that the social side of shopping is one of the key areas affecting patronage behaviour worthy of exploration in the future. Other studies have looked at the role of specific physical stimuli on approach-avoidance, and this study largely confirms the findings of those as important in driving consumer patronage response. However, the social side has been identified across several constructs, and while there is research in this area, it has previously not received as much attention as the physical stimuli. To the author's knowledge no previous study has attempted to look at the relative contributions of both physical and social

surroundings to approach-avoidance behaviour. Findings suggest social surroundings may be as important as physical surroundings, so it is recommended further research be conducted in this area to redress the imbalance. An important direction for future research is to further examine the specifics of the social surroundings to identify which are the most important drivers of patronage, and how they should best be manipulated.

Check the new measures

Further research is required to confirm whether the measures of learning history and consequences dimensions introduced in this study can be applied to future research, and whether they can be adapted for use in studies examining different types of behaviour.

Determine whether 'approach-avoidance' can be used in a typical gravity model as a measure of 'attraction'.

With further research there may be potential to determine whether any of the constructs identified as impacting approach and/or choice behaviour in the present study could be used to improve upon traditional gravity models. These models would replace square footage or store composition with individual level variables, such as approach or even one of the independent variables like reinforcement to measure 'attraction'.

Reconsider Consequences

While this research shows the potential of examining the effects of reinforcement at an individual level, it did so with a more traditional view of consequences from the BPM. Future studies should examine whether the approach which favours the dichotomy of punishing consequences, as part of the four types of consequences suggested by Foxall, Oliveira-Castro et al (2006) works better than the three types of consequences found in older applications of the BPM (Foxall 1990). Further development of metrics in this area and subsequent PCA may confirm whether it is possible to measure these four dimensions, or perhaps if the three dimension approach still fits well.

Further Analysis

Further analysis could be considered should a larger sample be extracted. It might be possible to consider shopping centre (or more reasonably) shopping centre type as a criterion variable, and carry out regression again, to determine whether the variables have a differential predictive capacity, depending on shopping centre in question. It may be, for example, that surroundings have a stronger coefficient in a model predicting approach-avoidance for the Metro Centre than it does for Durham City (based on the findings that surroundings were significantly greater at the Metro Centre than Durham City).

With further revisions to shorten the questionnaire, it may be possible to query respondents about their online patronage behaviour. Though not within the scope of the present study, the research was originally conceived as important, given the decline of high street retail, and online retail identified as a key driver of this. Though reinforcement of online shopping has been discussed in broad terms in the present study, further research is needed to identify the types of and contributions towards reinforcement online, how strong these are, and to determine categorically whether there is a difference between the levels of reinforcement determined by an online verses offline shopping 'trip'. It should certainly help physical retailers to identify areas in which they can differentiate from their online competitors.

An alternative strand of research could focus on examining patronage of less preferred shopping centres as well as preferred ones. The way the sample was extracted, with consumers answering on the basis of their most recently visited shopping centre, it is likely that preferred shopping centres are favoured in sampling than less preferred ones. Some of the more unusual findings (like the lack of distinction in pleasure levels between shopping centres visited) may be attributed to this oversampling of preferred shopping centres, as consumers are more likely to visit shopping centres which they know will provide a pleasure response. In future research, it may be possible to get consumers to rank their top ten more visited shopping centres, then ask them to talk about their most recent shopping trip to their preferred centre (comparable with this study) and with the most recent trip to one of their less preferred centre, to enable comparison.

6.3 Contribution to practice

The main contributions to practice provided from this thesis come from recommendations to shopping centre managers made possible from the outcomes of research. It suggests not leaving the attraction of the centre down to the cumulative draw of tenants alone, but advocates taking a more pro-active approach to ensure a tenant mix that differentiates the shopping centre from competitors, while focussing on the strengths of the shopping centre itself.

Recommendations to Practitioners

Focus on Physical and Social Surroundings.

As the main areas contributing to approach-avoidance appear to come from surroundings and its indirect influence through pleasure response, it makes sense for all shopping centres to use what resources they have at their disposal to create the most attractive surroundings for their consumers. But this study has shown that considering the physical surroundings (atmospherics) alone, as previous research has done, is too limiting. Instead, shopping centre managers must find a way to leverage social capital also. In engineering the environment, they must focus not only on the ambient forces, but also on the people within it. Shopping centres must not only encourage customers to take their time and want to spend time socialising, but facilitate this social interaction also. The most pleasure inducing environments will not live up to their full potential if there is nowhere for customers to relax and spend time with family and/or friends. Some shopping centres already offer socially oriented entertainment facilities. It is notable that the Metro Centre, which has a plethora of socially focussed entertainment venues (cafes, restaurants, bars, cinema and bowling alley) is also one with the highest level of surroundings reported by customers. Other centres scoring highly on surroundings (Eldon Square, Dalton Park, Newcastle and Sunderland, for instance) all have a wide range of social entertainment venues either within or located nearby, and for the most part offer up to date, pleasant physical environments.

Part of the social aspect of surroundings comes down to the service encounter, another area which management can manipulate to an extent. This study does not necessarily advocate employing highly visible 'greeters' to meet, greet and help consumers in the shopping centre. While this approach is popular and works well in certain types of store (do it yourself stores for

example), it may well be too overt for consumers in shopping centres, which may be viewed as more of a public space than stores themselves. While shopping centre managers cannot do too much to encourage impeccable service within the stores themselves, they can try to ensure that outwards facing shopping centre staff (service desk personnel, cleaners, security personnel) etc., are trained to be as congenial as possible, and project the image of the shopping centre. Though difficult to draw definitive conclusions regarding one question, regulatory forces item 'visibility of security personnel' loaded instead upon surroundings, suggesting that customers are comforted by an overt presence of security. This does not appear to undermine confidence with the shopping centre.

Shopping centres that currently house empty units should consider attracting the types of stores and venue that provide a high level of informational reinforcement. Though there is the downside to chain retailers that shopping centres will look more and more like others, having stores that are instantly recognisable and likely to provide positive feedback from peers should improve approach behaviours.

Though some shopping centres have for some years attempted to dissuade younger patrons from visiting them, moving them along with security, or using techniques like playing brass band music or mosquito alarms (Lee and Motzkau 2011) "to deter youths from congregating in large groups and acting in an anti-social manner as well as causing damage to property" (www.compoundsecurity.co.uk), this may not be the most appropriate strategy. Indeed it is a very short term and potentially heavy-handed solution. While undesirable behaviours like shoplifting, property damage and aggressive behaviour to other shoppers should be dissuaded, visiting and activities like 'loitering' should not necessarily be viewed as negative. Though they may not have a disposable income themselves, and don't spend in the centre themselves, they are likely to in the future. From a behavioural perspective, these are the informative years for younger generations. Their experiences as teenagers, and the levels of reinforcement and aversive consequences felt at this age will inform their learning history and intention to approach shopping centres in the future. Shopping centre management should take a more long term strategy to treat these patrons well, even when they don't have the money to spend, and this will inform their future behaviour, when they may have money to spend.

Though the link between surroundings and pleasure is clearly identified, but further research may be required for shopping centre managers to understand what factors in the physical and

social surroundings constitute the most pleasurable outcomes, and this may require research with a narrower focus than in the present study.

Consider how to Differentiate

Where the goal of the shopping centre is to differentiate, shopping centre managers must consider if and how they currently differentiate. In this study, only a few centres were found to differentiate on any of the dimensions measured, namely the Metro Centre, Eldon Square, and Dalton Park currently differentiate form other centres in the area on surroundings. Though the Metro Centre and Eldon Square are fairly comparable in terms of composition of stores, and access to social venues, though the Metro Centre is brighter, more open and modern. Dalton Park is very different from the Metro Centre and Eldon Square, yet is still able to achieve a high surroundings score from respondents. It is an open-air, partially covered outlet centre, with several cafes. It does not have the same scale of entertainment venues as the Metro Centre and Eldon Square, but respondents still score it highly on surroundings.

It is in the social domain too, that shopping centres may find the potential to differentiate not only from each other, but also from their online competitors, which cannot hope to compare with the social interactions facilitated by physical retail spaces. Online retailers themselves recognise the importance of social forces, are attempting to tap into the social domain through social media, whereby consumers can share their purchases online on sites like amazon.co.uk.

Areas which effect approach, but are not currently used to differentiate centres are pleasure, aversive consequences and informational reinforcement. Given that pleasure is strongly dependent upon surroundings, then the focus should really be on the surroundings dimension, which is a proven differentiator. Aversive consequences are an area shopping centre managers should focus on minimising, but not necessarily on differentiating. Surprisingly, aversive consequences did not come across as a differentiator, even though some centres clearly have further costs associated with them (e.g. car-parking costs for Eldon and Newcastle) than others (i.e. the Metro Centre), so it is not advocated that shopping centres that currently have revenue providing regulatory forces revoke these (i.e. keep charging for parking, etc.). As learning history is an internal force, there is little shopping centres can do to manipulate customers directly, other than to focus increasing the informational reinforcement of visits. Interestingly, informational reinforcement was one of the dimension on which there was (limited)

differentiation, though only Eldon Square differentiates itself on this dimension. There was also an association between informational reinforcement and approach-avoidance. Ensuring consumers perceive the shopping centre as desirable not only to themselves, but to their reference groups appears to be a further way to differentiate, and one that Eldon Square, at least, is managing to achieve.

Further, if the goal is to differentiate, shopping centre managers may wish to pursue incentivising independent retailers to become tenants.

Essentially, while engineering the physical and social surroundings is an important part of 'packaging' the shopping centre offering, findings from this study can also inform other aspects of the shopping centres marketing mix. It is important to focus communication efforts with customers that the shopping centre is not just a pleasant place to visit and socialise, and will reward customers with peer approval. Partly this will come down to the experiences consumers have when visiting the shopping centre. However, social aspects of shopping may also be a potentially useful appeal to focus upon in other above-the-line and below-the-line marketing communications. It is interesting that social forces are a recurring theme across the constructs. Social constitutes not just part of the surroundings, but also the level of social feedback acquired (informational reinforcement had a large association with approach-avoidance) and the importance of informational reinforcement (informational learning history). Based on findings of this research, communications that focus on the social aspects of the surroundings, and the ability of the shopping centre to satisfy social feedback and approval should elicit a positive reaction from consumers.

Reward Customers

Other means of encouraging approach-avoidance behaviour may come from facilitating utilitarian reinforcement. Though not established to impact approach-avoidance in this study, it may be that finding a way to differentiate on this factor would benefit. At present, there are few ways in which shopping centres reinforce customers in terms of function. At a store level this is often done through reward/ loyalty cards, where repeat customers are rewarded with points that translate to price discount. Shopping centres like the Metro Centre currently have gift cards- in this case, a prepaid MasterCard that customers register and redeem at outlets within the centre. This gift card could perhaps be adapted. Loyal customers could have an online loyalty account.

When customers receive gift cards they could 'register' these to their account, and accrue loyalty points each time they spend on their gift card. This may also provide a means of differentiating the shopping centre from others. Physical shopping centres must be aware that they already have an edge over their online competitors in terms of reinforcement schedules. Purchases made in physical shopping centres are immediately reinforced with the acquisition of the product, while online purchases are subject to a delay in reinforcement. Online reinforcement should therefore be less strong than reinforcement from physical shopping centres. Reinforcement of online purchases is likely to come more from the smaller prices online retailers are able to charge customers, in passing on savings.

Advice for the Metro Centre

The Metro Centre already has respondents that score highly on surroundings, informational reinforcement and approach-avoidance, so it should focus on continuing to ensure the environment remains well kept.

The Metro Centre was also by far the most visited shopping centre in the study, even though this question was left open ended to reflect the most frequently visited shopping centre. This is not too surprising, given the size of the shopping centre.

Advice for Eldon Square

Though fewer people in the sample visited Eldon Square, overall they reported the highest levels of approach-avoidance and surroundings, and the highest levels of informational reinforcement, with the exception of Newcastle itself, despite being a slightly older shopping centre that has not been as extensively modernised as the Metro Centre apart form a new wing which opened in 201x. Focussing on the social aspects of the surroundings seems to be a useful area to focus upon. It is already strong in this area, and manages to differentiate well on this basis.

Advice for Dalton Park

Dalton park also does reasonably well in terms of favourable surroundings responses, informational reinforcement and approach-avoidance, suggesting it hits above its weight for a centre this size in these important areas. Though very different from the Metro Centre or Eldon

Square, Dalton Park appears to be appreciated by its customers, and this should be continued. The partially open-air design of the centre seems to be popular with customers.

Advice for Durham City

The Durham city shopping area, which comprises the shopping streets, market and privately owned Prince Bishops shopping street appears to be underperforming in crucial areas. It performs significantly worse than the Metro Centre and Eldon Square on surroundings, while other centres still perform better. Respondents viewed the surroundings and informational reinforcement more positively than centres like The Gates in Durham and Blaydon Precinct, but is outperforming in terms of surroundings by centres like Sunderland, Newcastle, Teeside Park and Middlesbrough. Durham is a small city with a world heritage site at its heart that attracts around 600,000 visitors a year (anon 2012), and compact enough that cafes, bars and restaurants are located close by. Despite this, and from its size and composition it appears that the shopping areas in Durham City are perhaps underperforming in terms of surroundings. The city should consider focussing attention on rejuvenating the appearance of some of the less appealing buildings, focussing on living up to its reputation as a world heritage site.

Advice for Durham 'The Gates', Consett, Blaydon Precinct and Middlesbrough

These centres represent some of the lowest achievers in terms of surroundings, and approach. Though one would not expect these centres to attract the same level of approach as centres like the Metro Centre and Eldon Square, they should be able to work to improve on their surroundings to enhance current levels of approach. These centres are typically more utilitarian in their function than the Metro Centre and Eldon Square. Rather than department stores, they are anchored with supermarkets or budget stores, so they are not placed as well to facilitate social shopping in the same way as larger shopping centres. Informational reinforcement, may be encouraged through providing incentives to smaller popular stores, which provide further opportunity for feedback from friends and family. For customers who see informational reinforcement as very important (high informational learning history) this is likely to be a further draw to the centre.

The recommendations above made to practitioners were based upon the findings of the research, and represent the satisfaction of the final research objective, "to make

recommendations to retailers based on the most salient forces affecting patronage and representing potential to act as source of differentiation".

6.6 Concluding Remarks

While retail gravitation models predict patronage to a reasonable extent, beyond initial location decisions, they offer little information to existing shopping centre managers- there is little that can be done to existing shopping centres beyond the costly measure of increasing the footprint to increase attraction, at the expense of other shopping centres. Studies at the individual level of the consumer offer, like the present one, are able to offer not only models of patronage, but also specific recommendations on how to appeal best to consumers. Though retail patronage has been examined from cognitive psychology perspectives, far less attention has been garnered from behavioural psychologists, though research on purchase and consumption is replete with studies from the behavioural psychology domain. In the same way that "the consumer behaviour setting and the consumer's learning history may have a role in explaining consumer behaviour, specifically brand choices" (Porto, Oliveira-Castro et al. 2011, p2568), this thesis shows that it also has a role to play in explaining consumer behaviour in terms of patronage choices.

In a retail landscape where bricks-and-mortar stores are having to compete with the ever growing online retail for sale of physical goods and with sale of some products on the high street being eroded by moves towards digital formats of physical media products, it is down to not only the retailers, but the shopping centres they inhabit to attract customers out of their homes. Why encourage consumers to leave their homes and move away from the cheaper and arguably more convenient shopping experience online, and into stores? According to the Department for Business Innovation and Skills (BIS 2012), retail in the UK currently employs 3 million people, a massive 10% of the UK workforce, which is the largest proportion of the private sector employment. For a large proportion of the UK population, the retail sector means work. The figure above encapsulates predominantly front line staff that work in the stores and shopping centres. The figure does not consider the staff that work in the other parts of the supply chain to get the products to the stores. Online retailers do not employ front line retail staff, and if online retail continues to grow at the expense of bricks-and-mortar retail, it will erode this important source of employment. Retail is also an important part of the lifeblood of town and city centres around the country. While many people come to the centres to work,

many more are drawn in to use the shops and facilities. Without these, as some towns are already finding, stores are closing by the droves as visitor numbers continue to decline, with tenancy rates in the north east currently at 81.5%, one of the poorest areas for tenancy rates in the UK (Hopkinson 2012).

This thesis has attempted to examine the relative contribution of external and internal forces on both intended and actual patronage from a behavioural perspective, with an aim to provide advice to shopping centre managers about what makes consumers choose to visit them. Findings across both studies suggested that it is in the social and physical components of the retail environment that retailers should focus their efforts, in an attempt to attract consumer attention. Social surroundings are perhaps more important that previously suggested, while physical surroundings are indeed as important as previous studies suggest, but it is through their impact on pleasure response that they drive approach behaviour to such a great extent. Shopping centre managers should focus their attention not only on environmental manipulation, but also on facilitating social interaction and training staff to engage with customers to achieve the most pleasurable responses, and approach behaviours.

Appendices

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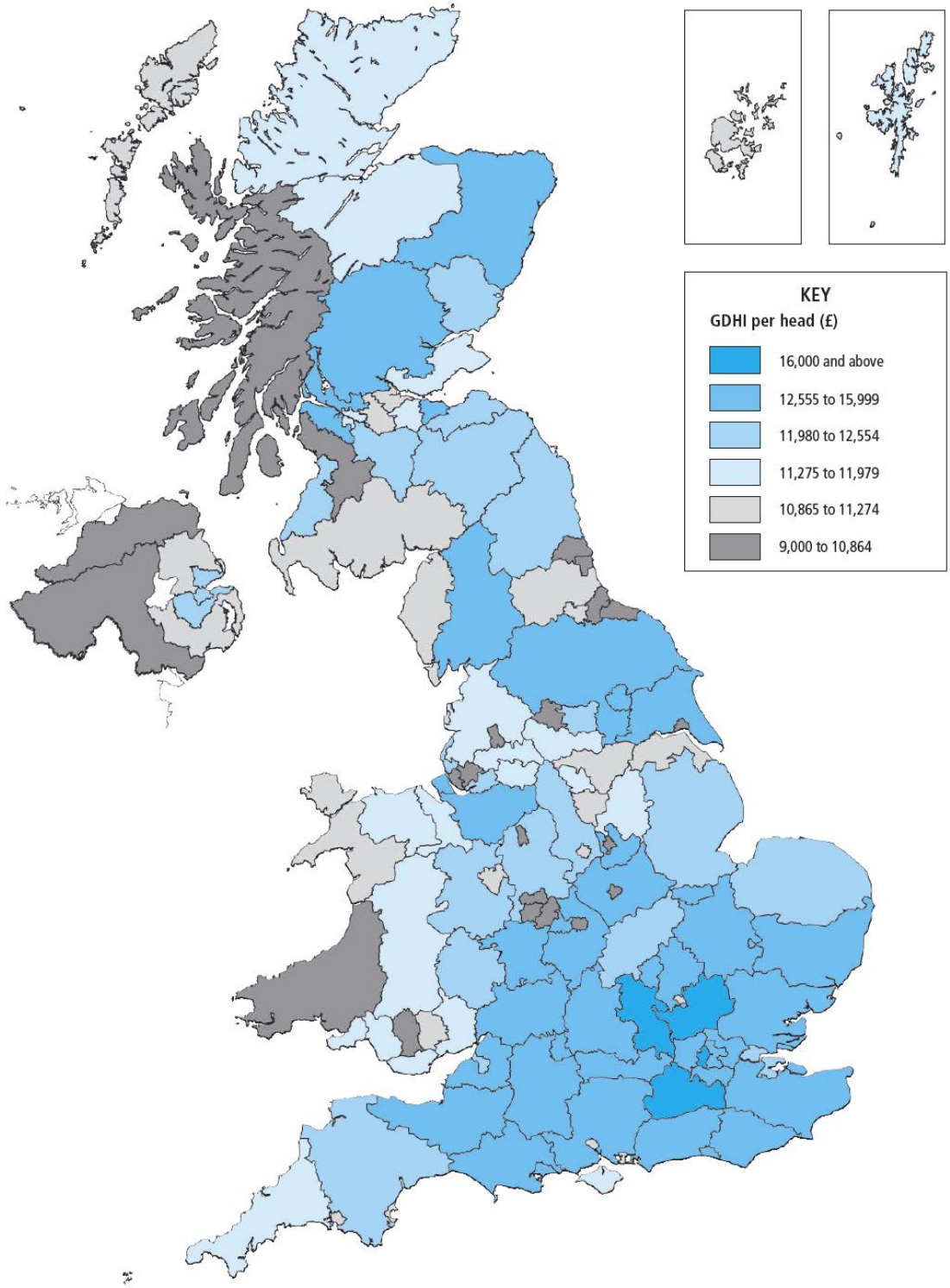
Appendix A- Disposable Income by area

Area code: NUTS3. Typically groups of unitary authorities or districts in the UK, also known as local areas (MacSearraigh, Marais et al. 2006).



Source: MacSearraigh, E., J. Marais, et al. (2006). "Regional Household Income." Economic Trends **633**.

Appendix B: Variations of Naturalism (Positivism) and Humanism

Source: Heath (1992) The Reconciliation of Humanism and Positivism in the Practice of Consumer Research: A view from the Trenches p109

Doctrinaire Naturalism	*Liberal Naturalism*	*Conservative Humanism*	*Doctrinaire Humanism*
	Ontological Issues		
1. One reality exists that is knowable with certainty.	1. One reality exists with multiple interpretations, but all are not equally valid.	1. Multiple realities exist, but all are not equally valid.	1. Multiple realities exist, all of which are equally valid.
2. Elementaristic.	2. Relatively elementaristic.	2. Relatively holistic.	2. Holistic.
3. Deterministic.	3. Deterministic/Voluntaristic.	3. Voluntaristic/Deterministic.	3. Voluntaristic.
	Epistemological Issues		
4. Explanatory, usually in terms of unidirectional causality.	4. Descriptive, explanatory, and/or causal. Causality can be isolated, even if probabilistically, and multi-directional causality is addressed.	4. Descriptive, explanatory, and/or causal. Focus on simultaneous shaping, but unidirectional causality is sometimes addressed.	4. Descriptive, especially "thick" description.
5. Conclusions are context-free.	5. Conclusions can be relatively context free, but contextual contingencies and boundary conditions are important.	5. Conclusions are relatively context bound, but transferability is possible and important.	5. Conclusions are context-bound.
6. Researcher and phenomenon are independent.	6. Researcher and phenomenon sometimes interact, but method can reduce researcher effects.	6. Researcher and phenomenon always interact, but method can reduce researcher effects.	6. Researcher and phenomenon always interact.
7. Inquiry is value-free.	7. Inquiry is influenced by values.	7. Inquiry is influenced by values.	7. Inquiry is value-bound.
	Methodological Issues		
8. Data are "given," not interpreted. Generalizability interpretations are, however, critical.	8. Data interpretations are needed, but are preferrably narrow (tied closely to the data). Method helps reduce the range of viable data interpretations. Generalizability interpretations are, however, critical. They can be supported conceptually or with replications. Probability sampling helps.	8. Data interpretations are critical and can be broad. Method helps reduce the range of viable data interpretations. Transferability interpretations are important, but should be supported with replications.	8. Data interpretations are critical and, in fact, themselves comprise the most important data. Transferability interpretations are impossible.
9. Internal validity is critical. Generalizability is often assumed.	9. Both internal and external validity are possible and important. (see #8)	9. Both credibility and transferability are possible and important. (see # 8)	9. Neither internal nor externa validity is possible.
10. Reliability is critical.	10. Reliability is possible and important.	10. Dependability is possible and important.	10. Reliability is impossible.
11. Objectivity is guaranteed by method.	11. Objectivity is possible and desired.	11. Confirmability is possible and desired.	11. Objectivity is impossible.
12. Data are never biased.	12. Unbiased data are possible. Need to reduce the effects of experimental demand, evaluation apprehension, and lying.	12. Data integrity is possible. Need to document events (e.g., pictures), and reduce the effects of evaluation apprehension and lying.	12. Data are always biased.
13. Manipulation, confound, and demand checks.	13. Manipulation, confound, and demand checks.	13. Member checks and multiple observers.	13. No need to assess credibility.
14. Convergence procedures such as multi-trait-multi-method matrices and interjudge reliability help establish validity.	14. Convergence procedures such as multi-trait-multi method matrices and interjudge reliability help establish validity.	14. Triangulation procedures such as interjudge agreement help establish validity.	14. Credibility is impossible.
15. Random, stratified, and other probability sampling frames are essential.	15. Random, stratified, and other probability sampling frames are appropriate, as are nonprobability frames such as convenience samples in some cases.	15. Convenience and purposive sampling frames are appropriate.	15. Sampling design is irrelevant.
16. Induction is not allowed. Theories are deductively falsifiable.	16. Induction is allowed. Theories can be (fallibly) confirmed through inductive processes and falsified through deductive processes.	16. Emergent designs use both inductive and deductive processes.	16. Emergent designs are inductive in nature. Theory confirmation and falsification are impossible.
17. Only quantitative methods are appropriate.	17. Both quantitative and qualitative methods are appropriate. Focus is on quantitative methods.	17. Both quantitative and qualitative methods are appropriate. Focus is on qualitative methods.	17. Qualitative methods are preferred.

Appendix C: Study 1 Pilot Questionnaire

Consumer Behaviour Questionnaire

Please fill in the following questionnaire. It should only take approximately 15 minutes
Please use block capitals for text responses and a cross in the appropriate box

Age ☐☐
Sex Male ☐ Female ☐
Nationality ☐☐☐☐☐☐☐☐
Marital Status ☐☐☐☐☐☐☐☐

Section 1

Please think about the act of shopping, and try to answer all of the following.

PLEASE REMEMBER TO ANSWER EACH QUESTION	YES	NO
Have you ever left a store because it was empty?	☐	☐
Do you find you are more productive at one particular time of day?	☐	☐
Do you believe that a crowded shopping centre must be a good shopping centre?	☐	☐
Do you buy yourself gifts as rewards for personal achievements?	☐	☐
Do you visit certain shops only at a particular time of year?	☐	☐
Do you find shopping more of a chore when recovering from an illness (E.g. flu)?	☐	☐
Do you tend to shop more out of necessity than out of desire?	☐	☐
Would you be put off buying a product you really liked if your friends did not like it?	☐	☐
Do your friends have a great deal of influence on your purchase decisions?	☐	☐
Do you tend to shop faster when you have definite lists of things to buy?	☐	☐
Have you ever left a store because it felt unclean?	☐	☐
Would you make an unnecessary purchase, just to cheer yourself up?	☐	☐
Have you ever left a store after noticing a bad smell?	☐	☐
Do you find it important that other people buy things that are similar to what you buy?	☐	☐
Would you tend to choose an alternative shopping centre than go somewhere with inadequate parking?	☐	☐
Have you ever avoided returning to a shopping centre that seemed unclean?	☐	☐
Would you use an entertainment facility in a shopping centre to improve your mood?	☐	☐
Do you feel a sense of adventure when shopping?	☐	☐
Have you ever felt your spirits lift when going into a warm, bright, airy shopping centre?	☐	☐
Are you happy to buy new or innovative products without hearing the opinions of others?	☐	☐
Do you ever watch others to keep up with changes in fashion?	☐	☐

Would a friend's negative opinion of a purchase make you avoid making similar purchases in the future? ☐ ☐

Would a sales assistant's cheerful or helpful manner ever make you feel more inclined to make a purchase? ☐ ☐

Would you take alternative transport to go to a shopping centre with inadequate parking? ☐ ☐

Do you ever choose a shopping centre because it is easy/cheap to park at? ☐ ☐

Do you become frustrated or angry when you get lost, or cannot find what you want? ☐ ☐

Do you think well-known brands are better quality than store-brand or unknown brands? ☐ ☐

Do you find yourself spending more on others in the run-up to a seasonal event? ☐ ☐

Have you ever left a store that displays items in a haphazard or disorganised way? ☐ ☐

Would you prefer to shop alone if you are in a bad mood? ☐ ☐

Are you ever put off by stores that go over the top at certain festivals, for example Halloween or Valentines Day ☐ ☐

Do you prefer to shop with people who have similar tastes to your own? ☐ ☐

Have you ever made a token purchase, out of guilt of taking up a sales assistant's time? ☐ ☐

Do you find shopping is a way to forget your problems? ☐ ☐

Would you be put off making a purchase because of a rude or unhelpful sales assistant? ☐ ☐

Have you ever noticed a store that seemed too dark? ☐ ☐

Do you find you start to make more bad decisions when you get tired? ☐ ☐

Have you ever gone inside a store to warm up on a cold day? ☐ ☐

If a friend asked for your opinion on a product they were considering purchasing, would you say you liked it, even if you did not? ☐ ☐

Would you ever ignore a bad opinion and buy a product you wanted anyway? ☐ ☐

Do you ever shop to put yourself in a better mood? ☐ ☐

Have you ever left a store because you felt the background music was too loud? ☐ ☐

Do you find shopping more enjoyable alone than with others? ☐ ☐

Do you find shopping usually more a chore than a pleasure? ☐ ☐

Do you find shopping exciting? ☐ ☐

Have you ever left a store because of a bad mood? ☐ ☐

Do you try to buy products that are similar to those your friends buy? ☐ ☐

Would you be happy buying bargain range brands as gifts for others? ☐ ☐

Has a sales assistant's manner ever influenced your decision over making a purchase? ☐ ☐

Do you make more purchases after payday than any other time of the month? ☐ ☐

Have you ever left a store because it was too cold or too hot? ☐ ☐

Do you find it satisfying to deliberate long and hard about a purchase decision? ☐ ☐

Would you get frustrated or stressed if you had to make a purchase decision without having time to think it through fully? ☐ ☐

Do you sometimes shop to overcome a bad mood? ☐ ☐

Do you think that making a bad purchase decision is the worst thing you can do? ☐ ☐

Have you ever left a shopping centre after having trouble finding a parking space? ☐ ☐

Would you go shopping to relax and unwind? ☐ ☐

If a friend asked for your opinion on a product they were considering purchasing, would you usually give them a truly honest answer? ☐ ☐

Would you buy a well-known brand as a gift for someone, when you use a lesser-known brand yourself? ☐ ☐

Have you ever found a shopping companion's mood affects your own behaviour? ☐ ☐

Does your mood sometimes suddenly change when shopping? ☐ ☐

Do you find it especially satisfying to use products that require a lot of mental effort? ☐ ☐

Can satisfaction sometimes come from the process of shopping itself? ☐ ☐

Have you ever put off making a purchase until you had a valued second opinion about it? ☐ ☐

Do you ever ask for a sales assistant's advice when choosing small items for yourself? ☐ ☐

Do you ever make more unplanned/unnecessary purchases when you have less available time? ☐ ☐

Would you ever use an online opinion website like Epinions, Ciao or Dooyoo to help make a purchase decision? ☐ ☐

Is it important to you that your friends like the products you buy? ☐ ☐

Does a sales assistant's manner usually not affect your purchase decisions? ☐ ☐

Would an unhelpful or moody sales assistant or an argument spoil your mood? ☐ ☐

Do you prefer to shop somewhere familiar? ☐ ☐

Do you prefer to shop in a variety of different places? ☐ ☐

Do you tend to make more rash purchase decisions when bored? ☐ ☐

Do you find the type of things you buy yourself change depending on time of year? ☐ ☐

Has a friend's advice ever affected the kind of purchases you make? ☐ ☐

Would you return to a store/ shopping centre that previously put you in a good mood? ☐ ☐

Do you find a bit of time pressure can push you to make important purchase decisions? ☐ ☐

Do your tastes (E.g. in clothes, movies, music, etc.) change to match those around you? ☐ ☐

Do you find you spend more time shopping when in a good mood? ☐ ☐

Do you tend to make more rash purchase decisions when in a bad mood? ☐ ☐

Do you only ever use well-known brands? ☐ ☐

Do you like having the excuse to buy presents for other people? ☐ ☐

Do you find you shop mainly because you want to, and not because you have to? ☐ ☐

Have you ever felt immediately better after making a purchase? ☐ ☐

Would a sales assistant's cheerful or helpful manner ever make you suspicious of their motives? ☐ ☐

Would you buy a well-known brand only because it will be seen by others? ☐ ☐

Do you find you are less likely to find the items you are looking for, if you do not have time to browse in an unfamiliar store? ☐ ☐

Do you ever continue to browse in a shop, even after purchasing a intended item? ☐ ☐

Have you ever noticed a store that seemed too bright? ☐ ☐

Do you find your mood improves with each purchase you make? ☐ ☐

Do you prefer to shop somewhere new? ☐ ☐

Do you find yourself buying more food when grocery shopping, if you have not yet eaten? ☐ ☐

Do you prefer to get in and out of a shopping centre as quickly as possible? ☐ ☐

Do you still browse through shops even when you do not have money? ☐ ☐

Have you ever deliberately stopped going to a store, because of a bad experience? ☐ ☐

Do you ever eat 'purchases' in store when grocery shopping, and pay at the end? ☐ ☐

Do you make more purchases when shopping with others than if you are alone? ☐ ☐

Would you feel happy settling for an unfamiliar or alternative brand to your usual choice, when you do not have time to shop around? ☐ ☐

In your experience, do you enjoy gift shopping? ☐ ☐

Do you tend to make a lot more purchase decisions immediately after payday? ☐ ☐

Is your choice of shopping centre (e.g. enclosed vs. open air) dependent on weather conditions outside? ☐ ☐

Do you find you shop more often in a store when in a good mood? ☐ ☐

Have you ever returned a purchase because a friend or family member did not like it? ☐ ☐

Do you sometimes lose track of time when having a good time shopping? ☐ ☐

Do you have negative feelings when seasonal decorations appear in shopping centres? ☐ ☐

Have you ever found you alter the way you shop to suit those you shop with? E.g. willingness to browse, try on, buy, etc. ☐ ☐

Do you prefer to shop somewhere that is easy to navigate? e.g. Easy layout, lots of signs. ☐ ☐

Have you ever stayed a long time in a store that plays good background music? ☐ ☐

Have you ever felt drawn into a store that smelt nice as you walked past? ☐ ☐

Have you ever left a store that you felt was too crowded? ☐ ☐

Do you tend to ignore friends' opinions when it comes to making a purchase decision? ☐ ☐

Do you enjoy being immersed in exciting new products? ☐ ☐

Do you find yourself spending more on yourself in the run-up to a seasonal event? ☐ ☐

Do you go shopping to escape ordinary life? ☐ ☐

Would you ever return to a shop checkout a second or third time in a single shopping trip after finding more goods you wish to purchase?	☐	☐
Do you find shopping boring?	☐	☐
Have you ever gone shopping when sad or depressed, to cheer yourself up?	☐	☐
Do you enjoy getting into the spirit of holidays?	☐	☐
Do you think the phrase “buy to shop, not shop to buy” refers to you?	☐	☐
Do you like to be responsible for a purchase decision that requires a lot of thinking?	☐	☐
Do you find you start to make more bad decisions when you are hungry?	☐	☐
Do you sometimes buy items in 3 for 2 offers, even if you were not looking for the item?	☐	☐
Do you enjoy getting a ‘bargain’, buying something that is usually more expensive?	☐	☐
Compared to other activities, does your time spent shopping feel truly enjoyable?	☐	☐
Do you avoid shopping somewhere because you knew there is inadequate parking?	☐	☐
Do you find you make more split-second purchase decisions when pushed for time?	☐	☐
Do you find you make fewer unplanned purchases when you have to leave soon?	☐	☐
Do you like to shop somewhere that is full of surprises?	☐	☐
Do you tend to make more rash purchase decisions when excited?	☐	☐
Do you get excited when seasonal decorations appear in shopping centres?	☐	☐
Do you enjoy shopping for its own sake, not just for the items you purchase?	☐	☐
Do you ever find yourself browsing, even when you have no intention to buy?	☐	☐
Do you prefer to shop with friends, so you do not make purchase mistakes?	☐	☐
Do you ever find slow moving crowds in shopping centres annoying or frustrating?	☐	☐
Do you find that you shop more when you are in a good mood?	☐	☐
Have you ever found certain products more desirable when someone you admire used/endorsed it? E.g. hair colourant, particular brands of sports clothes/shoes, etc.	☐	☐
Do you prefer to have a good recommendation before buying a new/innovative product?	☐	☐
Have you ever left a shopping centre because of an argument while shopping?	☐	☐
Have you ever put an item back rather than queue a long time to purchase it?	☐	☐
Has a friend ever persuaded you to buy something you otherwise would not have bought?	☐	☐
Do you spend a lot more money on shopping immediately after payday?	☐	☐
Do you get frustrated or annoyed when returning to a familiar store, to discover items have been moved around?	☐	☐
Do you try to keep up with current fashions and trends?	☐	☐
Do you tend to spend more time shopping when shopping for fun?	☐	☐
Do you think that it is not really shopping if you do not buy anything?	☐	☐

Section 2

Please put a cross in the appropriate box.

Work quickly and do not think too long about the exact meaning of the questions

	YES	NO
Does your mood often go up and down?	☐	☐
Do you take much notice of what people think?	☐	☐
If you say you will do something, do you always keep your promise no matter how inconvenient it might be?	☐	☐
Are you a talkative person?	☐	☐
Do you ever feel `just miserable' for no reason?	☐	☐
Would being in debt worry you?	☐	☐
Are you rather lively?	☐	☐
Were you ever greedy by helping yourself to more than your share of anything?	☐	☐
Are you an irritable person?	☐	☐
Would you take drugs which may have strange or dangerous effects?	☐	☐
Do you enjoy meeting new people?	☐	☐
Have you ever blamed someone for doing something you knew was really your fault?	☐	☐
Are your feelings easily hurt?	☐	☐
Do you prefer to go your own way rather than act by the rules?	☐	☐
Can you usually let yourself go and enjoy yourself at a lively party?	☐	☐
Are all your habits good and desirable ones?	☐	☐
Do you often feel fed up?	☐	☐
Do good manners and cleanliness matter much to you?	☐	☐
Do you usually take the initiative in making new friends?	☐	☐
Have you ever taken anything (even a pin or a button) that belonged to someone else?	☐	☐
Would you call yourself a nervous person?	☐	☐
Do you think marriage is old-fashioned and should be done away with?	☐	☐
Can you easily get some life into a rather dull party?	☐	☐
Have you ever broken or lost something belonging to someone else?	☐	☐
Are you a worrier?	☐	☐
Do you enjoy co -operating with others?	☐	☐
Do you tend to keep in the background on social occasions?	☐	☐
Does it worry you if there are mistakes in your work?	☐	☐
Have you ever said anything bad or nasty about anyone?	☐	☐
Would you call yourself tense or highly- strung?	☐	☐
Do you think people spend too much time safeguarding their future with savings and insurances?	☐	☐
Do you like mixing with people?	☐	☐
As a child were you ever cheeky to your parents?	☐	☐
Do you worry too long after an embarrassing experience?	☐	☐
Do you try not to be rude to people?	☐	☐
Do you like plenty of bustle and excitement around you?	☐	☐
Have you ever cheated at a game?	☐	☐
Do you suffer from `nerves'?	☐	☐
Would you like other people to be afraid of you?	☐	☐
Have you ever taken advantage of someone?	☐	☐

Are you almost always quiet when you are with other people?

Do you often feel lonely?

Is it better to follow society's rules than go your own way?

Do other people think of you as being very lively?

Do you always practice what you preach?

Are you often troubled about feelings of guilt?

Do you sometimes put off tomorrow what you ought to do today?

Can you get a party going?

Appendix D: Study 2 Pilot Questionnaire (formatted from electronic version)

Dear Shoppers, The following questionnaire is part of academic research at Durham University, into factors affecting choice of Shopping Centre in the north east of England. It will be used for academic purposes only, and will be treated with complete confidentiality. Please take the time to complete this questionnaire, it should take no more than 15 minutes to complete. By taking part in this questionnaire you will be considered for a prize draw to win a £50 voucher of your choice: Amazon, ASOS, Metro Centre, Marks and Spencers, Asda or Sainsbury's. If you wish to be entered for a chance to win a voucher, please fill in contact details at the end of the questionnaire, along with your voucher preference. Your personal details will only be used to contact you if you win the voucher.

Please identify the last shopping centre (a shopping area with multiple stores) you visited in the north of England. This might include a town or city centre. Please note this study is not looking at supermarkets.
Shopping Centre Visited:_____

SCday When did you visit the shopping centre?
- ❍ Monday (1)
- ❍ Tuesday (2)
- ❍ Wednesday (3)
- ❍ Thursday (4)
- ❍ Friday (5)
- ❍ Saturday (6)
- ❍ Sunday (7)

SCParty How would you best describe your shopping party
- ❍ On my own (1)
- ❍ With my partner (2)
- ❍ With a friend (3)
- ❍ With friends (4)
- ❍ With family (5)

SCSummary Provide a brief summary of what you did on the visit:_____

SCTimePref How much time would you like to spend in this shopping centre?
- ❍ None (1)
- ❍ A few minutes (2)
- ❍ Ten minutes (3)
- ❍ Half an hour (4)
- ❍ One hour (5)
- ❍ 2-3 hours (6)
- ❍ A few hours (7)
- ❍ A day (8)

LHInfo Please indicate the extent to which you agree with the following statements in general, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is important that friends like the shopping centres I visit (1)	❍	❍	❍	❍	❍	❍	❍
I like being seen in the right sort of shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
I enjoy getting feedback on purchases from friends (3)	❍	❍	❍	❍	❍	❍	❍
Visiting shopping centres is a good way to socialise (4)	❍	❍	❍	❍	❍	❍	❍
It is important to choose shopping centres where you see people your own age (5)	❍	❍	❍	❍	❍	❍	❍
It is important that the shopping centre have alot of well known stores (6)	❍	❍	❍	❍	❍	❍	❍
My friends greatly influence the decisions I make (7)	❍	❍	❍	❍	❍	❍	❍
I am more likely to buy a product that has received endorsement from someone I admire (8)	❍	❍	❍	❍	❍	❍	❍
It is important for me to keep up with current fashions and trends (9)	❍	❍	❍	❍	❍	❍	❍
The brands I buy are similar to those my friends buy (10)	❍	❍	❍	❍	❍	❍	❍

LHUtil Please indicate the extent to which you agree with the following statements in general, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is important to visit shopping centres that allow me to buy everything I want (1)	❍	❍	❍	❍	❍	❍	❍
It is imortant that a shopping centre visit puts me in a good mood (2)	❍	❍	❍	❍	❍	❍	❍
I feel really bad when I think I have made a poor choice of shopping centre (3)	❍	❍	❍	❍	❍	❍	❍
Efficiency is very important when choosing which shopping centre to visit (4)	❍	❍	❍	❍	❍	❍	❍
Visiting a good shopping centre makes me feel happy (5)	❍	❍	❍	❍	❍	❍	❍
I don't like having to make more shopping trips than are necessary (6)	❍	❍	❍	❍	❍	❍	❍
Visiting a shopping centre is a good way to spend time (7)	❍	❍	❍	❍	❍	❍	❍
Visiting shopping centres is a necessary evil (8)	❍	❍	❍	❍	❍	❍	❍

LHCost Please indicate the extent to which you agree with the following statements in general, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is important to select shopping centres nearby (1)	❍	❍	❍	❍	❍	❍	❍
It shouldn't cost a lot to get to a shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
Visiting shopping centres can be very costly (3)	❍	❍	❍	❍	❍	❍	❍

I dislike spending a lot of time going on a shopping trip (4)	❍	❍	❍	❍	❍	❍	❍
Shopping centres with lots of choice are more economical (5)	❍	❍	❍	❍	❍	❍	❍

Please answer the following sections with the shopping centre above in mind.

Transport How did you get to the shopping centre for this visit?

- ❑ Private Car (1)
- ❑ Taxi (2)
- ❑ Bicycle (3)
- ❑ On Foot (4)
- ❑ Public Bus (5)
- ❑ Coach (6)
- ❑ Metro (7)
- ❑ Train (8)
- ❑ Other (9)

Q56 Please describe how you got to the shopping centre.

_____

TravelTime Approximately how long did it take for you to get to the shopping centre? _____

SitPhys Please indicate the extent to which you agree with the following statements with respect to the shopping centre visited, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The shopping centre is well lit (1)	❍	❍	❍	❍	❍	❍	❍
Variety of stores is poor (2)	❍	❍	❍	❍	❍	❍	❍
Odours in the shopping centre are pleasant (3)	❍	❍	❍	❍	❍	❍	❍
The centre has a poor layout (4)	❍	❍	❍	❍	❍	❍	❍
I enjoy the music played (5)	❍	❍	❍	❍	❍	❍	❍
The temperature of the shopping centre is suitable (6)	❍	❍	❍	❍	❍	❍	❍
The shopping centre looks good (7)	❍	❍	❍	❍	❍	❍	❍
The shopping centre has a modern feel (8)	❍	❍	❍	❍	❍	❍	❍
It is easy to navigate around the shopping centre (9)	❍	❍	❍	❍	❍	❍	❍
The shopping centre is kept very clean (10)	❍	❍	❍	❍	❍	❍	❍

SitSoc Please indicate the extent to which you agree with the following statements with respect to the shopping centre visited, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The shopping centre provides a good opportunity to shop with friends (1)	❍	❍	❍	❍	❍	❍	❍
I"d prefer to visit this shopping centre on my own (2)	❍	❍	❍	❍	❍	❍	❍
The shopping centre seems popular (3)	❍	❍	❍	❍	❍	❍	❍
The shopping centre is a good place to see new fashions and trends (4)	❍	❍	❍	❍	❍	❍	❍
I would trust sales personnel in the shopping centre (5)	❍	❍	❍	❍	❍	❍	❍
The shopping centre feels too crowded (6)	❍	❍	❍	❍	❍	❍	❍
Staff in the shopping centre are very helpful (7)	❍	❍	❍	❍	❍	❍	❍
The shopping centre is a good place to socialise (8)	❍	❍	❍	❍	❍	❍	❍
The shopping centre has lots of well known stores (9)	❍	❍	❍	❍	❍	❍	❍

SitTemp Please indicate the extent to which you agree with the following statements with respect to the shopping centre visited, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The shopping centre felt very fast paced (1)	❍	❍	❍	❍	❍	❍	❍
I was able to shop at my leisure on this trip (2)	❍	❍	❍	❍	❍	❍	❍
I didn't have enough time to do everything I wanted in the shopping centre (3)	❍	❍	❍	❍	❍	❍	❍
I had to hurry to complete my shopping trip on time (4)	❍	❍	❍	❍	❍	❍	❍
I had plenty of time to complete my shopping (5)	❍	❍	❍	❍	❍	❍	❍
The shopping centre should stay open much longer (6)	❍	❍	❍	❍	❍	❍	❍
I feel rushed for time in this shopping centre (7)	❍	❍	❍	❍	❍	❍	❍
The shopping centre made it likely for me to linger (8)	❍	❍	❍	❍	❍	❍	❍
I feel pressured to complete my shopping quickly here (9)	❍	❍	❍	❍	❍	❍	❍

SitRegulat Please indicate the extent to which you agree with the following statements with respect to the shopping centre visited, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Parking is very restricted at the shopping centre (1)	❍	❍	❍	❍	❍	❍	❍
The shopping centre is heavily regulated (2)	❍	❍	❍	❍	❍	❍	❍
Security personnel are highly visible. (3)	❍	❍	❍	❍	❍	❍	❍
Shoppers seem free to do many different things in the shopping centre. (4)	❍	❍	❍	❍	❍	❍	❍
It costs alot for people to park at the shopping centre (5)	❍	❍	❍	❍	❍	❍	❍
Alot of time is spent queuing in the shopping centre (6)	❍	❍	❍	❍	❍	❍	❍
There are many time limited offers in the shops (7)	❍	❍	❍	❍	❍	❍	❍

InfoReinfo Please tick the response that best describes the outcome of your visit to the shopping centre

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I felt good after my visit to this shopping centre. (1)	❍	❍	❍	❍	❍	❍	❍
Getting to and from the centre was difficult. (2)	❍	❍	❍	❍	❍	❍	❍
Friends commented positively on the products I bought. (3)	❍	❍	❍	❍	❍	❍	❍
People will respect me more for visiting this shopping centre. (4)	❍	❍	❍	❍	❍	❍	❍
I wouldn't want friends to know I visited this shopping centre. (5)	❍	❍	❍	❍	❍	❍	❍
My friends approve of my choice of shopping centre. (6)	❍	❍	❍	❍	❍	❍	❍
Visiting this shopping centre seemed like a bad choice (7)	❍	❍	❍	❍	❍	❍	❍
Friends commented positively on the products I bought. (8)	❍	❍	❍	❍	❍	❍	❍
I'm confident that my choice of shopping centre was the right one. (9)	❍	❍	❍	❍	❍	❍	❍

UtilReinfo Please tick the response that best describes the outcome of your visit to the shopping centre

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
My visit to the shopping centre was a productive one. (1)	❍	❍	❍	❍	❍	❍	❍
I wasn't able to do everything I planned during the visit (2)	❍	❍	❍	❍	❍	❍	❍
I was able to get some good deals on my visit (3)	❍	❍	❍	❍	❍	❍	❍
I will have to go elsewhere to find what I was looking for (4)	❍	❍	❍	❍	❍	❍	❍
I am satisfied with the outcome of my visit to the shopping centre. (5)	❍	❍	❍	❍	❍	❍	❍
I spent too much money on my visit (6)	❍	❍	❍	❍	❍	❍	❍
I managed to do everything I wanted on my visit (7)	❍	❍	❍	❍	❍	❍	❍
My purchases aren't really what I wanted (8)	❍	❍	❍	❍	❍	❍	❍

AversConse Please tick the response that best describes the outcome of your visit to the shopping centre

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It was costly to get to the shopping centre (1)	❍	❍	❍	❍	❍	❍	❍
It took too long to get to the shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
Getting to the shopping centre was difficult (3)	❍	❍	❍	❍	❍	❍	❍
Access to the shopping centre was very difficult (4)	❍	❍	❍	❍	❍	❍	❍
Finding the way to the shopping centre was complicated (5)	❍	❍	❍	❍	❍	❍	❍

AppPhysicl Please tick the response that best describes how you feel towards the shopping centre.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I would like to come back to this shopping centre in the future (1)	❍	❍	❍	❍	❍	❍	❍
I would leave this shopping centre as soon as possible (2)	❍	❍	❍	❍	❍	❍	❍
I like this shopping centre (3)	❍	❍	❍	❍	❍	❍	❍
I would avoid returning to this shopping centre (4)	❍	❍	❍	❍	❍	❍	❍
Shopping here is fun (5)	❍	❍	❍	❍	❍	❍	❍

AppExplore Please tick the response that best describes how you feel towards the shopping centre.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I would enjoy exploring this shopping centre (1)	❍	❍	❍	❍	❍	❍	❍
I would avoid looking around this shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
I'd stay longer in this shopping centre than planned (3)	❍	❍	❍	❍	❍	❍	❍
I'd avoid exploring this shopping centre (4)	❍	❍	❍	❍	❍	❍	❍
I'd be willing to browse in this shopping centre (5)	❍	❍	❍	❍	❍	❍	❍

AppCommuni Please tick the response that best describes how you feel towards the shopping centre.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I would be likely to avoid talking with other shoppers here (1)	❍	❍	❍	❍	❍	❍	❍
I would recommend this shopping centre to friends (2)	❍	❍	❍	❍	❍	❍	❍
I would be willing to listen to the advice of sales personnel (3)	❍	❍	❍	❍	❍	❍	❍
I would like to shop here with friends (4)	❍	❍	❍	❍	❍	❍	❍
I would avoid shopping here with family (5)	❍	❍	❍	❍	❍	❍	❍
Shopping here with family would be fun (6)	❍	❍	❍	❍	❍	❍	❍

AppPerfSat Please tick the response that best describes how you feel towards the shopping centre.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is easy to find everything I want at the shopping centre (1)	❍	❍	❍	❍	❍	❍	❍
I'd be willing to spend more money than planned in this shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
It's harder than usual to find everything I want in this shopping centre (3)	❍	❍	❍	❍	❍	❍	❍
I would probably buy more items in the shopping centre than expected (4)	❍	❍	❍	❍	❍	❍	❍

shortPAD1 Please tick the response that best describes your feelings about the shopping centre.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Unhappy:Happy (1)	❍	❍	❍	❍	❍	❍	❍
Overcrowded:Uncrowded (2)	❍	❍	❍	❍	❍	❍	❍
Contented:Melancholic (3)	❍	❍	❍	❍	❍	❍	❍
Unaroused:Aroused (4)	❍	❍	❍	❍	❍	❍	❍
Bored:Relaxed (5)	❍	❍	❍	❍	❍	❍	❍
Dominant:Submissive (6)	❍	❍	❍	❍	❍	❍	❍
Calm:Excited (7)	❍	❍	❍	❍	❍	❍	❍
Imporant:Insignificant (8)	❍	❍	❍	❍	❍	❍	❍
Frenzied:Sluggish (9)	❍	❍	❍	❍	❍	❍	❍
Guided:Autonomous (10)	❍	❍	❍	❍	❍	❍	❍

shortPAD2 Please tick the response that best describes your feelings about the shopping centre.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
In Control:Cared-for (1)	❍	❍	❍	❍	❍	❍	❍
Influential:Influenced (2)	❍	❍	❍	❍	❍	❍	❍
Free:Restricted (3)	❍	❍	❍	❍	❍	❍	❍
Despairing:Hopeful (4)	❍	❍	❍	❍	❍	❍	❍
Controlling:Controlled (5)	❍	❍	❍	❍	❍	❍	❍
Jittery:Dull (6)	❍	❍	❍	❍	❍	❍	❍
Unsatisfied:Satisfied (7)	❍	❍	❍	❍	❍	❍	❍
Sleepy:Wideawake (8)	❍	❍	❍	❍	❍	❍	❍
Annoyed:Pleased (9)	❍	❍	❍	❍	❍	❍	❍

Relaxed:Stimulated (10)	❍	❍	❍	❍	❍	❍	❍

SCPref Please rank the following shopping centres on the basis of how frequently you visit them (1 for most frequently visited shopping centre, 2 for second most visited shopping centre, etc...). Once you run out of shopping centres you know, or feel you can no longer comment, leave your response blank.

_____ Metro Centre (1)
_____ Eldon Shopping Centre (2)
_____ Monument Mall (3)
_____ The Gates, Durham (4)
_____ Prince Bishops, Durham (5)
_____ Manor Walks (6)
_____ Newcastle City Centre (7)
_____ Durham City Centre (8)
_____ Sunderland City Centre (9)
_____ The Bridges Sunderland (10)
_____ Cleveland Centre, Middlesbrough (11)
_____ Middlesbrough (12)
_____ Darlington (13)
_____ Cornmill Darlington (14)
_____ Arniston Centre (15)
_____ Dalton Park (16)
_____ Hartlepool (17)
_____ Washington Galleries (18)
_____ Royal Quays (19)
_____ Silverlinks (20)
_____ Kingston Park (21)
_____ Hexham (22)
_____ Other (23)

Q61 If other, please list, in order of visit frequency, the shopping centres you visit.
Shopping Centre (1)

Q49 Sex:
- ❍ Male (1)
- ❍ Female (2)

Q50 Age _____

Q48 Please enter your postcode. This will be used for mapping purposes only. Please leave blank if you prefer not to respond to this question. _____

Q42 Thank you for taking the time to fill in the questionnaire. For a chance to win a £50 voucher, please provide contact details (email, or phone number) below:_____

Q43 Please indicate your preference for voucher. Amazon (1)
- ❍ ASOS (2)
- ❍ Metro Centre (3)
- ❍ Marks and Spencers (4)
- ❍ Asda (5)
- ❍ Sainsbury's (6)

Q44 Would you be willing to be contacted to request you take part in further research?
- ❍ Yes (1)
- ❍ No (2)

Q46 If you would like to comment on the questionnaire, you can email me at m.l.mundell@durham.ac.uk.

Appendix E- Study 1 Final Questionnaire with scoring system

Shopping Questionnaire

This questionnaire is for academic purposes only, and will be treated with complete confidentiality.

Please fill in the following questionnaire. It should only take approximately 10 minutes
Please use block capitals for text responses and a cross the appropriate box.
Please give only one response for each question, unless otherwise stated.

Thank you for taking the time to fill in this questionnaire.

Section 1

What is your main reason for coming to this shopping centre today?

Which activities do you plan to do here today? (Tick all that apply)

- ☐ Walk around for exercise
- ☐ Look at mall exhibits or shows
- ☐ Socialise with friends or family
- ☐ Play a game at the arcade
- ☐ Visit the doctor/dentist/optician
- ☐ Kill some time wandering around
- ☐ Browse in a store without planning to buy
- ☐ Go to a film
- ☐ Get lunch or dinner
- ☐ Talk to other shoppers
- ☐ Buy a snack or a drink
- ☐ Go to hair/beauty salon
- ☐ Look for something to buy

How did you get to the shopping centre today?

1 Private Car	2 Taxi	3 Bicycle	4 On Foot
5 Public Bus	6 Coach	7 Metro	8 Train

How far did you have to travel to get to the shopping centre today?

1 Under 5 minutes	2 5-10 minutes	3 10-15 minutes
4 15-20 minutes	5 20-25 minutes	6 25-30 minutes

Please put in order the three shopping centres you go to most often

1. _____
2. _____
3. _____

Section 2

Please indicate the degree to which you agree or disagree with the following statements

If it happens that I buy an unsatisfactory item, I try to do something about it.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

Sometimes when I don't know much about a product, I might as well decide which brand to buy just by flipping a coin.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

Usually, when I plan to buy something I can find the best deal.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

Making good buys depends on how hard I look.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

There have been times when I just could not resist the pressure of a good salesperson.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

Being able to wait for sales and looking for information about the item has really helped me get good deals.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

I have often found it useful to complain about unsatisfactory products.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

It's hard for me to know whether or not something is a good buy.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

To me, there's not much point in trying too hard to discover differences in quality between products.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

Usually I make an effort to be sure that I don't end up with a "lemon" when I go shopping.
1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

I find that there's no point to shopping around because prices are nearly the same everywhere.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

When I buy something unsatisfactory, I usually keep it because complaining doesn't help.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

Sometimes I can't understand how I end up buying the kinds of things that I do.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

I am vulnerable to rip-offs, no matter how hard I try to prevent them.
5 *strongly disagree* 4 *disagree* 3 *neutral* 2 *agree* 1 *strongly agree*

Section 3

Please give a yes OR no response to the following questions	YES	NO
Is it important to you that your friends like the products you buy?	1	0
Have you ever gone inside a store to warm up on a cold day?	1	0
Do you find your mood improves with each purchase you make?	1	0
Would you be put off buying a product you really liked if your friends did not like it?	1	0
Do you find a bit of time pressure can push you to make important purchase decisions?	1	0
Would you make an unnecessary purchase, just to cheer yourself up?	1	0
Do you tend to make more rash purchase decisions when excited?	1	0
Do you try to keep up with current fashions and trends?	1	0
Do you find the type of things you buy yourself change depending on time of year?	1	0
Do you enjoy getting into the spirit of holidays?	1	0
Do you still browse through shops even when you do not have money?	1	0
Have you ever left a store after noticing a bad smell?	1	0
Do you tend to make more rash purchase decisions when bored?	1	0
Do you find yourself buying more food when grocery shopping, if you have not yet eaten?	1	0
Have you ever left a store because you felt the background music was too loud?	1	0
Do you find shopping exciting?	1	0
Do you enjoy shopping for its own sake, not just for the items you purchase?	1	0
Do you go shopping to escape ordinary life?	1	0
Have you ever found certain products more desirable when someone you admire used/endorsed it? E.g. hair colourant, brands of sports clothes/shoes, etc.	1	0
Do you believe that a crowded shopping centre must be a good shopping centre?	1	0
Do you get excited when seasonal decorations appear in shopping centres?	1	0
Do your tastes (E.g. in clothes, movies, music, etc.) change to match those around you?	1	0
Do you find you make more split-second purchase decisions when pushed for time?	1	0
Compared to other activities, does your time spent shopping feel truly enjoyable?	1	0
Do you ever find yourself browsing, even when you have no intention to buy?	1	0
Have you ever gone shopping when sad or depressed, to cheer yourself up?	1	0
Do you find you shop mainly because you want to, and not because you have to?	1	0
Do you ever watch others to keep up with changes in fashion?	1	0
Do you find yourself spending more on yourself in the run-up to a seasonal event?	1	0
Have you ever stayed a long time in a store that plays good background music?	1	0
Do you find you start to make more bad decisions when you are hungry?	1	0
Do you try to buy products that are similar to those your friends buy?	1	0
Have you ever left a store that displays items in a haphazard or disorganised way?	1	0
Do you tend to make a lot more purchase decisions immediately after payday?	1	0

Do you ever shop to put yourself in a better mood?	1	0

Section 4

	YES	NO
Does your mood often go up and down?	1	0
Do you take much notice of what people think?	0	1
Do you ever feel `just miserable' for no reason?	1	0
Would being in debt worry you?	0	1
Are you rather lively?	1	0
Are you an irritable person?	1	0
Would you take drugs which may have strange or dangerous effects?	1	0
Do you enjoy meeting new people?	1	0
Are your feelings easily hurt?	1	0
Do you prefer to go your own way rather than act by the rules?	1	0
Can you usually let yourself go and enjoy yourself at a lively party?	1	0
Do you often feel fed up?	1	0
Do good manners and cleanliness matter much to you?	0	1
Do you usually take the initiative in making new friends?	1	0
Would you call yourself a nervous person?	1	0
Do you think marriage is old-fashioned and should be done away with?	1	0
Can you easily get some life into a rather dull party?	1	0
Are you a worrier?	1	0
Do you enjoy co -operating with others?	0	1
Do you tend to keep in the background on social occasions?	0	1
Does it worry you if there are mistakes in your work?	0	1
Would you call yourself tense or highly- strung?	1	0
Do you think people spend too much time safeguarding their future with savings & insurances?	1	0
Do you like mixing with people?	1	0
Do you worry too long after an embarrassing experience?	1	0
Do you try not to be rude to people?	0	1
Do you like plenty of bustle and excitement around you?	1	0
Do you suffer from `nerves'?	1	0
Would you like other people to be afraid of you?	1	0
Are you almost always quiet when you are with other people?	0	1
Do you often feel lonely?	1	0
Is it better to follow society's rules than go your own way?	1	0
Do other people think of you as being very lively?	1	0
Are you often troubled about feelings of guilt?	1	0
Can you get a party going?	1	0

Section 5

Gender 1 Male 2 Female

Age 1 16-25 2 26-35 3 36-45 4 46-55 5 56-65 6 66+

Nationality _____

Education- please tick the highest educational level you achieved

1 Postgraduate Degree
2 Degree
3 Teaching/ HND/ Nursing
4 A-level or equivalent
5 GCSE or equivalent
6 No qualification
7 Other qualification (please specify) _____

Economic Activity

1 Part Time Employed
2 Full Time Employed
3 Self Employed
4 Unemployed
5 Full-time Student
6 Retired
7 Looking after home/ family
8 Other

Income Bracket

1 £0-10,000 2 £10,000-20,000
3 £20,000-30,000 4 £30,000-40,000
5 £40,000-50,000 6 £50,000-60,000
7 £60,000+ 8 Prefer not to say

Postcode Sector for your home (e.g. NE29 4, DH1 3) ☐☐☐☐ ☐

Your personal details will be treated confidentially, and will not be passed on

Would you be interested in helping out with further research? 1 Yes 2 No

If yes, please enter your name, and either a telephone number, or email address

Name _____

Contact Details _____

Thank you again for taking the time to fill out this questionnaire.

Appendix F: Study 2 Pilot Item-to-totals Final

See overleaf for item-to-total correlations for the study 2 constructs.

Correlations

		SitPhysTot	SitPhys_1	SitPhys_3	SitPhys_5	SitPhys_7	SitPhys_8
SitPhysTot	Pearson Correlation	1	.828**	.887**	.808**	.911**	.880**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	25	25	25	25	25	25
SitPhys_1	Pearson Correlation	.828**	1	.727**	.491*	.705**	.705**
	Sig. (2-tailed)	.000		.000	.013	.000	.000
	N	25	25	25	25	25	25
SitPhys_3	Pearson Correlation	.887**	.727**	1	.800**	.702**	.629**
	Sig. (2-tailed)	.000	.000		.000	.000	.001
	N	25	25	25	25	25	25
SitPhys_5	Pearson Correlation	.808**	.491*	.800**	1	.622**	.559**
	Sig. (2-tailed)	.000	.013	.000		.001	.004
	N	25	25	25	25	25	25
SitPhys_7	Pearson Correlation	.911**	.705**	.702**	.622**	1	.876**
	Sig. (2-tailed)	.000	.000	.000	.001		.000
	N	25	25	25	25	25	25
SitPhys_8	Pearson Correlation	.880**	.705**	.629**	.559**	.876**	1
	Sig. (2-tailed)	.000	.000	.001	.004	.000	
	N	25	25	25	25	25	25

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		SitSocTot	SitSoc_1	SitSoc_3	SitSoc_4	SitSoc_5	SitSoc_9
SitSocTot	Pearson Correlation	1	.817**	.636**	.892**	.821**	.814**
	Sig. (2-tailed)		.000	.001	.000	.000	.000
	N	24	24	24	24	24	24
SitSoc_1	Pearson Correlation	.817**	1	.236	.662**	.571**	.726**
	Sig. (2-tailed)	.000		.266	.000	.004	.000
	N	24	24	24	24	24	24

SitSoc_3	Pearson Correlation	.636**	.236	1	.614**	.448*	.337
	Sig. (2-tailed)	.001	.266		.001	.028	.107
	N	24	24	24	24	24	24
SitSoc_4	Pearson Correlation	.892**	.662**	.614**	1	.712**	.563**
	Sig. (2-tailed)	.000	.000	.001		.000	.004
	N	24	24	24	24	24	24
SitSoc_5	Pearson Correlation	.821**	.571**	.448*	.712**	1	.560**
	Sig. (2-tailed)	.000	.004	.028	.000		.004
	N	24	24	24	24	24	24
SitSoc_9	Pearson Correlation	.814**	.726**	.337	.563**	.560**	1
	Sig. (2-tailed)	.000	.000	.107	.004	.004	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		SitTempTot	SitTemp_1	SitTemp_3	SitTemp_4	SitTemp_7	SitTemp_9
SitTempTot	Pearson Correlation	1	.645**	.699**	.794**	.765**	.689**
	Sig. (2-tailed)		.001	.000	.000	.000	.000
	N	24	24	24	24	24	24
SitTemp_1	Pearson Correlation	.645**	1	.222	.365	.482*	.226
	Sig. (2-tailed)	.001		.298	.079	.017	.289
	N	24	24	24	24	24	24
SitTemp_3	Pearson Correlation	.699**	.222	1	.786**	.269	.280
	Sig. (2-tailed)	.000	.298		.000	.204	.184
	N	24	24	24	24	24	24
SitTemp_4	Pearson Correlation	.794**	.365	.786**	1	.480*	.305
	Sig. (2-tailed)	.000	.079	.000		.018	.147
	N	24	24	24	24	24	24
SitTemp_7	Pearson Correlation	.765**	.482*	.269	.480*	1	.558**
	Sig. (2-tailed)	.000	.017	.204	.018		.005

	N	24	24	24	24	24	24
SitTemp_9	Pearson Correlation	.689**	.226	.280	.305	.558**	1
	Sig. (2-tailed)	.000	.289	.184	.147	.005	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		SitRegulTot	SitRegulat_1	SitRegulat_3	SitRegulat_5	SitRegulat_6	SitRegulat_7
SitRegulTot	Pearson Correlation	1	.882**	.740**	.854**	.713**	.675**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
SitRegulat_1	Pearson Correlation	.882**	1	.536**	.832**	.555**	.404
	Sig. (2-tailed)	.000		.007	.000	.005	.050
	N	24	24	24	24	24	24
SitRegulat_3	Pearson Correlation	.740**	.536**	1	.497*	.319	.588**
	Sig. (2-tailed)	.000	.007		.014	.128	.002
	N	24	24	24	24	24	24
SitRegulat_5	Pearson Correlation	.854**	.832**	.497*	1	.519**	.357
	Sig. (2-tailed)	.000	.000	.014		.009	.087
	N	24	24	24	24	24	24
SitRegulat_6	Pearson Correlation	.713**	.555**	.319	.519**	1	.388
	Sig. (2-tailed)	.000	.005	.128	.009		.061
	N	24	24	24	24	24	24
SitRegulat_7	Pearson Correlation	.675**	.404	.588**	.357	.388	1
	Sig. (2-tailed)	.000	.050	.002	.087	.061	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		UtilReinfoTot	UtilReinfo_1	UtilReinfo_2	UtilReinfo_3	UtilReinfo_5	UtilReinfo_7
UtilReinfoTot	Pearson Correlation	1	.838**	.300	.838**	.879**	.888**

	Sig. (2-tailed)		.000	.154	.000	.000	.000
	N	24	24	24	24	24	24
UtilReinfo_1	Pearson Correlation	.838**	1	.042	.616**	.719**	.717**
	Sig. (2-tailed)	.000		.846	.001	.000	.000
	N	24	24	24	24	24	24
UtilReinfo_2	Pearson Correlation	.300	.042	1	.039	-.008	.026
	Sig. (2-tailed)	.154	.846		.857	.972	.905
	N	24	24	24	24	24	24
UtilReinfo_3	Pearson Correlation	.838**	.616**	.039	1	.751**	.774**
	Sig. (2-tailed)	.000	.001	.857		.000	.000
	N	24	24	24	24	24	24
UtilReinfo_5	Pearson Correlation	.879**	.719**	-.008	.751**	1	.836**
	Sig. (2-tailed)	.000	.000	.972	.000		.000
	N	24	24	24	24	24	24
UtilReinfo_7	Pearson Correlation	.888**	.717**	.026	.774**	.836**	1
	Sig. (2-tailed)	.000	.000	.905	.000	.000	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		InfoReinfoTot	InfoReinfo_1	InfoReinfo_3	InfoReinfo_4	InfoReinfo_6	InfoReinfo_9
InfoReinfoTot	Pearson Correlation	1	.806**	.810**	.669**	.915**	.875**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
InfoReinfo_1	Pearson Correlation	.806**	1	.575**	.322	.702**	.626**
	Sig. (2-tailed)	.000		.003	.125	.000	.001
	N	24	24	24	24	24	24
InfoReinfo_3	Pearson Correlation	.810**	.575**	1	.393	.715**	.687**
	Sig. (2-tailed)	.000	.003		.057	.000	.000
	N	24	24	24	24	24	24

InfoReinfo_4	Pearson Correlation	.669**	.322	.393	1	.522**	.458*
	Sig. (2-tailed)	.000	.125	.057		.009	.024
	N	24	24	24	24	24	24
InfoReinfo_6	Pearson Correlation	.915**	.702**	.715**	.522**	1	.817**
	Sig. (2-tailed)	.000	.000	.000	.009		.000
	N	24	24	24	24	24	24
InfoReinfo_9	Pearson Correlation	.875**	.626**	.687**	.458*	.817**	1
	Sig. (2-tailed)	.000	.001	.000	.024	.000	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		AversConsTot	AversConse_1	AversConse_2	AversConse_3	AversConse_4	AversConse_5
AversConsTot	Pearson Correlation	1	.937**	.875**	.959**	.927**	.975**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
AversConse_1	Pearson Correlation	.937**	1	.767**	.857**	.807**	.926**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	24	24	24	24	24	24
AversConse_2	Pearson Correlation	.875**	.767**	1	.820**	.749**	.799**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	24	24	24	24	24	24
AversConse_3	Pearson Correlation	.959**	.857**	.820**	1	.883**	.921**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	24	24	24	24	24	24
AversConse_4	Pearson Correlation	.927**	.807**	.749**	.883**	1	.897**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	24	24	24	24	24	24
AversConse_5	Pearson Correlation	.975**	.926**	.799**	.921**	.897**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		AppPhsTot	AppPhysicl_1	AppPhysicl_2	AppPhysicl_3	AppPhysicl_4	AppPhysicl_5
AppPhsTot	Pearson Correlation	1	.771**	.778**	.860**	.734**	.903**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
AppPhysicl_1	Pearson Correlation	.771**	1	.284	.787**	.395	.733**
	Sig. (2-tailed)	.000		.178	.000	.056	.000
	N	24	24	24	24	24	24
AppPhysicl_2	Pearson Correlation	.778**	.284	1	.542**	.665**	.586**
	Sig. (2-tailed)	.000	.178		.006	.000	.003
	N	24	24	24	24	24	24
AppPhysicl_3	Pearson Correlation	.860**	.787**	.542**	1	.372	.788**
	Sig. (2-tailed)	.000	.000	.006		.073	.000
	N	24	24	24	24	24	24
AppPhysicl_4	Pearson Correlation	.734**	.395	.665**	.372	1	.549**
	Sig. (2-tailed)	.000	.056	.000	.073		.005
	N	24	24	24	24	24	24
AppPhysicl_5	Pearson Correlation	.903**	.733**	.586**	.788**	.549**	1
	Sig. (2-tailed)	.000	.000	.003	.000	.005	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		AppExplTot	AppExplore_1	AppExplore_2	AppExplore_3	AppExplore_5
AppExplTot	Pearson Correlation	1	.954**	.761**	.887**	.912**
	Sig. (2-tailed)		.000	.000	.000	.000

	N	24	24	24	24	24
AppExplore_1	Pearson Correlation	.954**	1	.658**	.817**	.876**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	24	24	24	24	24
AppExplore_2	Pearson Correlation	.761**	.658**	1	.467*	.508*
	Sig. (2-tailed)	.000	.000		.021	.011
	N	24	24	24	24	24
AppExplore_3	Pearson Correlation	.887**	.817**	.467*	1	.850**
	Sig. (2-tailed)	.000	.000	.021		.000
	N	24	24	24	24	24
AppExplore_5	Pearson Correlation	.912**	.876**	.508*	.850**	1
	Sig. (2-tailed)	.000	.000	.011	.000	
	N	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		AppCommTot	AppCommuni_2	AppCommuni_3	AppCommuni_4	AppCommuni_5	AppCommuni_6
AppCommTot	Pearson Correlation	1	.955**	.859**	.948**	.755**	.879**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
AppCommuni_2	Pearson Correlation	.955**	1	.905**	.959**	.574**	.774**
	Sig. (2-tailed)	.000		.000	.000	.003	.000
	N	24	24	24	24	24	24
AppCommuni_3	Pearson Correlation	.859**	.905**	1	.900**	.433*	.574**
	Sig. (2-tailed)	.000	.000		.000	.035	.003
	N	24	24	24	24	24	24
AppCommuni_4	Pearson Correlation	.948**	.959**	.900**	1	.558**	.768**
	Sig. (2-tailed)	.000	.000	.000		.005	.000

	N	24	24	24	24	24	24
AppCommuni_5	Pearson Correlation	.755**	.574**	.433*	.558**	1	.718**
	Sig. (2-tailed)	.000	.003	.035	.005		.000
	N	24	24	24	24	24	24
AppCommuni_6	Pearson Correlation	.879**	.774**	.574**	.768**	.718**	1
	Sig. (2-tailed)	.000	.000	.003	.000	.000	
	N	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		AppPerfSatTot	AppPerfSat_1	AppPerfSat_2	AppPerfSat_3	AppPerfSat_4
AppPerfSatTot	Pearson Correlation	1	.874**	.821**	.496*	.752**
	Sig. (2-tailed)		.000	.000	.014	.000
	N	24	24	24	24	24
AppPerfSat_1	Pearson Correlation	.874**	1	.646**	.400	.536**
	Sig. (2-tailed)	.000		.001	.053	.007
	N	24	24	24	24	24
AppPerfSat_2	Pearson Correlation	.821**	.646**	1	.088	.678**
	Sig. (2-tailed)	.000	.001		.682	.000
	N	24	24	24	24	24
AppPerfSat_3	Pearson Correlation	.496*	.400	.088	1	-.016
	Sig. (2-tailed)	.014	.053	.682		.942
	N	24	24	24	24	24
AppPerfSat_4	Pearson Correlation	.752**	.536**	.678**	-.016	1
	Sig. (2-tailed)	.000	.007	.000	.942	
	N	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		LHUtilTot	LHUtil_1	LHUtil_2	LHUtil_4	LHUtil_5	LHUtil_6
LHUtilTot	Pearson Correlation	1	.790**	.813**	.732**	.733**	.731**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	25	25	25	25	25	25
LHUtil_1	Pearson Correlation	.790**	1	.518**	.377	.441*	.705**
	Sig. (2-tailed)	.000		.008	.063	.028	.000
	N	25	25	25	25	25	25
LHUtil_2	Pearson Correlation	.813**	.518**	1	.465*	.767**	.352
	Sig. (2-tailed)	.000	.008		.019	.000	.085
	N	25	25	25	25	25	25
LHUtil_4	Pearson Correlation	.732**	.377	.465*	1	.377	.474*
	Sig. (2-tailed)	.000	.063	.019		.063	.017
	N	25	25	25	25	25	25
LHUtil_5	Pearson Correlation	.733**	.441*	.767**	.377	1	.247
	Sig. (2-tailed)	.000	.028	.000	.063		.235
	N	25	25	25	25	25	25
LHUtil_6	Pearson Correlation	.731**	.705**	.352	.474*	.247	1
	Sig. (2-tailed)	.000	.000	.085	.017	.235	
	N	25	25	25	25	25	25

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		LHInfoTot	LHInfo_2	LHInfo_3	LHInfo_4	LHInfo_9	LHInfo_10
LHInfoTot	Pearson Correlation	1	.752**	.844**	.873**	.772**	.860**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	25	25	25	25	25	25
LHInfo_2	Pearson Correlation	.752**	1	.549**	.599**	.351	.598**
	Sig. (2-tailed)	.000		.005	.002	.086	.002

	N	25	25	25	25	25	25
LHInfo_3	Pearson Correlation	.844**	.549**	1	.659**	.623**	.598**
	Sig. (2-tailed)	.000	.005		.000	.001	.002
	N	25	25	25	25	25	25
LHInfo_4	Pearson Correlation	.873**	.599**	.659**	1	.561**	.717**
	Sig. (2-tailed)	.000	.002	.000		.004	.000
	N	25	25	25	25	25	25
LHInfo_9	Pearson Correlation	.772**	.351	.623**	.561**	1	.666**
	Sig. (2-tailed)	.000	.086	.001	.004		.000
	N	25	25	25	25	25	25
LHInfo_10	Pearson Correlation	.860**	.598**	.598**	.717**	.666**	1
	Sig. (2-tailed)	.000	.002	.002	.000	.000	
	N	25	25	25	25	25	25

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		LHCostTot	LHCost_1	LHCost_2	LHCost_3	LHCost_4	LHCost_5
LHCostTot	Pearson Correlation	1	.732**	.831**	.804**	.778**	.831**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	25	25	25	25	25	25
LHCost_1	Pearson Correlation	.732**	1	.729**	.363	.360	.529**
	Sig. (2-tailed)	.000		.000	.074	.078	.007
	N	25	25	25	25	25	25
LHCost_2	Pearson Correlation	.831**	.729**	1	.518**	.429*	.745**
	Sig. (2-tailed)	.000	.000		.008	.032	.000
	N	25	25	25	25	25	25
LHCost_3	Pearson Correlation	.804**	.363	.518**	1	.647**	.623**
	Sig. (2-tailed)	.000	.074	.008		.000	.001
	N	25	25	25	25	25	25
LHCost_4	Pearson Correlation	.778**	.360	.429*	.647**	1	.501*

	Sig. (2-tailed)	.000	.078	.032	.000		.011
	N	25	25	25	25	25	25
LHCost_5	Pearson Correlation	.831**	.529**	.745**	.623**	.501*	1
	Sig. (2-tailed)	.000	.007	.000	.001	.011	
	N	25	25	25	25	25	25

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		PleasureTot	Pleasure_1	Pleasure_3	Pleasure_5	Pleasure_8	Pleasure_3	Pleasure_4	Pleasure_7	Pleasure_9
PleasureTot	Pearson Correlation	1	.809**	.621**	.882**	.822**	.466*	.831**	.908**	.919**
	Sig. (2-tailed)		.000	.001	.000	.000	.022	.000	.000	.000
	N	24	24	24	24	24	24	24	24	24
Pleasure_1	Pearson Correlation	.809**	1	.405*	.762**	.595**	.392	.605**	.682**	.623**
	Sig. (2-tailed)	.000		.050	.000	.002	.058	.002	.000	.001
	N	24	24	24	24	24	24	24	24	24
Pleasure_3	Pearson Correlation	.621**	.405*	1	.516**	.392	.289	.365	.482*	.573**
	Sig. (2-tailed)	.001	.050		.010	.058	.172	.079	.017	.003
	N	24	24	24	24	24	24	24	24	24
Pleasure_5	Pearson Correlation	.882**	.762**	.516**	1	.643**	.335	.607**	.808**	.853**
	Sig. (2-tailed)	.000	.000	.010		.001	.110	.002	.000	.000
	N	24	24	24	24	24	24	24	24	24
Pleasure_8	Pearson Correlation	.822**	.595**	.392	.643**	1	.091	.764**	.747**	.767**
	Sig. (2-tailed)	.000	.002	.058	.001		.673	.000	.000	.000
	N	24	24	24	24	24	24	24	24	24
Pleasure_3	Pearson Correlation	.466*	.392	.289	.335	.091	1	.298	.382	.346
	Sig. (2-tailed)	.022	.058	.172	.110	.673		.158	.065	.098
	N	24	24	24	24	24	24	24	24	24
Pleasure_4	Pearson Correlation	.831**	.605**	.365	.607**	.764**	.298	1	.732**	.760**
	Sig. (2-tailed)	.000	.002	.079	.002	.000	.158		.000	.000
	N	24	24	24	24	24	24	24	24	24
Pleasure_7	Pearson Correlation	.908**	.682**	.482*	.808**	.747**	.382	.732**	1	.818**
	Sig. (2-tailed)	.000	.000	.017	.000	.000	.065	.000		.000

	N	24	24	24	24	24	24	24	24	24
Pleasure_9	Pearson Correlation	.919**	.623**	.573**	.853**	.767**	.346	.760**	.818**	1
	Sig. (2-tailed)	.000	.001	.003	.000	.000	.098	.000	.000	
	N	24	24	24	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		ArousalTot	Arousal_2	Arousal_4	Arousal_7	Arousal_9	Arousal_6	Arousal_8	Arousal_10
ArousalTot	Pearson Correlation	1	.268	.556**	.795**	.745**	.602**	.869**	.744**
	Sig. (2-tailed)		.205	.005	.000	.000	.002	.000	.000
	N	24	24	24	24	24	24	24	24
Arousal_2	Pearson Correlation	.268	1	-.193	-.045	.233	.002	.096	.126
	Sig. (2-tailed)	.205		.366	.833	.273	.993	.656	.558
	N	24	24	24	24	24	24	24	24
Arousal_4	Pearson Correlation	.556**	-.193	1	.546**	.336	.076	.434*	.241
	Sig. (2-tailed)	.005	.366		.006	.109	.723	.034	.256
	N	24	24	24	24	24	24	24	24
Arousal_7	Pearson Correlation	.795**	-.045	.546**	1	.448*	.420*	.593**	.653**
	Sig. (2-tailed)	.000	.833	.006		.028	.041	.002	.001
	N	24	24	24	24	24	24	24	24
Arousal_9	Pearson Correlation	.745**	.233	.336	.448*	1	.275	.611**	.470*
	Sig. (2-tailed)	.000	.273	.109	.028		.193	.002	.020
	N	24	24	24	24	24	24	24	24
Arousal_6	Pearson Correlation	.602**	.002	.076	.420*	.275	1	.619**	.392
	Sig. (2-tailed)	.002	.993	.723	.041	.193		.001	.058
	N	24	24	24	24	24	24	24	24
Arousal_8	Pearson Correlation	.869**	.096	.434*	.593**	.611**	.619**	1	.683**
	Sig. (2-tailed)	.000	.656	.034	.002	.002	.001		.000
	N	24	24	24	24	24	24	24	24
Arousal_10	Pearson Correlation	.744**	.126	.241	.653**	.470*	.392	.683**	1
	Sig. (2-tailed)	.000	.558	.256	.001	.020	.058	.000	
	N	24	24	24	24	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		DominanceTot	Dominance_6	Dominance_2	Dominance_5
DominanceTot	Pearson Correlation	1	.692**	.761**	.560**
	Sig. (2-tailed)		.000	.000	.004
	N	24	24	24	24
Dominance_6	Pearson Correlation	.692**	1	.291	.104
	Sig. (2-tailed)	.000		.167	.628
	N	24	24	24	24
Dominance_2	Pearson Correlation	.761**	.291	1	.145
	Sig. (2-tailed)	.000	.167		.498
	N	24	24	24	24
Dominance_5	Pearson Correlation	.560**	.104	.145	1
	Sig. (2-tailed)	.004	.628	.498	
	N	24	24	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix G: Study 2 Final Shopping Centre Questionnaire

Dear Shoppers, The following questionnaire is part of academic research at Durham University, into factors affecting choice of Shopping Centre in the north east of England. It will be used for academic purposes only, and will be treated with complete confidentiality. Please take the time to complete this questionnaire, it should take around 15 to 20 minutes to complete. By taking part in this questionnaire you will be considered for a prize draw to win a shopping voucher of your choice: Amazon, ASOS, Metro Centre, Marks and Spencers, Asda or Sainsbury's. There is one prize of £50, and five smaller prizes of £10.If you wish to be entered for a chance to win, please fill in contact details at the end of the questionnaire, along with your voucher preference. Your personal details will only be used to contact you if you win the voucher. Winners will be informed by June 30th 2012.You can view your progress through the questionnaire on this bar:

Please identify the last shopping centre (a shopping area with multiple stores) you visited in the north east of England. This might include a town or city centre. Please note this study is NOT looking at supermarkets. Last Shopping Centre Visited:_____

SCday When did you visit the shopping centre?

	Morning (1)	Afternoon (2)	Evening (3)	All Day (4)
Weekday (1)	❍	❍	❍	❍
Weekend (8)	❍	❍	❍	❍

SCParty How would you best describe your shopping party

- ❍ On my own (1)
- ❍ With my partner (2)
- ❍ With a friend (3)
- ❍ With friends (4)
- ❍ With family (5)

SCSummary Provide a brief summary of what you did on the visit:

SCTimePref How much time would you like to spend in this shopping centre?

- ❍ None (1)
- ❍ A few minutes (2)
- ❍ Half an hour (4)
- ❍ One hour (5)
- ❍ A few hours (7)
- ❍ A day (8)

TimesVisited Roughly how many times have you visited this particular shopping centre in the last 6 months.

_____

Transport How did you get to the shopping centre for this visit?

- ❑ Private Car (1)
- ❑ Taxi (2)
- ❑ Bicycle (3)
- ❑ On Foot (4)
- ❑ Public Bus (5)
- ❑ Coach (6)
- ❑ Metro (7)
- ❑ Train (8)
- ❑ Other (9)

Sitphy/Sitsoc Please indicate the extent to which you agree with the following statements with respect to the shopping centre most recently visited, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The shopping centre is well lit (1)	❍	❍	❍	❍	❍	❍	❍
Odours in the shopping centre are pleasant (2)	❍	❍	❍	❍	❍	❍	❍
I enjoy the music played (3)	❍	❍	❍	❍	❍	❍	❍
The shopping centre looks good (4)	❍	❍	❍	❍	❍	❍	❍
The shopping centre has a modern feel (5)	❍	❍	❍	❍	❍	❍	❍
The shopping centre provides a good opportunity to shop with friends (6)	❍	❍	❍	❍	❍	❍	❍
The shopping centre seems popular (7)	❍	❍	❍	❍	❍	❍	❍
The shopping centre is a good place to see new fashions and trends (8)	❍	❍	❍	❍	❍	❍	❍
I would trust sales personnel in the shopping (9)	❍	❍	❍	❍	❍	❍	❍
The shopping centre has lots of well known stores (10)	❍	❍	❍	❍	❍	❍	❍

SitTem/SitReg ----------

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The shopping centre felt very fast paced (1)	❍	❍	❍	❍	❍	❍	❍
I didn't have enough time to do everything I wanted in the shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
I had to hurry to complete my shopping trip on time (3)	❍	❍	❍	❍	❍	❍	❍
I felt rushed for time in this shopping centre (4)	❍	❍	❍	❍	❍	❍	❍
I felt pressured to complete my shopping quickly (5)	❍	❍	❍	❍	❍	❍	❍
Parking is very restricted at the shopping centre. (6)	❍	❍	❍	❍	❍	❍	❍
Security personnel are highly visible. (7)	❍	❍	❍	❍	❍	❍	❍
It costs a lot for people to park at the shopping centre. (8)	❍	❍	❍	❍	❍	❍	❍
A lot of time is spent queuing in the shopping centre. (9)	❍	❍	❍	❍	❍	❍	❍
There are many time limited offers in the shops. (10)	❍	❍	❍	❍	❍	❍	❍

ReinfInfo/ReinfUtil/AversCons Please tick the response that best describes the outcome of your visit to the shopping centre

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I felt good after my visit to this shopping centre. (1)	❍	❍	❍	❍	❍	❍	❍
Friends commented positively on the products I bought. (2)	❍	❍	❍	❍	❍	❍	❍
My friends approve of my choice of shopping centre. (3)	❍	❍	❍	❍	❍	❍	❍
People will respect me more for visiting this shopping centre. (4)	❍	❍	❍	❍	❍	❍	❍
I'm confident that my choice of shopping centre was the right one. (5)	❍	❍	❍	❍	❍	❍	❍
My visit to the shopping centre was a productive one. (6)	❍	❍	❍	❍	❍	❍	❍
I wasn't able to do everything I planned during the visit. (7)	❍	❍	❍	❍	❍	❍	❍
I was able to get some good deals on my visit. (8)	❍	❍	❍	❍	❍	❍	❍
I am satisfied with the outcome of my visit to the shopping. (9)	❍	❍	❍	❍	❍	❍	❍
I managed to do everything I wanted on my visit. (10)	❍	❍	❍	❍	❍	❍	❍
It was costly to get to the shopping centre. (11)	❍	❍	❍	❍	❍	❍	❍
It took too long to get to the shopping centre. (12)	❍	❍	❍	❍	❍	❍	❍
Getting to the shopping centre was difficult. (13)	❍	❍	❍	❍	❍	❍	❍
Access to the shopping centre was very difficult. (14)	❍	❍	❍	❍	❍	❍	❍
Finding the way to the shopping centre was complicated. (15)	❍	❍	❍	❍	❍	❍	❍

AppPhys/AppExp Please tick the response that best describes how you feel towards the shopping centre.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I would like to come back to this shopping centre in the future (1)	❍	❍	❍	❍	❍	❍	❍
I would leave this shopping centre as soon as possible (2)	❍	❍	❍	❍	❍	❍	❍
I like this shopping centre (3)	❍	❍	❍	❍	❍	❍	❍
I would avoid returning to this shopping centre (4)	❍	❍	❍	❍	❍	❍	❍
Shopping here is fun (5)	❍	❍	❍	❍	❍	❍	❍
I would enjoy exploring this shopping centre. (6)	❍	❍	❍	❍	❍	❍	❍
I would avoid looking around this shopping centre. (7)	❍	❍	❍	❍	❍	❍	❍
I'd stay longer in this shopping centre than planned. (8)	❍	❍	❍	❍	❍	❍	❍
I'd be willing to browse in this shopping centre. (9)	❍	❍	❍	❍	❍	❍	❍

AppCom/AppPerf ----------

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I would recommend this shopping centre to friends (1)	❍	❍	❍	❍	❍	❍	❍
I would be willing to listen to the advice of sales personnel (2)	❍	❍	❍	❍	❍	❍	❍
I would like to shop here with friends (3)	❍	❍	❍	❍	❍	❍	❍
I would avoid shopping here with family (4)	❍	❍	❍	❍	❍	❍	❍
Shopping here with family would be fun (5)	❍	❍	❍	❍	❍	❍	❍
It is easy to find everything I want at the shopping centre. (6)	❍	❍	❍	❍	❍	❍	❍
I'd be willing to spend more money than planned in this shopping centre. (7)	❍	❍	❍	❍	❍	❍	❍
It's harder than usual to find everything I want in this shopping centre. (8)	❍	❍	❍	❍	❍	❍	❍
I would probably buy more items in the shopping centre than expected. (9)	❍	❍	❍	❍	❍	❍	❍

Pleasure/Arousal Please tick the response that best describes your feelings about the shopping centre when you visited.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Unhappy:Happy (1)	❍	❍	❍	❍	❍	❍	❍
Overcrowded:Uncrowded (2)	❍	❍	❍	❍	❍	❍	❍
Contented:Melancholic (3)	❍	❍	❍	❍	❍	❍	❍
Unaroused:Aroused (4)	❍	❍	❍	❍	❍	❍	❍
Bored:Relaxed (5)	❍	❍	❍	❍	❍	❍	❍
Calm:Excited (6)	❍	❍	❍	❍	❍	❍	❍
Frenzied:Sluggish (7)	❍	❍	❍	❍	❍	❍	❍

Pleasure/Arousal ----------

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Despairing:Hopeful (1)	❍	❍	❍	❍	❍	❍	❍
Jittery:Dull (2)	❍	❍	❍	❍	❍	❍	❍
Unsatisfied:Satisfied (3)	❍	❍	❍	❍	❍	❍	❍
Sleepy:Wideawake (4)	❍	❍	❍	❍	❍	❍	❍
Annoyed:Pleased (5)	❍	❍	❍	❍	❍	❍	❍
Relaxed:Stimulated (6)	❍	❍	❍	❍	❍	❍	❍

LHInfo The sections above focussed on your response to the last shopping centre you visited. The following section is intended to find out more about what you consider to be important IN GENERAL, for all shopping trips. Please indicate the extent to which you agree with the following statements IN GENERAL, by selecting the appropriate response for each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I like being seen in the right sort of shopping centre (1)	❍	❍	❍	❍	❍	❍	❍
I enjoy getting feedback on purchases from friends (2)	❍	❍	❍	❍	❍	❍	❍
Visiting shopping centres is a good way to socialise (3)	❍	❍	❍	❍	❍	❍	❍
It is important for me to keep up with current fashions and trends (4)	❍	❍	❍	❍	❍	❍	❍
The brands I buy are similar to those my friends buy (5)	❍	❍	❍	❍	❍	❍	❍

LHUtil ----------

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is important to visit shopping centres that allow me to buy everything I want (1)	❍	❍	❍	❍	❍	❍	❍
It is important that a shopping centre visit puts me in a good mood (2)	❍	❍	❍	❍	❍	❍	❍
Efficiency is very important when choosing which shopping centre to visit (3)	❍	❍	❍	❍	❍	❍	❍
Visiting a good shopping centre makes me feel happy (4)	❍	❍	❍	❍	❍	❍	❍
I don't like having to make more shopping trips than are necessary (5)	❍	❍	❍	❍	❍	❍	❍

LHCost ----------

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is important to select shopping centres nearby (1)	❍	❍	❍	❍	❍	❍	❍
It shouldn't cost a lot to get to a shopping centre (2)	❍	❍	❍	❍	❍	❍	❍
Visiting shopping centres can be very costly (3)	❍	❍	❍	❍	❍	❍	❍
I dislike spending a lot of time going on a shopping trip (4)	❍	❍	❍	❍	❍	❍	❍
Shopping centres with lots of choice are more economical (5)	❍	❍	❍	❍	❍	❍	❍

Postcode Please enter your postcode. This will be used for mapping purposes only. Please leave blank if you prefer not to respond to this question.

Sex Sex:
- ❍ Male (1)
- ❍ Female (2)

Age Age (open ended)

SCPref Finally, please rank the following shopping centres on the basis of how frequently you visit them (1 for most frequently visited shopping centre, 2 for second most visited shopping centre, etc...). Only attempt to rank shopping centres you visit reasonable often (more than once a year). If you only visit one or two shopping centres, then only give a rank for these.

_____ Metro Centre (1)
_____ Eldon Shopping Centre (2)
_____ Monument Mall (3)
_____ The Gates, Durham (4)
_____ Prince Bishops, Durham (5)
_____ Manor Walks (6)
_____ Newcastle City Centre (7)
_____ Durham City Centre (8)
_____ Sunderland City Centre (9)
_____ The Bridges Sunderland (10)
_____ Cleveland Centre, Middlesbrough (11)
_____ Middlesbrough (12)
_____ Darlington (13)
_____ Cornmill Darlington (14)
_____ Arniston Centre (15)
_____ Dalton Park (16)
_____ Hartlepool (17)
_____ Washington Galleries (18)
_____ Royal Quays (19)
_____ Silverlinks (20)
_____ Kingston Park (21)
_____ Hexham (22)
_____ Other (23)

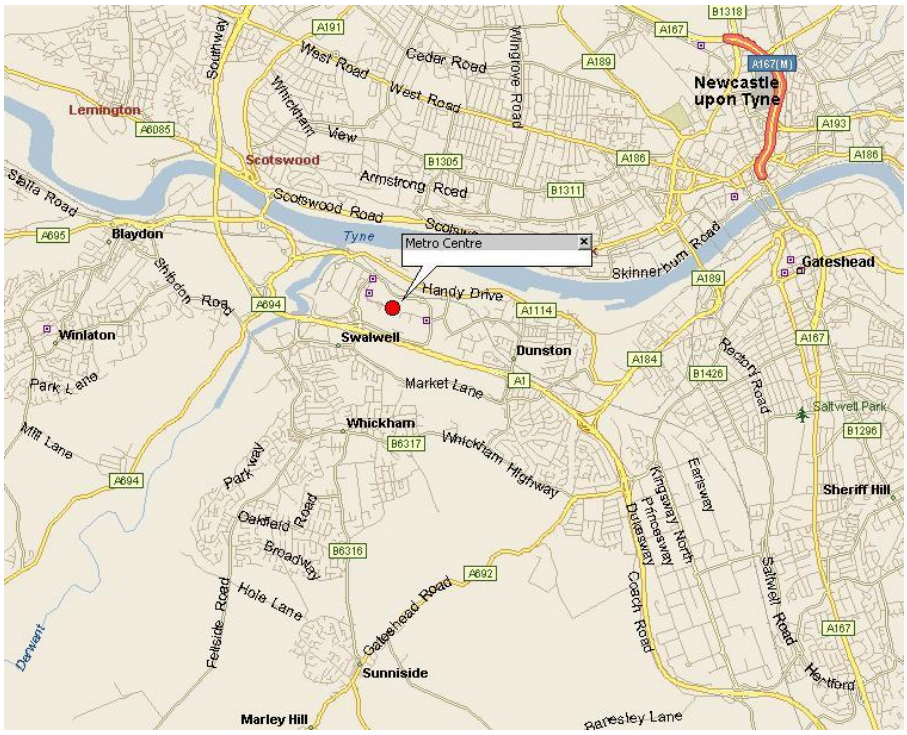
Reason What is the main reason for you visiting your most frequently visited shopping centre? (e.g. variety of shops/products, close to home/work, like the atmosphere, etc.)

_____

Thank you again for your participation and patience. If you would like to comment on the questionnaire, you can email me at m.l.mundell@durham.ac.uk. Please pass on the questionnaire to anyone you know who shops in the north east of England and may be interested in taking part.

Appendix H- Study 1 Centre Descriptions

Metro Centre Profile



Established 1986

Size 190,447 square metres

Units 334

Catchment- 1.5 million within half an hours' drive. 3 million within a one hour drive.

Approximately 1,250,000 people live within 30 minutes drive of the Metro Centre (MapPoint).

The Metro Centre a large fully enclosed out-of-town shopping centre located in Gateshead. At the time the data was collected, the centre was 190,446 square metres in size with 334 retail units, and was about to open up an extension- a new 'mall' which would allow it to resume its position as Europe's largest shopping centre, an honour it enjoyed when it first opened in 1986. At this time, the centre was anchored by a multiplex UCI cinema, themepark 'New Metroland' and a large Marks and Spencer's store at end points of the centre, and a House of Frasiers department store in the middle.

Despite starting to show its age, the centre has remained consistently popular, with generous free parking providing easy access to the 1.5 million people who live within half an hours' drive of the centre, and the 3 million within 1 hours' drive of the centre. The new transport interchange promised to improve the already substantial public transport access for buses and metro, which are also popular modes of transport for people visiting the Metro Centre. An extensive coach park is testimony to the draw of the Metro Centre of customers from much further afield, with coach tours from all over the UK making the trip to the Metro Centre, with even more scheduled visits in the run up to Christmas.

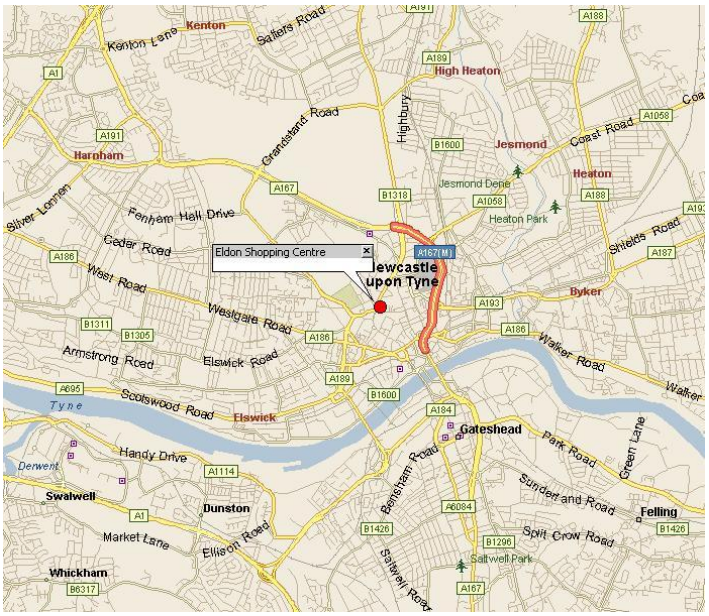
Since the research was conducted, the centre has undergone extensive modernisation, with new flooring and lighting and renovation to parts of the retail facias in certain zones. In terms of leisure facilities at the time of the research, the Metro Centre had an extensive selection of bars, cafes and restaurants, along with a multiplex cinema, Bowling alley, laser quest, video arcade and the indoor theme park New MetroLand. Despite rejuvenation efforts, the theme park, bowling alley, laser quest and video arcade are now being redeveloped as part of the new Yellow Mall development, which will have a new modernised multiplex cinema and stores, new food court, with plans to redevelop the blue mall where the current cinema resides in the near future. Part of this development, Qube, is now open, housing a new modern food court, a new updated bowling alley to replace the old one, and an indoor dodgem track, children's play area and games machines.

The Metro Centre boasts many cafes spread throughout, and one area, the Mediterranean Village (now 'Studio' as an extension of the Red Mall development) devoted to restaurants, along with a food court (newly redeveloped as part of the Yellow Mall rejuvenation).

Stores within the Metro Centre vary in size from small 'barrows' in the mall walkways, to small, medium and large stores. The Metro Centre has always boasted a diverse range of retail units, including a mix of clothing stores aimed at both sexes of many ages, though young low-medium income females seem most catered for.

Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	97.5
Get lunch or dinner	37.5
Browse in a store without planning to buy	27.5
Buy a snack or a drink	25
Socialise with friends or family	22.5
Kill some time wandering around	7.5
Look at mall exhibit or show	7.5
Go to a film	5
Visit the doctor/dentist/optician	2.5
Walk around for exercise	2.5
Talk to other shoppers	0
Play a game in the arcade	0

Eldon Centre Profile



Established 1976.

Eldon Square Size 100,986 square metres

Eldon Square Size 89,277 square metres retail space

Eldon Square Units 148

Anchor Stores- John Lewis, Fenwicks, Marks and Spencers, Boots, Argos Superstore.

Catchment- 1 million shoppers within half an hours drive. Approximately 1,350,000 in 30 minutes drive of Eldon Shopping Centre (MapPoint).

Transport- bus and metro stations, taxi rank and train station in walking distance.

Parking- 1,800 parking spaces

Leisure- integrated leisure centre. Cafes, restaurants and pubs.

Around five million people are reported to walk through the mall every year (http://www.novaloca.com/property-details/17706) accessed 13/12/09

Eldon shopping centre is a City Centre Mall, comprised of two enclosed, adjoined shopping centres- Eldon Square, and Eldon Gardens, with Eldon Square being the larger of the two, containing all anchor stores in the complex. At the time the research was carried out, Eldon Shopping Centre was 100,986 square metres and contained around 148 retail units. The interior or Eldon Square was beginning to feel somewhat dated, though the centre was still highly popular with locals and visitors alike. Eldon Gardens was more recently developed and had a more modern feel. The complex offers many retail units, with

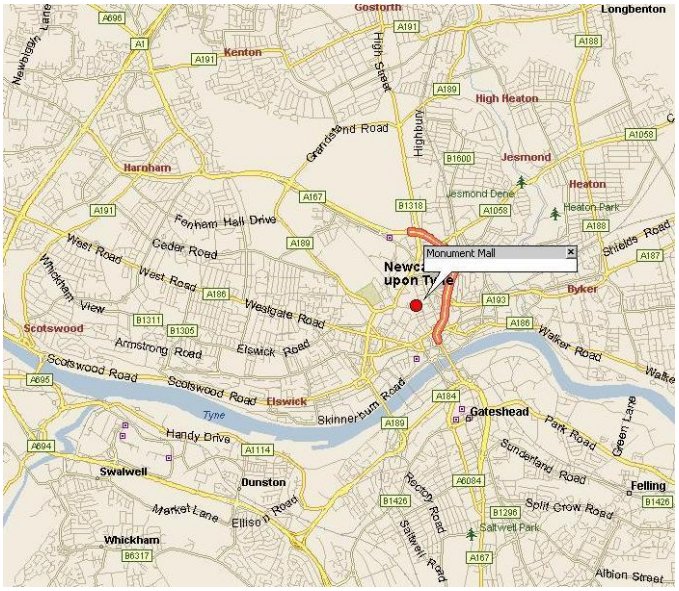
most Eldon Square units situated on one level, along with a leisure complex on an upper floor of Eldon Square, containing an astro-turf bowls lawn, and bouldering wall, which had not been modernised since the centre was originally built. Eldon square has many entrances leading to parts of Newcastle City Centre, such as the main shopping high street Northumberland Street, and The Monument, with Monument Mall located a few seconds away by foot.

Eldon shopping centre is an unusually shaped enclosed shopping centre, in that it has a series of anchor stores, but rather than being dispersed throughout the mall at strategic end points, the department stores tend to be clustered in just one end of the shopping centre, with the largest stores- a John Lewis (formerly Bainbridges), Mark's and Spencers, and Fenwicks department stores, and a large Boots all located next to each other. At the time data was collected, the centre was anchored at the far end by a large covered market area for small independent vendors to occupy, and an Argos superstore.

While Eldon Square has very few parking spaces for a centre that size, there are an additional 8,200 parking spaces nearby in the city centre. All parking is fairly expensive in the city centre, including the shopping centre car parks. The primary modes of transport to the shopping centre are by bus, metro or train.

Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	87.8
Get lunch or dinner	44.6
Browse in a store without planning to buy	35.1
Socialise with friends or family	25.7
Buy a snack or a drink	25.7
Kill some time wandering around	16.2
Look at mall exhibit or show	14.9
Walk around for exercise	13.5
Go to hair/beauty salon	5.4
Go to a film	2.7
Talk to other shoppers	1.4
Play a game in the arcade	0
Visit the doctor/dentist/optician	0

Monument Mall Profile



Opened in June 1992

38, 100 square metres

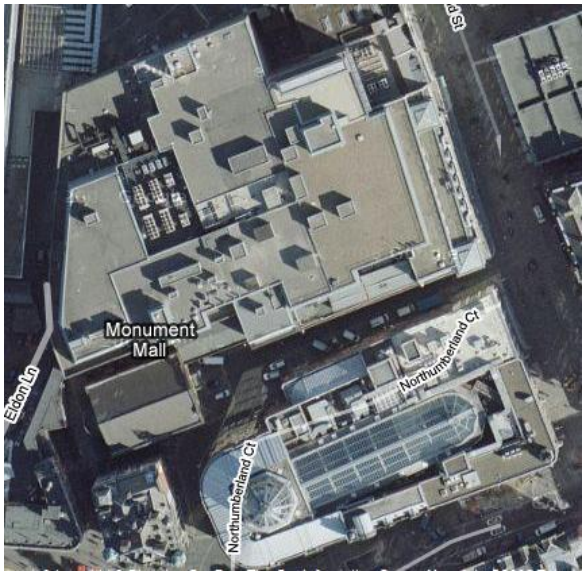
Monument Mall is an enclosed shopping centre spread over 4 floors, with 15 separate retail units.

Approximately 1,350,000 in 30 minutes drive of Monument Mall (MapPoint).

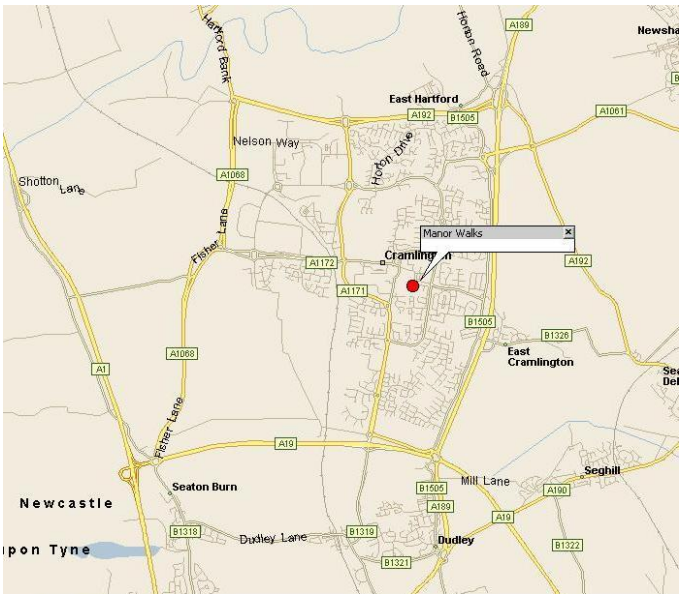
Monument Mall is a small City Centre Mall in Newcastle off Northumberland Street, the main shopping street in Newcastle. A recent development, Monument Mall has a spacious and airy feeling, with stores split across many levels, with a spacious atrium with escalators providing access to the different stores. Anchored by moderately sized JJB sports, and a large TK Maxx, Monument Mall mainly contains small retail units, with a Boots occupying a reasonably sized outlet on the ground floor. The top floor is devoted to cafes and restaurants, and facilities, while JJB sports takes up one floor of the development. Monument Mall has seen little change over the years, and despite its modern feel, it has not achieved the popularity of its neighbouring Eldon Shopping Centre or Northumberland Street, and seems to be facing difficulty, with more units becoming vacant. The lack of a suitable anchor store makes Monument Mall less attractive than both the nearby Eldon Shopping Centre and Northumberland Street, which it lies adjacent to. TK Maxx, though highly popular, can be accessed via a separate entrance, next to the mall, meaning customers have little incentive to enter the mall at all if they intend to visit the anchor store. More

recently, Monument Mall has attempted a renaissance by encouraging more art-based stores and galleries to open up.

Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	66.7
Get lunch or dinner	39.6
Socialise with friends or family	33.3
Kill some time wandering around	31.3
Browse in a store without planning to buy	27.1
Buy a snack or a drink	22.9
Look at mall exhibit or show	10.4
Walk around for exercise	4.2
Visit the doctor/dentist/optician	2.1
Go to a film	2.1
Go to hair/beauty salon	2.1
Talk to other shoppers	0
Play a game in the arcade	0



Manor Walks Profile



Size 23, 226 square metres

Units 52

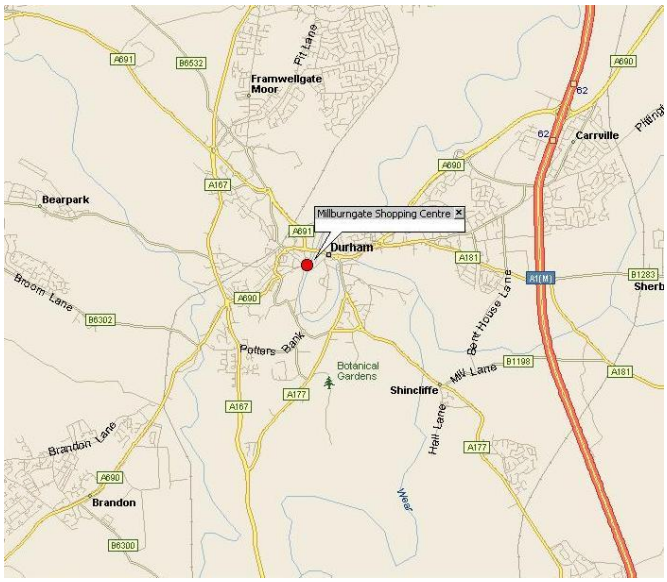
Parking- 1,500 parking spaces

Approximately 800,000 people living within 30 minutes drive of Manor Walks (MapPoint)

Manor Walks is classified a town shopping centre. At the time of data collection, Manor walks contained a mix of low-end fashion (principally female fashion) and home-ware stores, with a cafe in the middle. It was anchored by two supermarkets, a Sainsbury's and an Asda, one at each end. The decor in Manor Walks was aging when the study was conducted. Though serviceable, the flooring, poor lighting and fixtures matched the low-end image of the aging centre. The centre appears popular to the local population, and those working in the nearby industrial estate. Housing the main grocery outlets in the area, Asda and Sainsbury's appear to be suitable and successful anchor stores, both for their ability to draw customers to the centre, as well as for the trade they make themselves.

Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	65.7
Walk around for exercise	31.4
Browse in a store without planning to buy	28.6
Buy a snack or a drink	25.7
Get lunch or dinner	22.9
Socialise with friends or family	20
Kill some time wandering around	20
Look at mall exhibit or show	11.4
Visit the doctor/dentist/optician	8.6
Talk to other shoppers	8.6
Go to a film	0
Go to hair/beauty salon	0
Play a game in the arcade	0

Millburngate Profile



Size 18,583 square metres

Units 45

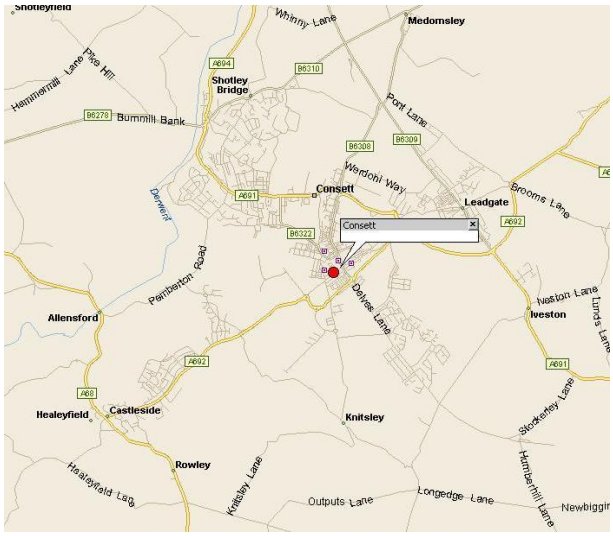
Approximately 980,000 people living within 30 minutes drive of Millburngate (MapPoint)

Millburngate is a small town shopping centre in the cathedral town of Durham. At the time of the study, the shopping centre was anchored by a Morrison's supermarket, and housed a mix of low-end stores.

Though a Waitrose took over the anchor premised from Morrisons, this closed less than two years later, and the anchor unit now sits empty. Without a suitable anchor, many of the other units within the shopping centre became empty, around 22% of the units are currently vacant. This situation may, in part, be due to the decay of nearby North Road, which has suffered as a result of the new Prince Bishops shopping centre and Gala entertainment centre, which has lead to the closure of many bars and shops.

Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	84.2
Browse in a store without planning to buy	33.3
Walk around for exercise	28.1
Kill some time wandering around	28.1
Get lunch or dinner	28.1
Socialise with friends or family	26.3
Buy a snack or a drink	26.3
Look at mall exhibit or show	15.8
Visit the doctor/dentist/optician	5.3
Talk to other shoppers	3.5
Go to hair/beauty salon	1.8
Go to a film	0
Play a game in the arcade	0

Consett Profile



Approximately 440,000 people living within 30 minutes drive of Consett (MapPoint)

Consett is a small town around 15 miles south-west of Newcastle. Data was collected from the main shopping street, Middle Street. 'Consett' in this study is therefore classified as a high street shopping area. The high street and nearby streets are characterised by low-end and independent retail stores. Off Middle Street is an InShops, a very small enclosed retail area with small independent retail units.

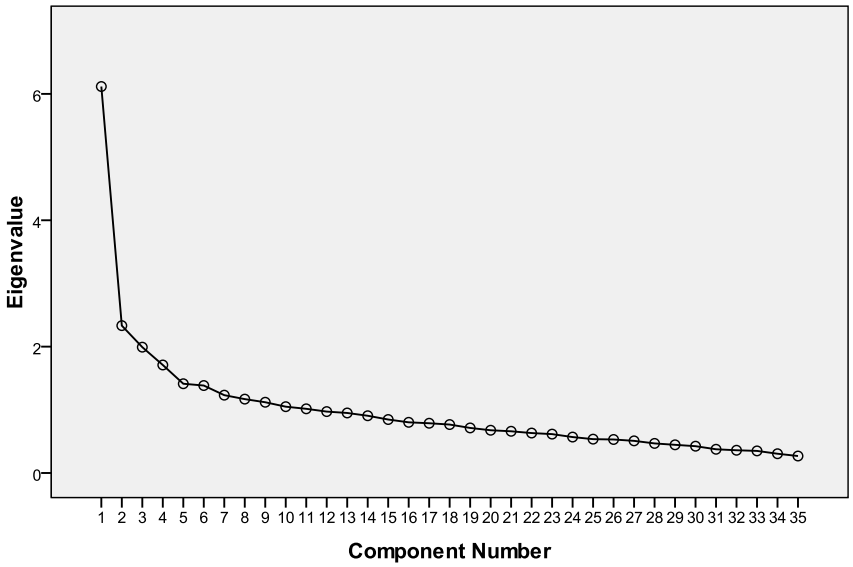
Activities patrons engage in while visiting shopping centre (based on Bloch 1994)	
Activity	**Percentage of visitors engaging in activity**
Look for something to buy	84.2
Browse in a store without planning to buy	33.3
Walk around for exercise	28.1
Kill some time wandering around	28.1
Get lunch or dinner	28.1
Socialise with friends or family	26.3
Buy a snack or a drink	26.3
Look at mall exhibit or show	15.8
Visit the doctor/dentist/optician	5.3
Talk to other shoppers	3.5
Go to hair/beauty salon	1.8
Go to a film	0
Play a game in the arcade	0

Appendix I: Study 1 PCA- Bartlet & KMO Tests

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	2293.769
	Df	595
	Sig.	.000

Scree Plot



KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.813
Bartlett's Test of Sphericity	Approx. Chi-Square	1653.772
	df	351
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.172	19.156	19.156	5.172	19.156	19.156	3.388	12.549	12.549
2	2.251	8.336	27.491	2.251	8.336	27.491	2.776	10.281	22.830
3	1.828	6.772	34.263	1.828	6.772	34.263	2.763	10.235	33.065
4	1.524	5.643	39.906	1.524	5.643	39.906	1.847	6.842	39.906
5	1.204	4.460	44.366						
6	1.145	4.240	48.607						
7	1.085	4.018	52.625						
8	.991	3.671	56.296						
9	.924	3.422	59.718						
10	.889	3.292	63.010						
11	.853	3.158	66.168						
12	.837	3.100	69.268						
13	.788	2.919	72.187						
14	.758	2.806	74.993						
15	.719	2.663	77.656						

16	.698	2.587	80.243						
17	.646	2.393	82.636						
18	.607	2.248	84.884						
19	.574	2.125	87.009						
20	.556	2.060	89.069						
21	.533	1.974	91.043						
22	.514	1.902	92.945						
23	.437	1.617	94.563						
24	.413	1.530	96.093						
25	.391	1.447	97.539						
26	.348	1.288	98.828						
27	.317	1.172	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component			
	1	2	3	4
Do you find shopping exciting?	.651	-.383	-.085	-.192
Compared to other activities, does your time spend shopping feel truly enjoyable?	.596	-.354	-.152	-.023
Do you enjoy shopping for its own sake, not just for the items you purchase?	.588	-.482	-.117	-.063
Would you make an unnecessary purchase, just to cheer yourself up?	.568	.033	.299	-.217
Have you ever found certain products more desirable when someone you admired used/endorsed it?	.563	.182	-.282	.019
Have you ever gone shopping when sad or depressed, to cheer yourself up?	.519	-.378	.145	-.198
Do you find your mood improves with each purchase you make?	.515	.047	-.030	-.391
Do you go shopping to escape ordinary life?	.514	-.315	-.005	-.140
Do you tend to make more rash purchase decisions when excited?	.507	.215	.237	-.320
Do you find yourself spending more on yourself in the run-up to a seasonal event?	.473	.175	.073	-.015
Do you try to buy products that are similar to those your friends buy?	.470	.315	-.327	.128
Have you ever stayed a long time in a store that plays good background music?	.463	-.052	.190	.317
Do you ever watch others to keep up with changes in fashion?	.442	.216	-.209	.176
Do you find you shop mainly because you want to, and not because you have to?	.432	-.356	-.217	-.082
Do your tastes (e.g. in clothes, movies, music, etc.) change to match those around you?	.408	.316	-.257	.330
Do you tend to make more rash purchase decisions when bored?	.396	.315	.256	-.141
Would you be put off buying a product you really liked if your friends did not like it?	.377	.366	-.370	-.042
Do you find a bit of time pressure can push you to make important purchase decisions?	.447	.476	.275	.177
Do you find you make more split-second purchase decisions when pushed for time?	.378	.470	.387	.042
Is it important to you that your friends like the products you buy?	.331	.234	-.500	.048
Do you find you start to make more bad decisions when you are hungry?	.233	.122	.374	.033
Do you believe a crowded shopping centre must be a good shopping centre?	.262	-.071	-.328	.312
Do you find yourself buying more food when grocery shopping, if you have not yet eaten?	.249	.119	.309	-.144
Have you ever gone inside a store to warm up on a cold day?	.267	-.154	.290	.239
Do you ever find yourself browsing, even when you have no intention to buy?	.254	-.377	.300	.487
Do you still browse through shops even when you do not have money?	.230	-.286	.141	.483
Have you ever left a store after noticing a bad smell?	.147	.015	.134	.392

Extraction Method: Principal Component Analysis.
a. 4 components extracted.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
Do you find shopping exciting?	.755	.146	.133	.075
Do you enjoy shopping for its own sake, not just for the items you purchase?	.739	.124	-.003	.186
Compared to other activities, does your time spend shopping feel truly enjoyable?	.650	.224	.031	.173
Have you ever gone shopping when sad or depressed, to cheer yourself up?	.636	-.070	.221	.120
Do you go shopping to escape ordinary life?	.591	.072	.136	.096
Do you find you shop mainly because you want to, and not because you have to?	.575	.165	-.080	.058
Do you find your mood improves with each purchase you make?	.444	.193	.366	-.229
Do you try to buy products that are similar to those your friends buy?	.098	.642	.146	.018
Do your tastes (e.g. in clothes, movies, music, etc.) change to match those around you?	-.022	.624	.108	.199
Is it important to you that your friends like the products you buy?	.113	.620	-.057	-.125
Would you be put off buying a product you really liked if your friends did not like it?	.070	.597	.141	-.181
Have you ever found certain products more desirable when someone you admired used/endorsed it?	.278	.564	.185	.002
Do you ever watch others to keep up with changes in fashion?	.113	.517	.147	.123
Do you believe a crowded shopping centre must be a good shopping centre?	.153	.402	-.200	.232
Do you find you make more split-second purchase decisions when pushed for time?	-.133	.183	.667	.138
Do you tend to make more rash purchase decisions when excited?	.266	.118	.602	-.121
Do you find a bit of time pressure can push you to make important purchase decisions?	-.124	.333	.595	.227
Do you tend to make more rash purchase decisions when bored?	.063	.149	.562	-.017
Would you make an unnecessary purchase, just to cheer yourself up?	.381	.050	.556	.056
Do you find yourself buying more food when grocery shopping, if you have not yet eaten?	.091	-.057	.425	.019
Do you find you start to make more bad decisions when you are hungry?	.007	-.054	.415	.188
Do you find yourself spending more on yourself in the run-up to a seasonal event?	.187	.275	.378	.081
Do you ever find yourself browsing, even when you have no intention to buy?	.202	-.106	.009	.693
Do you still browse through shops even when you do not have money?	.150	.027	-.061	.601
Have you ever stayed a long time in a store that plays good background music?	.198	.180	.249	.469
Have you ever gone inside a store to warm up on a cold day?	.151	-.057	.185	.419
Have you ever left a store after noticing a bad smell?	-.069	.109	.066	.415

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Appendix J: Study 2 Final Reliability Analysis

Behaviour Setting Reliability Analysis

Surroundings

Reliability Statistics

Cronbach's Alpha	N of Items
.926	12

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The shopping centre is well lit	.688	.919
Odours in the shopping centre are pleasant	.709	.919
I enjoy the music played	.580	.923
The shopping centre looks good	.763	.916
The shopping centre has a modern feel	.822	.913
The shopping centre provides a good opportunity to shop with friends	.814	.914
The shopping centre seems popular	.759	.917
The shopping centre is a good place to see new fashions and trends	.823	.913
I would trust sales personnel in the shopping	.573	.923
The shopping centre has lots of well known stores	.766	.916
The shopping centre felt very fast paced	.506	.927
Security personnel are highly visible.	.472	.929

Temporal Perspective

Reliability Statistics

Cronbach's Alpha	N of Items
.876	6

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The shopping centre felt very fast paced	.337	.910
I didn't have enough time to do everything I wanted in the shopping centre	.745	.844
I had to hurry to complete my shopping trip on time	.869	.821
I felt rushed for time in this shopping centre	.875	.822
I felt pressured to complete my shopping quickly	.845	.827
A lot of time is spent queuing in the shopping centre.	.472	.888

Regulatory Forces

Reliability Statistics

Cronbach's Alpha	N of Items
.744	5

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I felt pressured to complete my shopping quickly	.513	.699
Parking is very restricted at the shopping centre.	.636	.650
It costs a lot for people to park at the shopping centre.	.497	.718
A lot of time is spent queuing in the shopping centre.	.631	.658
There are many time limited offers in the shops.	.313	.760

Reinforcement Reliability Analysis

Utilitarian Reinforcement

Reliability Statistics

Cronbach's Alpha	N of Items
.839	8

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I felt good after my visit to this shopping centre.	.588	.818
Friends commented positively on the products I bought.	.485	.831
I'm confident that my choice of shopping centre was the right one.	.544	.823
My visit to the shopping centre was a productive one.	.759	.800
I wasn't able to do everything I planned during the visit.	.300	.866
I was able to get some good deals on my visit.	.572	.819
I am satisfied with the outcome of my visit to the shopping.	.837	.788
I managed to do everything I wanted on my visit.	.650	.809

Informational Reinforcement

Reliability Statistics

Cronbach's Alpha	N of Items
.839	8

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I felt good after my visit to this shopping centre.	.588	.818
Friends commented positively on the products I bought.	.485	.831
I'm confident that my choice of shopping centre was the right one.	.544	.823
My visit to the shopping centre was a productive one.	.759	.800
I wasn't able to do everything I planned during the visit.	.300	.866
I was able to get some good deals on my visit.	.572	.819
I am satisfied with the outcome of my visit to the shopping.	.837	.788
I managed to do everything I wanted on my visit.	.650	.809

Aversive Consequences

Reliability Statistics

Cronbach's Alpha	N of Items
.896	6

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
R I wasn't able to do everything I planned during the visit.	.519	.911
It was costly to get to the shopping centre.	.712	.879
It took too long to get to the shopping centre.	.752	.872
Getting to the shopping centre was difficult.	.852	.859
Access to the shopping centre was very difficult.	.790	.867
Finding the way to the shopping centre was complicated.	.752	.874

Approach-Avoidance Reliability Analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.943	18

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would like to come back to this shopping centre in the future	.744	.940
I would leave this shopping centre as soon as possible	.493	.944
I like this shopping centre	.812	.938
I would avoid returning to this shopping centre	.629	.941
Shopping here is fun	.811	.938
I would enjoy exploring this shopping centre.	.765	.938
I would avoid looking around this shopping centre.	.540	.943
I'd stay longer in this shopping centre than planned.	.746	.939
I'd be willing to browse in this shopping centre.	.787	.938
I would recommend this shopping centre to friends	.827	.938
I would be willing to listen to the advice of sales personnel	.482	.944
I would like to shop here with friends	.778	.938
I would avoid shopping here with family	.384	.946
Shopping here with family would be fun	.707	.940
It is easy to find everything I want at the shopping centre.	.727	.939
I'd be willing to spend more money than planned in this shopping centre.	.795	.938
It's harder than usual to find everything I want in this shopping centre.	.542	.943
I would probably buy more items in the shopping centre than expected.	.678	.940

Learning History

Utilitarian Learning History

Reliability Statistics

Cronbach's Alpha	N of Items
.676	9

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
It is important to visit shopping centres that allow me to buy everything I want	.406	.638
It is important that a shopping centre visit puts me in a good mood	.264	.666
Efficiency is very important when choosing which shopping centre to visit	.425	.638
I don't like having to make more shopping trips than are necessary	.507	.610
It is important to select shopping centres nearby	.390	.641
It shouldn't cost a lot to get to a shopping centre	.590	.613
Visiting shopping centres can be very costly	.206	.682
I dislike spending a lot of time going on a shopping trip	.233	.686
Shopping centres with lots of choice are more economical	.285	.662

Informational Learning History

Reliability Statistics

Cronbach's Alpha	N of Items
.806	10

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I like being seen in the right sort of shopping centre	.656	.767
I enjoy getting feedback on purchases from friends	.630	.773
Visiting shopping centres is a good way to socialise	.689	.763
It is important for me to keep up with current fashions and trends	.641	.769
The brands I buy are similar to those my friends buy	.509	.786
It is important to visit shopping centres that allow me to buy everything I want	.479	.791
It is imortant that a shopping centre visit puts me in a good mood	.653	.774
Visiting a good shopping centre makes me feel happy	.650	.774
R I dislike spending a lot of time going on a shopping trip	-.141	.865
Shopping centres with lots of choice are more economical	.321	.805

Emotional Responses Reliability Analysis

Pleasure

Reliability Statistics

Cronbach's Alpha	N of Items
.883	10

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Unhappy:Happy	.770	.860
Contented:Melancholic	.369	.892
Unaroused:Aroused	.490	.881
Bored:Relaxed	.744	.862
Frenzied:Sluggish	.498	.880
Despairing:Hopeful	.745	.863
Jittery:Dull	.516	.879
Unsatisfied:Satisfied	.739	.863
Sleepy:Wideawake	.601	.873
Annoyed:Pleased	.712	.865

Arousal

Reliability Statistics

Cronbach's Alpha	N of Items
.633	6

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Overcrowded:Uncrowded	.258	.640
Unaroused:Aroused	.513	.528
Calm:Excited	.584	.487
Frenzied:Sluggish	.393	.586
Jittery:Dull	.419	.583
Relaxed:Stimulated	.138	.679

Appendix K: Study 2 Principal Component Analysis

KMO and Bartlett's test for Situational Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.887
Bartlett's Test of Sphericity	Approx. Chi-Square	2526.173
	df	190
	Sig.	.000

Rotated Component Matrix for two factor solution for Situation

	Component	
	1	2
The shopping centre is well lit	.760	
Odours in the shopping centre are pleasant	.766	
I enjoy the music played	.640	
The shopping centre looks good	.822	
The shopping centre has a modern feel	.877	
The shopping centre provides a good opportunity to shop with friends	.864	
The shopping centre seems popular	.812	
The shopping centre is a good place to see new fashions and trends	.853	
I would trust sales personnel in the shopping	.628	
The shopping centre has lots of well known stores	.815	
The shopping centre felt very fast paced	.541	.376
I didn't have enough time to do everything I wanted in the shopping centre		.803
I had to hurry to complete my shopping trip on time		.903
I felt rushed for time in this shopping centre		.911
I felt pressured to complete my shopping quickly		.907
Parking is very restricted at the shopping centre.		.621
Security personnel are highly visible.	.520	
It costs a lot for people to park at the shopping centre.		.471
A lot of time is spent queuing in the shopping centre.		.660
There are many time limited offers in the shops.		.368

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

KMO and Bartlett's test for Approach-Avoidance Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.920
Bartlett's Test of Sphericity	Approx. Chi-Square	2151.063
	df	153
	Sig.	.000

Rotated Component Matrix for two factor solution for Reinforcement

	Component	
	1 Reinforcement	2 Aversive
I felt good after my visit to this shopping centre.	.760	
Friends commented positively on the products I bought.	.728	
My friends approve of my choice of shopping centre.	.659	
People will respect me more for visiting this shopping centre.	.421	
I'm confident that my choice of shopping centre was the right one.	.725	
My visit to the shopping centre was a productive one.	.804	
I wasn't able to do everything I planned during the visit.		-.672
I was able to get some good deals on my visit.	.686	
I am satisfied with the outcome of my visit to the shopping.	.829	
I managed to do everything I wanted on my visit.	.606	-.315
It was costly to get to the shopping centre.		.784
It took too long to get to the shopping centre.		.833
Getting to the shopping centre was difficult.		.886
Access to the shopping centre was very difficult.		.856
Finding the way to the shopping centre was complicated.		.831

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

KMO and Bartlett's test for Learning History Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	696.741
	df	55
	Sig.	.000

KMO and Bartlett's test for Reinforcement Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.872
Bartlett's Test of Sphericity	Approx. Chi-Square	872.346
	df	66
	Sig.	.000

Situational Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.878	34.392	34.392	6.878	34.392	34.392	6.809	34.046	34.046
2	4.431	22.153	56.545	4.431	22.153	56.545	3.717	18.584	52.630
3	1.433	7.166	63.711	1.433	7.166	63.711	2.143	10.716	63.346
4	1.113	5.565	69.276	1.113	5.565	69.276	1.186	5.930	69.276
5	.877	4.384	73.660						
6	.769	3.847	77.507						
7	.668	3.342	80.849						
8	.611	3.053	83.902						
9	.513	2.565	86.467						
10	.435	2.173	88.639						
11	.409	2.047	90.687						
12	.348	1.742	92.429						
13	.308	1.541	93.970						
14	.273	1.367	95.337						
15	.232	1.159	96.496						
16	.212	1.061	97.557						
17	.185	.924	98.481						
18	.132	.662	99.143						
19	.100	.500	99.643						
20	.071	.357	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
The shopping centre is a good place to see new fashions and trends	.861	-.022	-.087
The shopping centre provides a good opportunity to shop with friends	.860	-.094	-.047
The shopping centre has a modern feel	.845	-.269	-.079
The shopping centre has lots of well known stores	.816	-.060	-.101
The shopping centre seems popular	.814	-.057	-.098
The shopping centre looks good	.810	-.141	-.082
Odours in the shopping centre are pleasant	.763	-.084	.055
The shopping centre is well lit	.732	-.230	.083
I enjoy the music played	.627	-.126	.147
I would trust sales personnel in the shopping	.621	-.091	.140
The shopping centre felt very fast paced	.595	.282	-.090
Security personnel are highly visible.	.525	-.016	.294
I felt rushed for time in this shopping centre	.128	.902	-.267
I felt pressured to complete my shopping quickly	.122	.899	-.166
I had to hurry to complete my shopping trip on time	.183	.885	-.287
I didn't have enough time to do everything I wanted in the shopping centre	.152	.789	-.369
A lot of time is spent queuing in the shopping centre.	.127	.648	.431
Parking is very restricted at the shopping centre.	.059	.620	.497
There are many time limited offers in the shops.	.244	.332	.213
It costs a lot for people to park at the shopping centre.	.081	.464	.670

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
The shopping centre has a modern feel	.879	-.066	-.123
The shopping centre provides a good opportunity to shop with friends	.863	.068	-.006
The shopping centre is a good place to see new fashions and trends	.852	.149	-.004
The shopping centre looks good	.823	.039	-.064
The shopping centre has lots of well known stores	.815	.118	-.039
The shopping centre seems popular	.812	.119	-.035
Odours in the shopping centre are pleasant	.765	.011	.077
The shopping centre is well lit	.760	-.132	.026
I enjoy the music played	.638	-.092	.123
I would trust sales personnel in the shopping	.626	-.060	.134
The shopping centre felt very fast paced	.538	.371	.121
Security personnel are highly visible.	.517	-.088	.295
I had to hurry to complete my shopping trip on time	.031	.923	.215
I felt rushed for time in this shopping centre	-.027	.919	.236
I didn't have enough time to do everything I wanted in the shopping centre	.017	.879	.094
I felt pressured to complete my shopping quickly	-.033	.864	.321
It costs a lot for people to park at the shopping centre.	-.006	.062	.817
Parking is very restricted at the shopping centre.	-.052	.280	.744
A lot of time is spent queuing in the shopping centre.	.010	.347	.708
There are many time limited offers in the shops.	.181	.208	.373

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 4 iterations.

Reinforcement Factor Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.676	31.173	31.173	4.676	31.173	31.173	4.021	26.806	26.806
2	4.081	27.210	58.383	4.081	27.210	58.383	3.731	24.872	51.678
3	1.557	10.380	68.763	1.557	10.380	68.763	2.563	17.084	68.763
4	.746	4.976	73.739						
5	.727	4.845	78.584						
6	.562	3.746	82.330						
7	.514	3.430	85.760						
8	.428	2.853	88.613						
9	.380	2.532	91.145						
10	.328	2.190	93.334						
11	.280	1.868	95.202						
12	.231	1.538	96.740						
13	.192	1.281	98.020						
14	.169	1.130	99.150						
15	.128	.850	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Matrix with All Loadings Component Matrix

	Component		
	1	2	3
I am satisfied with the outcome of my visit to the shopping.	.800	.300	.348
My visit to the shopping centre was a productive one.	.763	.310	.217
I managed to do everything I wanted on my visit.	.678	.083	.489
I was able to get some good deals on my visit.	.622	.305	.130
I felt good after my visit to this shopping centre.	.596	.475	-.071
I'm confident that my choice of shopping centre was the right one.	.593	.417	-.093
I wasn't able to do everything I planned during the visit.	.556	-.434	.373
Friends commented positively on the products I bought.	.526	.519	-.274
It took too long to get to the shopping centre.	-.361	.762	.116
Getting to the shopping centre was difficult.	-.482	.743	.271
Finding the way to the shopping centre was complicated.	-.468	.687	.212
Access to the shopping centre was very difficult.	-.547	.663	.175
It was costly to get to the shopping centre.	-.433	.654	.213
People will respect me more for visiting this shopping centre.	.189	.469	-.653
My friends approve of my choice of shopping centre.	.459	.497	-.521

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

Rotated Component Matrix

	Component		
	1	2	3
Getting to the shopping centre was difficult.	.926	-.010	-.009
Access to the shopping centre was very difficult.	.866	-.138	.005
Finding the way to the shopping centre was complicated.	.856	-.048	.015
It took too long to get to the shopping centre.	.835	.007	.166
It was costly to get to the shopping centre.	.812	-.030	.010
I wasn't able to do everything I planned during the visit.	-.526	.507	-.322
I am satisfied with the outcome of my visit to the shopping.	-.063	.908	.150
I managed to do everything I wanted on my visit.	-.135	.821	-.112
My visit to the shopping centre was a productive one.	-.074	.812	.246
I was able to get some good deals on my visit.	-.031	.653	.265
I felt good after my visit to this shopping centre.	.061	.576	.500
I'm confident that my choice of shopping centre was the right one.	.009	.544	.487
My friends approve of my choice of shopping centre.	.018	.234	.821
People will respect me more for visiting this shopping centre.	.094	-.058	.818
Friends commented positively on the products I bought.	.074	.426	.660

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 6 iterations.

Approach-Avoidance Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.612	53.401	53.401	9.612	53.401	53.401	7.086	39.365	39.365
2	1.496	8.309	61.710	1.496	8.309	61.710	4.022	22.345	61.710
3	1.125	6.253	67.963						
4	.844	4.688	72.651						
5	.704	3.913	76.565						
6	.605	3.360	79.924						
7	.516	2.865	82.789						
8	.484	2.690	85.479						
9	.455	2.525	88.004						
10	.405	2.248	90.252						
11	.360	1.999	92.252						
12	.299	1.662	93.914						
13	.259	1.440	95.353						
14	.232	1.288	96.641						
15	.184	1.022	97.663						
16	.150	.834	98.497						
17	.140	.780	99.277						
18	.130	.723	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
I would recommend this shopping centre to friends	.863	-.041
Shopping here is fun	.845	-.146
I like this shopping centre	.843	.151
I'd be willing to spend more money than planned in this shopping centre.	.830	-.249
I'd be willing to browse in this shopping centre.	.823	-.066
I would like to shop here with friends	.817	-.158
I would enjoy exploring this shopping centre.	.812	-.223
I'd stay longer in this shopping centre than planned.	.788	-.208
I would like to come back to this shopping centre in the future	.779	.236
It is easy to find everything I want at the shopping centre.	.768	-.101
Shopping here with family would be fun	.745	-.223
I would probably buy more items in the shopping centre than expected.	.729	-.374
I would avoid returning to this shopping centre	.660	.537
I would avoid looking around this shopping centre.	.581	.481
It's harder than usual to find everything I want in this shopping centre.	.576	.229
I would leave this shopping centre as soon as possible	.540	.500
I would be willing to listen to the advice of sales personnel	.527	-.185
I would avoid shopping here with family	.413	.391

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
I'd be willing to spend more money than planned in this shopping centre.	.828	.256
I would probably buy more items in the shopping centre than expected.	.814	.096
I would enjoy exploring this shopping centre.	.799	.268
Shopping here is fun	.783	.350
I'd stay longer in this shopping centre than planned.	.770	.267
I would like to shop here with friends	.767	.325
Shopping here with family would be fun	.743	.231
I would recommend this shopping centre to friends	.739	.448
I'd be willing to browse in this shopping centre.	.720	.404
It is easy to find everything I want at the shopping centre.	.693	.345
I like this shopping centre	.616	.596
I would be willing to listen to the advice of sales personnel	.540	.141
I would avoid returning to this shopping centre	.248	.814
I would avoid looking around this shopping centre.	.214	.723
I would leave this shopping centre as soon as possible	.169	.717
I would like to come back to this shopping centre in the future	.515	.630
I would avoid shopping here with family	.125	.555
It's harder than usual to find everything I want in this shopping centre.	.350	.511

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Learning History Factor Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.683	31.218	31.218	4.683	31.218	31.218	4.609	30.728	30.728
2	2.672	17.811	49.029	2.672	17.811	49.029	2.745	18.302	49.029
3	1.271	8.470	57.500						
4	1.132	7.548	65.048						
5	.898	5.986	71.034						
6	.778	5.184	76.217						
7	.636	4.241	80.458						
8	.526	3.507	83.965						
9	.475	3.167	87.132						
10	.451	3.009	90.142						
11	.396	2.639	92.781						
12	.320	2.131	94.912						
13	.298	1.985	96.897						
14	.242	1.611	98.508						
15	.224	1.492	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
Visiting shopping centres is a good way to socialise	.772	-.085
Visiting a good shopping centre makes me feel happy	.767	-.065
It is imortant that a shopping centre visit puts me in a good mood	.763	.159
It is important for me to keep up with current fashions and trends	.761	-.259
I like being seen in the right sort of shopping centre	.754	-.162
I enjoy getting feedback on purchases from friends	.736	.005
The brands I buy are similar to those my friends buy	.618	-.274
It is important to visit shopping centres that allow me to buy everything I want	.614	.343
Shopping centres with lots of choice are more economical	.394	.331
I don't like having to make more shopping trips than are necessary	-.123	.796
It shouldn't cost a lot to get to a shopping centre	.141	.780
It is important to select shopping centres nearby	.193	.580
I dislike spending a lot of time going on a shopping trip	-.336	.555
Efficiency is very important when choosing which shopping centre to visit	.347	.515
Visiting shopping centres can be very costly	.074	.298

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
It is important for me to keep up with current fashions and trends	.797	-.109
Visiting shopping centres is a good way to socialise	.774	.064
I like being seen in the right sort of shopping centre	.771	-.015
Visiting a good shopping centre makes me feel happy	.766	.083
I enjoy getting feedback on purchases from friends	.721	.145
It is imortant that a shopping centre visit puts me in a good mood	.718	.302
The brands I buy are similar to those my friends buy	.659	-.150
It is important to visit shopping centres that allow me to buy everything I want	.537	.454
It shouldn't cost a lot to get to a shopping centre	-.011	.792
I don't like having to make more shopping trips than are necessary	-.273	.758
It is important to select shopping centres nearby	.079	.606
Efficiency is very important when choosing which shopping centre to visit	.242	.571
I dislike spending a lot of time going on a shopping trip	-.436	.480
Shopping centres with lots of choice are more economical	.324	.400
Visiting shopping centres can be very costly	.016	.307

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Emotional Response Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.206	40.049	40.049	5.206	40.049	40.049	4.914	37.803	37.803
2	1.822	14.013	54.062	1.822	14.013	54.062	2.114	16.259	54.062
3	1.100	8.462	62.525						
4	.944	7.265	69.790						
5	.867	6.671	76.460						
6	.623	4.794	81.254						
7	.484	3.723	84.977						
8	.461	3.542	88.519						
9	.405	3.112	91.632						
10	.315	2.425	94.057						
11	.308	2.366	96.422						
12	.243	1.872	98.294						
13	.222	1.706	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
Unsatisfied:Satisfied	.845	-.029
Annoyed:Pleased	.837	-.066
Unhappy:Happy	.833	.096
Bored:Relaxed	.821	.087
Despairing:Hopeful	.798	.168
Sleepy:Wideawake	.670	.194
Jittery:Dull	.490	.480
Contented:Melancholic	.487	-.138
Frenzied:Sluggish	.473	.454
Calm:Excited	.211	.786
Unaroused:Aroused	.450	.642
Overcrowded:Uncrowded	-.203	.594
Relaxed:Stimulated	-.239	.431

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Matrix[a]

	Component	
	1	2
Unhappy:Happy	.824	-.153
Despairing:Hopeful	.812	-.074
Bored:Relaxed	.810	-.158
Unsatisfied:Satisfied	.800	-.276
Annoyed:Pleased	.781	-.308
Sleepy:Wideawake	.698	-.011
Unaroused:Aroused	.619	.482
Jittery:Dull	.609	.315
Frenzied:Sluggish	.585	.295
Contented:Melancholic	.425	-.275
Calm:Excited	.432	.690
Overcrowded:Uncrowded	-.019	.628
Relaxed:Stimulated	-.102	.482

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

Appendix L: Study 1 Multinomial Logistic Regression 1- Basic model- situational and individual

Case Processing Summary

		N	Marginal Percentage
mallcode	1 Manor Walks	35	12.5%
	2 Consett	26	9.3%
	3 Eldon Shopping Centre	74	26.4%
	4 Monument Mall	48	17.1%
	5 Millburngate	57	20.4%
	6 Metro Centre	40	14.3%
Valid		280	100.0%
Missing		2	
Total		282	
Subpopulation		280[a]	

a. The dependent variable has only one value observed in 280 (100.0%) subpopulations.

Model Fitting Information

	Model Fitting Criteria			Likelihood Ratio Tests		
Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	982.532	1000.706	972.532			
Final	987.826	1151.391	897.826	74.706	40	.001

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	1431.945	1355	.072
Deviance	897.826	1355	1.000

Pseudo R-Square

Cox and Snell	.234
Nagelkerke	.242
McFadden	.077

Likelihood Ratio Tests

	Model Fitting Criteria			Likelihood Ratio Tests		
Effect	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	982.277	1127.669	902.277	4.451	5	.486
Physical	978.133	1123.525	898.133	.307	5	.998
Social	992.158	1137.550	912.158	14.332	5	.014
Temporal	981.756	1127.147	901.756	3.930	5	.559
Regulatory	981.667	1127.059	901.667	3.842	5	.572
newloc	981.482	1126.874	901.482	3.656	5	.600
new_epq_e	985.601	1130.992	905.601	7.775	5	.169
new_epq_n	1003.402	1148.793	923.402	25.576	5	.000
new_epq_p	990.793	1136.185	910.793	12.967	5	.024

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Parameter Estimates

mallcode[a]		B	Std. Error	Wald	df	Sig.	Exp(B)
1 Manor Walks	Intercept	-5.700	3.080	3.425	1	.064	
	TOTPhysical	.035	.209	.028	1	.867	1.035
	TOTSocial	.334	.226	2.173	1	.140	1.396
	TOTTemporal	.033	.184	.032	1	.858	1.034
	TOTRegulatory	-.190	.132	2.065	1	.151	.827
	newloc	.065	.049	1.718	1	.190	1.067
	new_epq_e	.170	.100	2.895	1	.089	1.185
	new_epq_n	.303	.097	9.726	1	.002	1.354
	new_epq_p	-.164	.200	.672	1	.412	.849
3 Eldon Shopping Centre	Intercept	-1.640	2.680	.375	1	.541	
	TOTPhysical	-.022	.186	.014	1	.907	.978
	TOTSocial	.585	.208	7.917	1	.005	1.795
	TOTTemporal	.214	.166	1.674	1	.196	1.239
	TOTRegulatory	-.119	.118	1.020	1	.312	.888
	newloc	.043	.044	.966	1	.326	1.044
	new_epq_e	.033	.083	.157	1	.692	1.033
	new_epq_n	-.028	.087	.106	1	.745	.972
	new_epq_p	-.252	.179	1.990	1	.158	.777
4 Monument Mall	Intercept	-2.232	2.846	.615	1	.433	
	TOTPhysical	.050	.196	.066	1	.797	1.052
	TOTSocial	.495	.214	5.347	1	.021	1.641
	TOTTemporal	.066	.174	.142	1	.706	1.068
	TOTRegulatory	-.180	.125	2.080	1	.149	.835
	newloc	.010	.046	.047	1	.828	1.010
	new_epq_e	.061	.090	.453	1	.501	1.063
	new_epq_n	.190	.090	4.400	1	.036	1.209
	new_epq_p	.173	.180	.927	1	.336	1.189
5 Millburngate	Intercept	-1.479	2.749	.289	1	.591	
	TOTPhysical	-.007	.192	.001	1	.969	.993
	TOTSocial	.596	.211	7.982	1	.005	1.816
	TOTTemporal	.143	.171	.702	1	.402	1.154
	TOTRegulatory	-.175	.122	2.068	1	.150	.839
	newloc	.024	.045	.281	1	.596	1.024
	new_epq_e	-.045	.086	.271	1	.603	.956
	new_epq_n	.131	.087	2.240	1	.134	1.140
	new_epq_p	.060	.178	.114	1	.735	1.062
6 Metro Centre	Intercept	-2.757	2.913	.896	1	.344	
	TOTPhysical	-.005	.201	.001	1	.978	.995
	TOTSocial	.416	.223	3.466	1	.063	1.515
	TOTTemporal	.234	.180	1.695	1	.193	1.264
	TOTRegulatory	-.225	.130	2.993	1	.084	.798
	newloc	.060	.047	1.590	1	.207	1.062
	new_epq_e	-.004	.090	.002	1	.963	.996
	new_epq_n	.052	.093	.317	1	.573	1.054
	new_epq_p	-.226	.197	1.313	1	.252	.798

a. The reference category is: 2 Consett.

Appendix M: Study 2 ANOVA Post- Hoc Comparison Tables

Surroundings

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
1.00 Metro Centre	70	49.9172	7.60017	.90839	12.35	63.86
2.00 Eldon Shopping Centre	35	50.9645	11.20346	1.89373	10.11	64.76
3.00 Dalton Park	9	46.8868	5.32031	1.77344	40.95	58.11
4.00 Durham City	12	39.8440	8.15225	2.35335	21.28	52.21
6.00 Durham The Gates	3	32.9497	4.20307	2.42664	28.83	37.24
7.00 Durham Arnison	8	39.2801	4.96968	1.75705	31.89	46.14
8.00 Teeside Park	3	46.1537	5.46632	3.15598	40.32	51.16
9.00 Newcastle	3	48.9500	6.61982	3.82195	43.68	56.38
10.00 Blaydon Precinct	2	27.3285	5.12440	3.62350	23.71	30.95
11.00 Galleries Washington	4	37.1180	10.67569	5.33785	21.99	45.41
12.00 Consett	3	25.9743	5.70205	3.29208	22.41	32.55
13.00 Sunderland	2	50.0290	3.83818	2.71400	47.32	52.74
15.00 Cleveland Centre Middlesbrough	2	44.7285	8.73772	6.17850	38.55	50.91
16.00 Middlesbrough	2	43.2645	16.27972	11.51150	31.75	54.78
Total	158	47.0479	10.01451	.79671	10.11	64.76

Multiple Comparisons

FASurroundings
Tukey HSD

(I) SC_Code	(J) SC_Code	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00 Metro Centre	2.00 Eldon Shopping Centre	-1.04727	1.75557	1.000	-7.0372	4.9426
	3.00 Dalton Park	3.03041	3.00297	.999	-7.2155	13.2763
	4.00 Durham City	10.07319*	2.64956	.015	1.0330	19.1133
	6.00 Durham The Gates	16.96752	4.99987	.053	-.0917	34.0268
	7.00 Durham Arnison	10.63706	3.16490	.058	-.1614	21.4355
	8.00 Teeside Park	3.76352	4.99987	1.000	-13.2957	20.8228
	9.00 Newcastle	.96719	4.99987	1.000	-16.0921	18.0264
	10.00 Blaydon Precinct	22.58869*	6.08148	.020	1.8390	43.3383
	11.00 Galleries Washington	12.79919	4.35957	.175	-2.0754	27.6738
	12.00 Consett	23.94285*	4.99987	.000	6.8836	41.0021
	13.00 Sunderland	-.11181	6.08148	1.000	-20.8615	20.6378
	15.00 Cleveland Centre Middlesbrough	5.18869	6.08148	1.000	-15.5610	25.9383
	16.00 Middlesbrough	6.65269	6.08148	.998	-14.0970	27.4023
2.00 Eldon Shopping Centre	1.00 Metro Centre	1.04727	1.75557	1.000	-4.9426	7.0372
	3.00 Dalton Park	4.07768	3.16941	.991	-6.7362	14.8915
	4.00 Durham City	11.12046*	2.83682	.010	1.4414	20.7995
	6.00 Durham The Gates	18.01479*	5.10157	.035	.6085	35.4211
	7.00 Durham Arnison	11.68433*	3.32324	.037	.3456	23.0230
	8.00 Teeside Park	4.81079	5.10157	1.000	-12.5955	22.2171
	9.00 Newcastle	2.01446	5.10157	1.000	-15.3918	19.4207
	10.00 Blaydon Precinct	23.63596*	6.16537	.013	2.6001	44.6718
	11.00 Galleries Washington	13.84646	4.47585	.119	-1.4249	29.1178
	12.00 Consett	24.99012*	5.10157	.000	7.5839	42.3964

	13.00 Sunderland	.93546	6.16537	1.000	-20.1004	21.9713
	15.00 Cleveland Centre Middlesbrough	6.23596	6.16537	.999	-14.7999	27.2718
	16.00 Middlesbrough	7.69996	6.16537	.993	-13.3359	28.7358
3.00 Dalton Park	1.00 Metro Centre	-3.03041	3.00297	.999	-13.2763	7.2155
	2.00 Eldon Shopping Centre	-4.07768	3.16941	.991	-14.8915	6.7362
	4.00 Durham City	7.04278	3.73943	.832	-5.7159	19.8015
	6.00 Durham The Gates	13.93711	5.65348	.439	-5.3522	33.2264
	7.00 Durham Arnison	7.60665	4.12065	.851	-6.4527	21.6661
	8.00 Teeside Park	.73311	5.65348	1.000	-18.5562	20.0224
	9.00 Newcastle	-2.06322	5.65348	1.000	-21.3526	17.2261
	10.00 Blaydon Precinct	19.55828	6.62929	.169	-3.0605	42.1770
	11.00 Galleries Washington	9.76878	5.09598	.814	-7.6184	27.1559
	12.00 Consett	20.91244*	5.65348	.021	1.6231	40.2018
	13.00 Sunderland	-3.14222	6.62929	1.000	-25.7610	19.4765
	15.00 Cleveland Centre Middlesbrough	2.15828	6.62929	1.000	-20.4605	24.7770
	16.00 Middlesbrough	3.62228	6.62929	1.000	-18.9965	26.2410
4.00 Durham City	1.00 Metro Centre	-10.07319*	2.64956	.015	-19.1133	-1.0330
	2.00 Eldon Shopping Centre	-11.12046*	2.83682	.010	-20.7995	-1.4414
	3.00 Dalton Park	-7.04278	3.73943	.832	-19.8015	5.7159
	6.00 Durham The Gates	6.89433	5.47396	.992	-11.7825	25.5712
	7.00 Durham Arnison	.56388	3.87067	1.000	-12.6426	13.7704
	8.00 Teeside Park	-6.30967	5.47396	.997	-24.9865	12.3672
	9.00 Newcastle	-9.10600	5.47396	.925	-27.7828	9.5708
	10.00 Blaydon Precinct	12.51550	6.47688	.805	-9.5832	34.6142
	11.00 Galleries Washington	2.72600	4.89606	1.000	-13.9791	19.4311
	12.00 Consett	13.86967	5.47396	.393	-4.8072	32.5465
	13.00 Sunderland	-10.18500	6.47688	.950	-32.2837	11.9137
	15.00 Cleveland Centre Middlesbrough	-4.88450	6.47688	1.000	-26.9832	17.2142
	16.00 Middlesbrough	-3.42050	6.47688	1.000	-25.5192	18.6782
6.00 Durham The Gates	1.00 Metro Centre	-16.96752	4.99987	.053	-34.0268	.0917
	2.00 Eldon Shopping Centre	-18.01479*	5.10157	.035	-35.4211	-.6085
	3.00 Dalton Park	-13.93711	5.65348	.439	-33.2264	5.3522
	4.00 Durham City	-6.89433	5.47396	.992	-25.5712	11.7825
	7.00 Durham Arnison	-6.33046	5.74114	.998	-25.9189	13.2580
	8.00 Teeside Park	-13.20400	6.92407	.819	-36.8285	10.4205
	9.00 Newcastle	-16.00033	6.92407	.550	-39.6248	7.6242
	10.00 Blaydon Precinct	5.62117	7.74135	1.000	-20.7918	32.0342
	11.00 Galleries Washington	-4.16833	6.47688	1.000	-26.2670	17.9304
	12.00 Consett	6.97533	6.92407	.999	-16.6492	30.5998
	13.00 Sunderland	-17.07933	7.74135	.626	-43.4923	9.3337
	15.00 Cleveland Centre Middlesbrough	-11.77883	7.74135	.962	-38.1918	14.6342
	16.00 Middlesbrough	-10.31483	7.74135	.987	-36.7278	16.0982
7.00 Durham Arnison	1.00 Metro Centre	-10.63706	3.16490	.058	-21.4355	.1614
	2.00 Eldon Shopping Centre	-11.68433*	3.32324	.037	-23.0230	-.3456
	3.00 Dalton Park	-7.60665	4.12065	.851	-21.6661	6.4527
	4.00 Durham City	-.56388	3.87067	1.000	-13.7704	12.6426
	6.00 Durham The Gates	6.33046	5.74114	.998	-13.2580	25.9189
	8.00 Teeside Park	-6.87354	5.74114	.995	-26.4620	12.7149
	9.00 Newcastle	-9.66988	5.74114	.918	-29.2583	9.9185
	10.00 Blaydon Precinct	11.95163	6.70420	.880	-10.9227	34.8260
	11.00 Galleries Washington	2.16212	5.19305	1.000	-15.5563	19.8805
	12.00 Consett	13.30579	5.74114	.545	-6.2826	32.8942
	13.00 Sunderland	-10.74887	6.70420	.943	-33.6232	12.1255
	15.00 Cleveland Centre Middlesbrough	-5.44838	6.70420	1.000	-28.3227	17.4260
	16.00 Middlesbrough	-3.98438	6.70420	1.000	-26.8587	18.8900
8.00 Teeside Park	1.00 Metro Centre	-3.76352	4.99987	1.000	-20.8228	13.2957
	2.00 Eldon Shopping Centre	-4.81079	5.10157	1.000	-22.2171	12.5955
	3.00 Dalton Park	-.73311	5.65348	1.000	-20.0224	18.5562
	4.00 Durham City	6.30967	5.47396	.997	-12.3672	24.9865
	6.00 Durham The Gates	13.20400	6.92407	.819	-10.4205	36.8285
	7.00 Durham Arnison	6.87354	5.74114	.995	-12.7149	26.4620

	9.00 Newcastle	-2.79633	6.92407	1.000	-26.4208	20.8282
	10.00 Blaydon Precinct	18.82517	7.74135	.463	-7.5878	45.2382
	11.00 Galleries Washington	9.03567	6.47688	.981	-13.0630	31.1344
	12.00 Consett	20.17933	6.92407	.184	-3.4452	43.8038
	13.00 Sunderland	-3.87533	7.74135	1.000	-30.2883	22.5377
	15.00 Cleveland Centre Middlesbrough	1.42517	7.74135	1.000	-24.9878	27.8382
	16.00 Middlesbrough	2.88917	7.74135	1.000	-23.5238	29.3022
9.00 Newcastle	1.00 Metro Centre	-.96719	4.99987	1.000	-18.0264	16.0921
	2.00 Eldon Shopping Centre	-2.01446	5.10157	1.000	-19.4207	15.3918
	3.00 Dalton Park	2.06322	5.65348	1.000	-17.2261	21.3526
	4.00 Durham City	9.10600	5.47396	.925	-9.5708	27.7828
	6.00 Durham The Gates	16.00033	6.92407	.550	-7.6242	39.6248
	7.00 Durham Arnison	9.66988	5.74114	.918	-9.9185	29.2583
	8.00 Teeside Park	2.79633	6.92407	1.000	-20.8282	26.4208
	10.00 Blaydon Precinct	21.62150	7.74135	.240	-4.7915	48.0345
	11.00 Galleries Washington	11.83200	6.47688	.860	-10.2667	33.9307
	12.00 Consett	22.97567	6.92407	.065	-.6488	46.6002
	13.00 Sunderland	-1.07900	7.74135	1.000	-27.4920	25.3340
	15.00 Cleveland Centre Middlesbrough	4.22150	7.74135	1.000	-22.1915	30.6345
	16.00 Middlesbrough	5.68550	7.74135	1.000	-20.7275	32.0985
10.00 Blaydon Precinct	1.00 Metro Centre	-22.58869*	6.08148	.020	-43.3383	-1.8390
	2.00 Eldon Shopping Centre	-23.63596*	6.16537	.013	-44.6718	-2.6001
	3.00 Dalton Park	-19.55828	6.62929	.169	-42.1770	3.0605
	4.00 Durham City	-12.51550	6.47688	.805	-34.6142	9.5832
	6.00 Durham The Gates	-5.62117	7.74135	1.000	-32.0342	20.7918
	7.00 Durham Arnison	-11.95163	6.70420	.880	-34.8260	10.9227
	8.00 Teeside Park	-18.82517	7.74135	.463	-45.2382	7.5878
	9.00 Newcastle	-21.62150	7.74135	.240	-48.0345	4.7915
	11.00 Galleries Washington	-9.78950	7.34409	.987	-34.8471	15.2681
	12.00 Consett	1.35417	7.74135	1.000	-25.0588	27.7672
	13.00 Sunderland	-22.70050	8.48022	.303	-51.6345	6.2335
	15.00 Cleveland Centre Middlesbrough	-17.40000	8.48022	.732	-46.3340	11.5340
	16.00 Middlesbrough	-15.93600	8.48022	.834	-44.8700	12.9980
11.00 Galleries Washington	1.00 Metro Centre	-12.79919	4.35957	.175	-27.6738	2.0754
	2.00 Eldon Shopping Centre	-13.84646	4.47585	.119	-29.1178	1.4249
	3.00 Dalton Park	-9.76878	5.09598	.814	-27.1559	7.6184
	4.00 Durham City	-2.72600	4.89606	1.000	-19.4311	13.9791
	6.00 Durham The Gates	4.16833	6.47688	1.000	-17.9304	26.2670
	7.00 Durham Arnison	-2.16212	5.19305	1.000	-19.8805	15.5563
	8.00 Teeside Park	-9.03567	6.47688	.981	-31.1344	13.0630
	9.00 Newcastle	-11.83200	6.47688	.860	-33.9307	10.2667
	10.00 Blaydon Precinct	9.78950	7.34409	.987	-15.2681	34.8471
	12.00 Consett	11.14367	6.47688	.905	-10.9550	33.2424
	13.00 Sunderland	-12.91100	7.34409	.891	-37.9686	12.1466
	15.00 Cleveland Centre Middlesbrough	-7.61050	7.34409	.999	-32.6681	17.4471
	16.00 Middlesbrough	-6.14650	7.34409	1.000	-31.2041	18.9111
12.00 Consett	1.00 Metro Centre	-23.94285*	4.99987	.000	-41.0021	-6.8836
	2.00 Eldon Shopping Centre	-24.99012*	5.10157	.000	-42.3964	-7.5839
	3.00 Dalton Park	-20.91244*	5.65348	.021	-40.2018	-1.6231
	4.00 Durham City	-13.86967	5.47396	.393	-32.5465	4.8072
	6.00 Durham The Gates	-6.97533	6.92407	.999	-30.5998	16.6492
	7.00 Durham Arnison	-13.30579	5.74114	.545	-32.8942	6.2826
	8.00 Teeside Park	-20.17933	6.92407	.184	-43.8038	3.4452
	9.00 Newcastle	-22.97567	6.92407	.065	-46.6002	.6488
	10.00 Blaydon Precinct	-1.35417	7.74135	1.000	-27.7672	25.0588
	11.00 Galleries Washington	-11.14367	6.47688	.905	-33.2424	10.9550
	13.00 Sunderland	-24.05467	7.74135	.115	-50.4677	2.3583
	15.00 Cleveland Centre Middlesbrough	-18.75417	7.74135	.469	-45.1672	7.6588
	16.00 Middlesbrough	-17.29017	7.74135	.606	-43.7032	9.1228
13.00 Sunderland	1.00 Metro Centre	.11181	6.08148	1.000	-20.6378	20.8615
	2.00 Eldon Shopping Centre	-.93546	6.16537	1.000	-21.9713	20.1004

	3.00 Dalton Park	3.14222	6.62929	1.000	-19.4765	25.7610
	4.00 Durham City	10.18500	6.47688	.950	-11.9137	32.2837
	6.00 Durham The Gates	17.07933	7.74135	.626	-9.3337	43.4923
	7.00 Durham Arnison	10.74887	6.70420	.943	-12.1255	33.6232
	8.00 Teeside Park	3.87533	7.74135	1.000	-22.5377	30.2883
	9.00 Newcastle	1.07900	7.74135	1.000	-25.3340	27.4920
	10.00 Blaydon Precinct	22.70050	8.48022	.303	-6.2335	51.6345
	11.00 Galleries Washington	12.91100	7.34409	.891	-12.1466	37.9686
	12.00 Consett	24.05467	7.74135	.115	-2.3583	50.4677
	15.00 Cleveland Centre Middlesbrough	5.30050	8.48022	1.000	-23.6335	34.2345
	16.00 Middlesbrough	6.76450	8.48022	1.000	-22.1695	35.6985
15.00 Cleveland Centre Middlesbrough	1.00 Metro Centre	-5.18869	6.08148	1.000	-25.9383	15.5610
	2.00 Eldon Shopping Centre	-6.23596	6.16537	.999	-27.2718	14.7999
	3.00 Dalton Park	-2.15828	6.62929	1.000	-24.7770	20.4605
	4.00 Durham City	4.88450	6.47688	1.000	-17.2142	26.9832
	6.00 Durham The Gates	11.77883	7.74135	.962	-14.6342	38.1918
	7.00 Durham Arnison	5.44838	6.70420	1.000	-17.4260	28.3227
	8.00 Teeside Park	-1.42517	7.74135	1.000	-27.8382	24.9878
	9.00 Newcastle	-4.22150	7.74135	1.000	-30.6345	22.1915
	10.00 Blaydon Precinct	17.40000	8.48022	.732	-11.5340	46.3340
	11.00 Galleries Washington	7.61050	7.34409	.999	-17.4471	32.6681
	12.00 Consett	18.75417	7.74135	.469	-7.6588	45.1672
	13.00 Sunderland	-5.30050	8.48022	1.000	-34.2345	23.6335
	16.00 Middlesbrough	1.46400	8.48022	1.000	-27.4700	30.3980
16.00 Middlesbrough	1.00 Metro Centre	-6.65269	6.08148	.998	-27.4023	14.0970
	2.00 Eldon Shopping Centre	-7.69996	6.16537	.993	-28.7358	13.3359
	3.00 Dalton Park	-3.62228	6.62929	1.000	-26.2410	18.9965
	4.00 Durham City	3.42050	6.47688	1.000	-18.6782	25.5192
	6.00 Durham The Gates	10.31483	7.74135	.987	-16.0982	36.7278
	7.00 Durham Arnison	3.98438	6.70420	1.000	-18.8900	26.8587
	8.00 Teeside Park	-2.88917	7.74135	1.000	-29.3022	23.5238
	9.00 Newcastle	-5.68550	7.74135	1.000	-32.0985	20.7275
	10.00 Blaydon Precinct	15.93600	8.48022	.834	-12.9980	44.8700
	11.00 Galleries Washington	6.14650	7.34409	1.000	-18.9111	31.2041
	12.00 Consett	17.29017	7.74135	.606	-9.1228	43.7032
	13.00 Sunderland	-6.76450	8.48022	1.000	-35.6985	22.1695
	15.00 Cleveland Centre Middlesbrough	-1.46400	8.48022	1.000	-30.3980	27.4700

*. The mean difference is significant at the 0.05 level.

Regulatory

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
1.00 Metro Centre	70	.8853	1.83682	.21954	-3.36	4.75
2.00 Eldon Shopping Centre	35	4.3110	1.76531	.29839	1.47	7.75
3.00 Dalton Park	9	1.2631	2.48606	.82869	-2.76	4.90
4.00 Durham City	12	4.9983	2.04966	.59169	1.50	8.70
6.00 Durham The Gates	3	4.2747	1.00601	.58082	3.15	5.08
7.00 Durham Arnison	8	2.0534	1.15746	.40922	.79	4.22
8.00 Teeside Park	3	3.1683	1.83751	1.06089	1.05	4.36
9.00 Newcastle	3	2.7023	2.89512	1.67150	-.25	5.54
10.00 Blaydon Precinct	2	.3045	.88742	.62750	-.32	.93
11.00 Galleries Washington	4	1.6273	.69721	.34861	1.24	2.67
12.00 Consett	3	.4430	2.17282	1.25448	-1.96	2.27
13.00 Sunderland	2	2.9895	2.88570	2.04050	.95	5.03
15.00 Cleveland Centre Middlesbrough	2	3.0715	.89025	.62950	2.44	3.70
16.00 Middlesbrough	2	2.5010	3.00662	2.12600	.38	4.63

Total	158	2.2572	2.41393	.19204	-3.36	8.70

Multiple Comparisons

FARegulatory
Tukey HSD

(I) SC_Code	(J) SC_Code	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00 Metro Centre	2.00 Eldon Shopping Centre	-3.42567*	.38544	.000	-4.7408	-2.1106
	3.00 Dalton Park	-.37781	.65931	1.000	-2.6273	1.8717
	4.00 Durham City	-4.11303*	.58172	.000	-6.0978	-2.1282
	6.00 Durham The Gates	-3.38937	1.09773	.121	-7.1348	.3560
	7.00 Durham Arnison	-1.16808	.69486	.919	-3.5389	1.2028
	8.00 Teeside Park	-2.28303	1.09773	.714	-6.0284	1.4624
	9.00 Newcastle	-1.81703	1.09773	.928	-5.5624	1.9284
	10.00 Blaydon Precinct	.58080	1.33520	1.000	-3.9748	5.1364
	11.00 Galleries Washington	-.74195	.95716	1.000	-4.0077	2.5238
	12.00 Consett	.44230	1.09773	1.000	-3.3031	4.1877
	13.00 Sunderland	-2.10420	1.33520	.950	-6.6598	2.4514
	15.00 Cleveland Centre Middlesbrough	-2.18620	1.33520	.933	-6.7418	2.3694
	16.00 Middlesbrough	-1.61570	1.33520	.995	-6.1713	2.9399
2.00 Eldon Shopping Centre	1.00 Metro Centre	3.42567*	.38544	.000	2.1106	4.7408
	3.00 Dalton Park	3.04786*	.69585	.002	.6737	5.4221
	4.00 Durham City	-.68736	.62283	.998	-2.8124	1.4377
	6.00 Durham The Gates	.03630	1.12006	1.000	-3.7853	3.8579
	7.00 Durham Arnison	2.25760	.72963	.119	-.2318	4.7470
	8.00 Teeside Park	1.14264	1.12006	.999	-2.6790	4.9642
	9.00 Newcastle	1.60864	1.12006	.976	-2.2130	5.4302
	10.00 Blaydon Precinct	4.00647	1.35362	.166	-.6120	8.6249
	11.00 Galleries Washington	2.68372	.98268	.273	-.6691	6.0366
	12.00 Consett	3.86797*	1.12006	.044	.0464	7.6896
	13.00 Sunderland	1.32147	1.35362	.999	-3.2970	5.9399
	15.00 Cleveland Centre Middlesbrough	1.23947	1.35362	1.000	-3.3790	5.8579
	16.00 Middlesbrough	1.80997	1.35362	.987	-2.8085	6.4284
3.00 Dalton Park	1.00 Metro Centre	.37781	.65931	1.000	-1.8717	2.6273
	2.00 Eldon Shopping Centre	-3.04786*	.69585	.002	-5.4221	-.6737
	4.00 Durham City	-3.73522*	.82100	.001	-6.5364	-.9340
	6.00 Durham The Gates	-3.01156	1.24124	.467	-7.2466	1.2235
	7.00 Durham Arnison	-.79026	.90470	1.000	-3.8770	2.2965
	8.00 Teeside Park	-1.90522	1.24124	.959	-6.1402	2.3298
	9.00 Newcastle	-1.43922	1.24124	.997	-5.6742	2.7958
	10.00 Blaydon Precinct	.95861	1.45548	1.000	-4.0074	5.9246
	11.00 Galleries Washington	-.36414	1.11883	1.000	-4.1815	3.4533
	12.00 Consett	.82011	1.24124	1.000	-3.4149	5.0551
	13.00 Sunderland	-1.72639	1.45548	.996	-6.6924	3.2396
	15.00 Cleveland Centre Middlesbrough	-1.80839	1.45548	.993	-6.7744	3.1576
	16.00 Middlesbrough	-1.23789	1.45548	1.000	-6.2039	3.7281
4.00 Durham City	1.00 Metro Centre	4.11303*	.58172	.000	2.1282	6.0978
	2.00 Eldon Shopping Centre	.68736	.62283	.998	-1.4377	2.8124
	3.00 Dalton Park	3.73522*	.82100	.001	.9340	6.5364
	6.00 Durham The Gates	.72367	1.20182	1.000	-3.3769	4.8242
	7.00 Durham Arnison	2.94496*	.84982	.043	.0454	5.8445
	8.00 Teeside Park	1.83000	1.20182	.961	-2.2705	5.9305
	9.00 Newcastle	2.29600	1.20182	.817	-1.8045	6.3965
	10.00 Blaydon Precinct	4.69383	1.42201	.069	-.1580	9.5457
	11.00 Galleries Washington	3.37108	1.07494	.107	-.2966	7.0387
	12.00 Consett	4.55533*	1.20182	.015	.4548	8.6559
	13.00 Sunderland	2.00883	1.42201	.979	-2.8430	6.8607
	15.00 Cleveland Centre Middlesbrough	1.92683	1.42201	.985	-2.9250	6.7787
	16.00 Middlesbrough	2.49733	1.42201	.891	-2.3545	7.3492

6.00 Durham The Gates	1.00 Metro Centre	3.38937	1.09773	.121	-.3560	7.1348
	2.00 Eldon Shopping Centre	-.03630	1.12006	1.000	-3.8579	3.7853
	3.00 Dalton Park	3.01156	1.24124	.467	-1.2235	7.2466
	4.00 Durham City	-.72367	1.20182	1.000	-4.8242	3.3769
	7.00 Durham Arnison	2.22129	1.26048	.889	-2.0794	6.5220
	8.00 Teeside Park	1.10633	1.52020	1.000	-4.0805	6.2932
	9.00 Newcastle	1.57233	1.52020	.999	-3.6145	6.7592
	10.00 Blaydon Precinct	3.97017	1.69963	.532	-1.8289	9.7692
	11.00 Galleries Washington	2.64742	1.42201	.843	-2.2044	7.4992
	12.00 Consett	3.83167	1.52020	.402	-1.3552	9.0185
	13.00 Sunderland	1.28517	1.69963	1.000	-4.5139	7.0842
	15.00 Cleveland Centre Middlesbrough	1.20317	1.69963	1.000	-4.5959	7.0022
	16.00 Middlesbrough	1.77367	1.69963	.999	-4.0254	7.5727
7.00 Durham Arnison	1.00 Metro Centre	1.16808	.69486	.919	-1.2028	3.5389
	2.00 Eldon Shopping Centre	-2.25760	.72963	.119	-4.7470	.2318
	3.00 Dalton Park	.79026	.90470	1.000	-2.2965	3.8770
	4.00 Durham City	-2.94496*	.84982	.043	-5.8445	-.0454
	6.00 Durham The Gates	-2.22129	1.26048	.889	-6.5220	2.0794
	8.00 Teeside Park	-1.11496	1.26048	1.000	-5.4156	3.1857
	9.00 Newcastle	-.64896	1.26048	1.000	-4.9496	3.6517
	10.00 Blaydon Precinct	1.74888	1.47192	.996	-3.2732	6.7710
	11.00 Galleries Washington	.42612	1.14015	1.000	-3.4640	4.3162
	12.00 Consett	1.61038	1.26048	.991	-2.6903	5.9111
	13.00 Sunderland	-.93612	1.47192	1.000	-5.9582	4.0860
	15.00 Cleveland Centre Middlesbrough	-1.01813	1.47192	1.000	-6.0402	4.0040
	16.00 Middlesbrough	-.44763	1.47192	1.000	-5.4697	4.5745
8.00 Teeside Park	1.00 Metro Centre	2.28303	1.09773	.714	-1.4624	6.0284
	2.00 Eldon Shopping Centre	-1.14264	1.12006	.999	-4.9642	2.6790
	3.00 Dalton Park	1.90522	1.24124	.959	-2.3298	6.1402
	4.00 Durham City	-1.83000	1.20182	.961	-5.9305	2.2705
	6.00 Durham The Gates	-1.10633	1.52020	1.000	-6.2932	4.0805
	7.00 Durham Arnison	1.11496	1.26048	1.000	-3.1857	5.4156
	9.00 Newcastle	.46600	1.52020	1.000	-4.7208	5.6528
	10.00 Blaydon Precinct	2.86383	1.69963	.918	-2.9352	8.6629
	11.00 Galleries Washington	1.54108	1.42201	.998	-3.3107	6.3929
	12.00 Consett	2.72533	1.52020	.876	-2.4615	7.9122
	13.00 Sunderland	.17883	1.69963	1.000	-5.6202	5.9779
	15.00 Cleveland Centre Middlesbrough	.09683	1.69963	1.000	-5.7022	5.8959
	16.00 Middlesbrough	.66733	1.69963	1.000	-5.1317	6.4664
9.00 Newcastle	1.00 Metro Centre	1.81703	1.09773	.928	-1.9284	5.5624
	2.00 Eldon Shopping Centre	-1.60864	1.12006	.976	-5.4302	2.2130
	3.00 Dalton Park	1.43922	1.24124	.997	-2.7958	5.6742
	4.00 Durham City	-2.29600	1.20182	.817	-6.3965	1.8045
	6.00 Durham The Gates	-1.57233	1.52020	.999	-6.7592	3.6145
	7.00 Durham Arnison	.64896	1.26048	1.000	-3.6517	4.9496
	8.00 Teeside Park	-.46600	1.52020	1.000	-5.6528	4.7208
	10.00 Blaydon Precinct	2.39783	1.69963	.979	-3.4012	8.1969
	11.00 Galleries Washington	1.07508	1.42201	1.000	-3.7767	5.9269
	12.00 Consett	2.25933	1.52020	.968	-2.9275	7.4462
	13.00 Sunderland	-.28717	1.69963	1.000	-6.0862	5.5119
	15.00 Cleveland Centre Middlesbrough	-.36917	1.69963	1.000	-6.1682	5.4299
	16.00 Middlesbrough	.20133	1.69963	1.000	-5.5977	6.0004
10.00 Blaydon Precinct	1.00 Metro Centre	-.58080	1.33520	1.000	-5.1364	3.9748
	2.00 Eldon Shopping Centre	-4.00647	1.35362	.166	-8.6249	.6120
	3.00 Dalton Park	-.95861	1.45548	1.000	-5.9246	4.0074
	4.00 Durham City	-4.69383	1.42201	.069	-9.5457	.1580
	6.00 Durham The Gates	-3.97017	1.69963	.532	-9.7692	1.8289
	7.00 Durham Arnison	-1.74888	1.47192	.996	-6.7710	3.2732
	8.00 Teeside Park	-2.86383	1.69963	.918	-8.6629	2.9352
	9.00 Newcastle	-2.39783	1.69963	.979	-8.1969	3.4012
	11.00 Galleries Washington	-1.32275	1.61241	1.000	-6.8242	4.1787

	12.00 Consett	-.13850	1.69963	1.000	-5.9375	5.6605
	13.00 Sunderland	-2.68500	1.86185	.975	-9.0375	3.6675
	15.00 Cleveland Centre Middlesbrough	-2.76700	1.86185	.968	-9.1195	3.5855
	16.00 Middlesbrough	-2.19650	1.86185	.996	-8.5490	4.1560
11.00 Galleries Washington	1.00 Metro Centre	.74195	.95716	1.000	-2.5238	4.0077
	2.00 Eldon Shopping Centre	-2.68372	.98268	.273	-6.0366	.6691
	3.00 Dalton Park	.36414	1.11883	1.000	-3.4533	4.1815
	4.00 Durham City	-3.37108	1.07494	.107	-7.0387	.2966
	6.00 Durham The Gates	-2.64742	1.42201	.843	-7.4992	2.2044
	7.00 Durham Arnison	-.42612	1.14015	1.000	-4.3162	3.4640
	8.00 Teeside Park	-1.54108	1.42201	.998	-6.3929	3.3107
	9.00 Newcastle	-1.07508	1.42201	1.000	-5.9269	3.7767
	10.00 Blaydon Precinct	1.32275	1.61241	1.000	-4.1787	6.8242
	12.00 Consett	1.18425	1.42201	1.000	-3.6676	6.0361
	13.00 Sunderland	-1.36225	1.61241	1.000	-6.8637	4.1392
	15.00 Cleveland Centre Middlesbrough	-1.44425	1.61241	1.000	-6.9457	4.0572
	16.00 Middlesbrough	-.87375	1.61241	1.000	-6.3752	4.6277
12.00 Consett	1.00 Metro Centre	-.44230	1.09773	1.000	-4.1877	3.3031
	2.00 Eldon Shopping Centre	-3.86797*	1.12006	.044	-7.6896	-.0464
	3.00 Dalton Park	-.82011	1.24124	1.000	-5.0551	3.4149
	4.00 Durham City	-4.55533*	1.20182	.015	-8.6559	-.4548
	6.00 Durham The Gates	-3.83167	1.52020	.402	-9.0185	1.3552
	7.00 Durham Arnison	-1.61038	1.26048	.991	-5.9111	2.6903
	8.00 Teeside Park	-2.72533	1.52020	.876	-7.9122	2.4615
	9.00 Newcastle	-2.25933	1.52020	.968	-7.4462	2.9275
	10.00 Blaydon Precinct	.13850	1.69963	1.000	-5.6605	5.9375
	11.00 Galleries Washington	-1.18425	1.42201	1.000	-6.0361	3.6676
	13.00 Sunderland	-2.54650	1.69963	.966	-8.3455	3.2525
	15.00 Cleveland Centre Middlesbrough	-2.62850	1.69963	.956	-8.4275	3.1705
	16.00 Middlesbrough	-2.05800	1.69963	.995	-7.8570	3.7410
13.00 Sunderland	1.00 Metro Centre	2.10420	1.33520	.950	-2.4514	6.6598
	2.00 Eldon Shopping Centre	-1.32147	1.35362	.999	-5.9399	3.2970
	3.00 Dalton Park	1.72639	1.45548	.996	-3.2396	6.6924
	4.00 Durham City	-2.00883	1.42201	.979	-6.8607	2.8430
	6.00 Durham The Gates	-1.28517	1.69963	1.000	-7.0842	4.5139
	7.00 Durham Arnison	.93612	1.47192	1.000	-4.0860	5.9582
	8.00 Teeside Park	-.17883	1.69963	1.000	-5.9779	5.6202
	9.00 Newcastle	.28717	1.69963	1.000	-5.5119	6.0862
	10.00 Blaydon Precinct	2.68500	1.86185	.975	-3.6675	9.0375
	11.00 Galleries Washington	1.36225	1.61241	1.000	-4.1392	6.8637
	12.00 Consett	2.54650	1.69963	.966	-3.2525	8.3455
	15.00 Cleveland Centre Middlesbrough	-.08200	1.86185	1.000	-6.4345	6.2705
	16.00 Middlesbrough	.48850	1.86185	1.000	-5.8640	6.8410
15.00 Cleveland Centre Middlesbrough	1.00 Metro Centre	2.18620	1.33520	.933	-2.3694	6.7418
	2.00 Eldon Shopping Centre	-1.23947	1.35362	1.000	-5.8579	3.3790
	3.00 Dalton Park	1.80839	1.45548	.993	-3.1576	6.7744
	4.00 Durham City	-1.92683	1.42201	.985	-6.7787	2.9250
	6.00 Durham The Gates	-1.20317	1.69963	1.000	-7.0022	4.5959
	7.00 Durham Arnison	1.01813	1.47192	1.000	-4.0040	6.0402
	8.00 Teeside Park	-.09683	1.69963	1.000	-5.8959	5.7022
	9.00 Newcastle	.36917	1.69963	1.000	-5.4299	6.1682
	10.00 Blaydon Precinct	2.76700	1.86185	.968	-3.5855	9.1195
	11.00 Galleries Washington	1.44425	1.61241	1.000	-4.0572	6.9457
	12.00 Consett	2.62850	1.69963	.956	-3.1705	8.4275
	13.00 Sunderland	.08200	1.86185	1.000	-6.2705	6.4345
	16.00 Middlesbrough	.57050	1.86185	1.000	-5.7820	6.9230
16.00 Middlesbrough	1.00 Metro Centre	1.61570	1.33520	.995	-2.9399	6.1713
	2.00 Eldon Shopping Centre	-1.80997	1.35362	.987	-6.4284	2.8085
	3.00 Dalton Park	1.23789	1.45548	1.000	-3.7281	6.2039
	4.00 Durham City	-2.49733	1.42201	.891	-7.3492	2.3545

	6.00 Durham The Gates	-1.77367	1.69963	.999	-7.5727	4.0254
	7.00 Durham Arnison	.44763	1.47192	1.000	-4.5745	5.4697
	8.00 Teeside Park	-.66733	1.69963	1.000	-6.4664	5.1317
	9.00 Newcastle	-.20133	1.69963	1.000	-6.0004	5.5977
	10.00 Blaydon Precinct	2.19650	1.86185	.996	-4.1560	8.5490
	11.00 Galleries Washington	.87375	1.61241	1.000	-4.6277	6.3752
	12.00 Consett	2.05800	1.69963	.995	-3.7410	7.8570
	13.00 Sunderland	-.48850	1.86185	1.000	-6.8410	5.8640
	15.00 Cleveland Centre Middlesbrough	-.57050	1.86185	1.000	-6.9230	5.7820

*. The mean difference is significant at the 0.05 level.

Informational Reinforcement

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
1.00 Metro Centre	65	17.5084	3.55254	.44064	8.40	27.83
2.00 Eldon Shopping Centre	33	18.4375	3.29855	.57420	10.94	25.77
3.00 Dalton Park	9	17.0670	2.68264	.89421	12.68	20.06
4.00 Durham City	12	14.4474	4.85264	1.40084	4.03	21.36
6.00 Durham The Gates	3	13.4417	1.06444	.61455	12.22	14.12
7.00 Durham Arnison	8	15.0179	2.43483	.86084	10.76	19.07
8.00 Teeside Park	3	18.6957	1.80247	1.04066	16.75	20.31
9.00 Newcastle	3	19.7700	1.94879	1.12514	18.40	22.00
10.00 Blaydon Precinct	2	14.9245	.14779	.10450	14.82	15.03
11.00 Galleries Washington	4	14.7860	4.82868	2.41434	8.26	19.92
12.00 Consett	3	15.7197	3.32025	1.91695	12.25	18.87
13.00 Sunderland	2	16.9355	2.70044	1.90950	15.03	18.85
15.00 Cleveland Centre Middlesbrough	2	14.2995	1.72888	1.22250	13.08	15.52
16.00 Middlesbrough	2	17.1030	1.63766	1.15800	15.95	18.26
Total	151	17.1003	3.60171	.29310	4.03	27.83

Multiple Comparisons

FAReinfInfo New Info
Tukey HSD

(I) SC_Code	(J) SC_Code	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00 Metro Centre	2.00 Eldon Shopping Centre	-.92910	.73849	.992	-3.4510	1.5928
	3.00 Dalton Park	.44138	1.22880	1.000	-3.7549	4.6376
	4.00 Durham City	3.06097	1.08553	.227	-.6460	6.7680
	6.00 Durham The Gates	4.06672	2.04023	.769	-2.9005	11.0340
	7.00 Durham Arnison	2.49051	1.29450	.810	-1.9301	6.9111
	8.00 Teeside Park	-1.18728	2.04023	1.000	-8.1545	5.7800
	9.00 Newcastle	-2.26162	2.04023	.998	-9.2289	4.7056
	10.00 Blaydon Precinct	2.58388	2.48032	.999	-5.8863	11.0540
	11.00 Galleries Washington	2.72238	1.77984	.960	-3.3556	8.8004
	12.00 Consett	1.78872	2.04023	1.000	-5.1785	8.7560
	13.00 Sunderland	.57288	2.48032	1.000	-7.8973	9.0430
	15.00 Cleveland Centre Middlesbrough	3.20888	2.48032	.990	-5.2613	11.6790
	16.00 Middlesbrough	.40538	2.48032	1.000	-8.0648	8.8755
2.00 Eldon Shopping Centre	1.00 Metro Centre	.92910	.73849	.992	-1.5928	3.4510
	3.00 Dalton Park	1.37048	1.29924	.999	-3.0663	5.8073
	4.00 Durham City	3.99007*	1.16466	.048	.0128	7.9673

	6.00 Durham The Gates	4.99582	2.08342	.487	-2.1189	12.1106
	7.00 Durham Arnison	3.41961	1.36155	.408	-1.2300	8.0692
	8.00 Teeside Park	-.25818	2.08342	1.000	-7.3729	6.8566
	9.00 Newcastle	-1.33252	2.08342	1.000	-8.4472	5.7822
	10.00 Blaydon Precinct	3.51298	2.51596	.981	-5.0789	12.1048
	11.00 Galleries Washington	3.65148	1.82918	.767	-2.5950	9.8980
	12.00 Consett	2.71782	2.08342	.989	-4.3969	9.8326
	13.00 Sunderland	1.50198	2.51596	1.000	-7.0899	10.0938
	15.00 Cleveland Centre Middlesbrough	4.13798	2.51596	.931	-4.4539	12.7298
	16.00 Middlesbrough	1.33448	2.51596	1.000	-7.2574	9.9263
3.00 Dalton Park	1.00 Metro Centre	-.44138	1.22880	1.000	-4.6376	3.7549
	2.00 Eldon Shopping Centre	-1.37048	1.29924	.999	-5.8073	3.0663
	4.00 Durham City	2.61958	1.52349	.905	-2.5830	7.8222
	6.00 Durham The Gates	3.62533	2.30330	.950	-4.2403	11.4910
	7.00 Durham Arnison	2.04912	1.67881	.994	-3.6839	7.7821
	8.00 Teeside Park	-1.62867	2.30330	1.000	-9.4943	6.2370
	9.00 Newcastle	-2.70300	2.30330	.996	-10.5686	5.1626
	10.00 Blaydon Precinct	2.14250	2.70086	1.000	-7.0808	11.3658
	11.00 Galleries Washington	2.28100	2.07617	.998	-4.8090	9.3710
	12.00 Consett	1.34733	2.30330	1.000	-6.5183	9.2130
	13.00 Sunderland	.13150	2.70086	1.000	-9.0918	9.3548
	15.00 Cleveland Centre Middlesbrough	2.76750	2.70086	.999	-6.4558	11.9908
	16.00 Middlesbrough	-.03600	2.70086	1.000	-9.2593	9.1873
4.00 Durham City	1.00 Metro Centre	-3.06097	1.08553	.227	-6.7680	.6460
	2.00 Eldon Shopping Centre	-3.99007*	1.16466	.048	-7.9673	-.0128
	3.00 Dalton Park	-2.61958	1.52349	.905	-7.8222	2.5830
	6.00 Durham The Gates	1.00575	2.23016	1.000	-6.6101	8.6216
	7.00 Durham Arnison	-.57046	1.57696	1.000	-5.9557	4.8148
	8.00 Teeside Park	-4.24825	2.23016	.820	-11.8641	3.3676
	9.00 Newcastle	-5.32258	2.23016	.495	-12.9385	2.2933
	10.00 Blaydon Precinct	-.47708	2.63877	1.000	-9.4883	8.5341
	11.00 Galleries Washington	-.33858	1.99472	1.000	-7.1504	6.4733
	12.00 Consett	-1.27225	2.23016	1.000	-8.8881	6.3436
	13.00 Sunderland	-2.48808	2.63877	1.000	-11.4993	6.5231
	15.00 Cleveland Centre Middlesbrough	.14792	2.63877	1.000	-8.8633	9.1591
	16.00 Middlesbrough	-2.65558	2.63877	.999	-11.6668	6.3556
6.00 Durham The Gates	1.00 Metro Centre	-4.06672	2.04023	.769	-11.0340	2.9005
	2.00 Eldon Shopping Centre	-4.99582	2.08342	.487	-12.1106	2.1189
	3.00 Dalton Park	-3.62533	2.30330	.950	-11.4910	4.2403
	4.00 Durham City	-1.00575	2.23016	1.000	-8.6216	6.6101
	7.00 Durham Arnison	-1.57621	2.33902	1.000	-9.5638	6.4114
	8.00 Teeside Park	-5.25400	2.82096	.843	-14.8874	4.3794
	9.00 Newcastle	-6.32833	2.82096	.599	-15.9617	3.3051
	10.00 Blaydon Precinct	-1.48283	3.15393	1.000	-12.2533	9.2876
	11.00 Galleries Washington	-1.34433	2.63877	1.000	-10.3555	7.6669
	12.00 Consett	-2.27800	2.82096	1.000	-11.9114	7.3554
	13.00 Sunderland	-3.49383	3.15393	.998	-14.2643	7.2766
	15.00 Cleveland Centre Middlesbrough	-.85783	3.15393	1.000	-11.6283	9.9126
	16.00 Middlesbrough	-3.66133	3.15393	.996	-14.4318	7.1091
7.00 Durham Arnison	1.00 Metro Centre	-2.49051	1.29450	.810	-6.9111	1.9301
	2.00 Eldon Shopping Centre	-3.41961	1.36155	.408	-8.0692	1.2300
	3.00 Dalton Park	-2.04912	1.67881	.994	-7.7821	3.6839
	4.00 Durham City	.57046	1.57696	1.000	-4.8148	5.9557
	6.00 Durham The Gates	1.57621	2.33902	1.000	-6.4114	9.5638
	8.00 Teeside Park	-3.67779	2.33902	.950	-11.6654	4.3098
	9.00 Newcastle	-4.75213	2.33902	.745	-12.7397	3.2355
	10.00 Blaydon Precinct	.09337	2.73138	1.000	-9.2341	9.4209
	11.00 Galleries Washington	.23187	2.11572	1.000	-6.9932	7.4569
	12.00 Consett	-.70179	2.33902	1.000	-8.6894	7.2858
	13.00 Sunderland	-1.91763	2.73138	1.000	-11.2451	7.4099
	15.00 Cleveland Centre Middlesbrough	.71837	2.73138	1.000	-8.6091	10.0459

	16.00 Middlesbrough	-2.08513	2.73138	1.000	-11.4126	7.2424
8.00 Teeside Park	1.00 Metro Centre	1.18728	2.04023	1.000	-5.7800	8.1545
	2.00 Eldon Shopping Centre	.25818	2.08342	1.000	-6.8566	7.3729
	3.00 Dalton Park	1.62867	2.30330	1.000	-6.2370	9.4943
	4.00 Durham City	4.24825	2.23016	.820	-3.3676	11.8641
	6.00 Durham The Gates	5.25400	2.82096	.843	-4.3794	14.8874
	7.00 Durham Arnison	3.67779	2.33902	.950	-4.3098	11.6654
	9.00 Newcastle	-1.07433	2.82096	1.000	-10.7077	8.5591
	10.00 Blaydon Precinct	3.77117	3.15393	.995	-6.9993	14.5416
	11.00 Galleries Washington	3.90967	2.63877	.969	-5.1015	12.9209
	12.00 Consett	2.97600	2.82096	.999	-6.6574	12.6094
	13.00 Sunderland	1.76017	3.15393	1.000	-9.0103	12.5306
	15.00 Cleveland Centre Middlesbrough	4.39617	3.15393	.981	-6.3743	15.1666
	16.00 Middlesbrough	1.59267	3.15393	1.000	-9.1778	12.3631
9.00 Newcastle	1.00 Metro Centre	2.26162	2.04023	.998	-4.7056	9.2289
	2.00 Eldon Shopping Centre	1.33252	2.08342	1.000	-5.7822	8.4472
	3.00 Dalton Park	2.70300	2.30330	.996	-5.1626	10.5686
	4.00 Durham City	5.32258	2.23016	.495	-2.2933	12.9385
	6.00 Durham The Gates	6.32833	2.82096	.599	-3.3051	15.9617
	7.00 Durham Arnison	4.75213	2.33902	.745	-3.2355	12.7397
	8.00 Teeside Park	1.07433	2.82096	1.000	-8.5591	10.7077
	10.00 Blaydon Precinct	4.84550	3.15393	.958	-5.9250	15.6160
	11.00 Galleries Washington	4.98400	2.63877	.829	-4.0272	13.9952
	12.00 Consett	4.05033	2.82096	.976	-5.5831	13.6837
	13.00 Sunderland	2.83450	3.15393	1.000	-7.9360	13.6050
	15.00 Cleveland Centre Middlesbrough	5.47050	3.15393	.900	-5.3000	16.2410
	16.00 Middlesbrough	2.66700	3.15393	1.000	-8.1035	13.4375
10.00 Blaydon Precinct	1.00 Metro Centre	-2.58388	2.48032	.999	-11.0540	5.8863
	2.00 Eldon Shopping Centre	-3.51298	2.51596	.981	-12.1048	5.0789
	3.00 Dalton Park	-2.14250	2.70086	1.000	-11.3658	7.0808
	4.00 Durham City	.47708	2.63877	1.000	-8.5341	9.4883
	6.00 Durham The Gates	1.48283	3.15393	1.000	-9.2876	12.2533
	7.00 Durham Arnison	-.09337	2.73138	1.000	-9.4209	9.2341
	8.00 Teeside Park	-3.77117	3.15393	.995	-14.5416	6.9993
	9.00 Newcastle	-4.84550	3.15393	.958	-15.6160	5.9250
	11.00 Galleries Washington	.13850	2.99208	1.000	-10.0793	10.3563
	12.00 Consett	-.79517	3.15393	1.000	-11.5656	9.9753
	13.00 Sunderland	-2.01100	3.45495	1.000	-13.8095	9.7875
	15.00 Cleveland Centre Middlesbrough	.62500	3.45495	1.000	-11.1735	12.4235
	16.00 Middlesbrough	-2.17850	3.45495	1.000	-13.9770	9.6200
11.00 Galleries Washington	1.00 Metro Centre	-2.72238	1.77984	.960	-8.8004	3.3556
	2.00 Eldon Shopping Centre	-3.65148	1.82918	.767	-9.8980	2.5950
	3.00 Dalton Park	-2.28100	2.07617	.998	-9.3710	4.8090
	4.00 Durham City	.33858	1.99472	1.000	-6.4733	7.1504
	6.00 Durham The Gates	1.34433	2.63877	1.000	-7.6669	10.3555
	7.00 Durham Arnison	-.23187	2.11572	1.000	-7.4569	6.9932
	8.00 Teeside Park	-3.90967	2.63877	.969	-12.9209	5.1015
	9.00 Newcastle	-4.98400	2.63877	.829	-13.9952	4.0272
	10.00 Blaydon Precinct	-.13850	2.99208	1.000	-10.3563	10.0793
	12.00 Consett	-.93367	2.63877	1.000	-9.9449	8.0775
	13.00 Sunderland	-2.14950	2.99208	1.000	-12.3673	8.0683
	15.00 Cleveland Centre Middlesbrough	.48650	2.99208	1.000	-9.7313	10.7043
	16.00 Middlesbrough	-2.31700	2.99208	1.000	-12.5348	7.9008
12.00 Consett	1.00 Metro Centre	-1.78872	2.04023	1.000	-8.7560	5.1785
	2.00 Eldon Shopping Centre	-2.71782	2.08342	.989	-9.8326	4.3969
	3.00 Dalton Park	-1.34733	2.30330	1.000	-9.2130	6.5183
	4.00 Durham City	1.27225	2.23016	1.000	-6.3436	8.8881
	6.00 Durham The Gates	2.27800	2.82096	1.000	-7.3554	11.9114
	7.00 Durham Arnison	.70179	2.33902	1.000	-7.2858	8.6894
	8.00 Teeside Park	-2.97600	2.82096	.999	-12.6094	6.6574
	9.00 Newcastle	-4.05033	2.82096	.976	-13.6837	5.5831

	10.00 Blaydon Precinct	.79517	3.15393	1.000	-9.9753	11.5656
	11.00 Galleries Washington	.93367	2.63877	1.000	-8.0775	9.9449
	13.00 Sunderland	-1.21583	3.15393	1.000	-11.9863	9.5546
	15.00 Cleveland Centre Middlesbrough	1.42017	3.15393	1.000	-9.3503	12.1906
	16.00 Middlesbrough	-1.38333	3.15393	1.000	-12.1538	9.3871
13.00 Sunderland	1.00 Metro Centre	-.57288	2.48032	1.000	-9.0430	7.8973
	2.00 Eldon Shopping Centre	-1.50198	2.51596	1.000	-10.0938	7.0899
	3.00 Dalton Park	-.13150	2.70086	1.000	-9.3548	9.0918
	4.00 Durham City	2.48808	2.63877	1.000	-6.5231	11.4993
	6.00 Durham The Gates	3.49383	3.15393	.998	-7.2766	14.2643
	7.00 Durham Arnison	1.91763	2.73138	1.000	-7.4099	11.2451
	8.00 Teeside Park	-1.76017	3.15393	1.000	-12.5306	9.0103
	9.00 Newcastle	-2.83450	3.15393	1.000	-13.6050	7.9360
	10.00 Blaydon Precinct	2.01100	3.45495	1.000	-9.7875	13.8095
	11.00 Galleries Washington	2.14950	2.99208	1.000	-8.0683	12.3673
	12.00 Consett	1.21583	3.15393	1.000	-9.5546	11.9863
	15.00 Cleveland Centre Middlesbrough	2.63600	3.45495	1.000	-9.1625	14.4345
	16.00 Middlesbrough	-.16750	3.45495	1.000	-11.9660	11.6310
15.00 Cleveland Centre Middlesbrough	1.00 Metro Centre	-3.20888	2.48032	.990	-11.6790	5.2613
	2.00 Eldon Shopping Centre	-4.13798	2.51596	.931	-12.7298	4.4539
	3.00 Dalton Park	-2.76750	2.70086	.999	-11.9908	6.4558
	4.00 Durham City	-.14792	2.63877	1.000	-9.1591	8.8633
	6.00 Durham The Gates	.85783	3.15393	1.000	-9.9126	11.6283
	7.00 Durham Arnison	-.71837	2.73138	1.000	-10.0459	8.6091
	8.00 Teeside Park	-4.39617	3.15393	.981	-15.1666	6.3743
	9.00 Newcastle	-5.47050	3.15393	.900	-16.2410	5.3000
	10.00 Blaydon Precinct	-.62500	3.45495	1.000	-12.4235	11.1735
	11.00 Galleries Washington	-.48650	2.99208	1.000	-10.7043	9.7313
	12.00 Consett	-1.42017	3.15393	1.000	-12.1906	9.3503
	13.00 Sunderland	-2.63600	3.45495	1.000	-14.4345	9.1625
	16.00 Middlesbrough	-2.80350	3.45495	1.000	-14.6020	8.9950
16.00 Middlesbrough	1.00 Metro Centre	-.40538	2.48032	1.000	-8.8755	8.0648
	2.00 Eldon Shopping Centre	-1.33448	2.51596	1.000	-9.9263	7.2574
	3.00 Dalton Park	.03600	2.70086	1.000	-9.1873	9.2593
	4.00 Durham City	2.65558	2.63877	.999	-6.3556	11.6668
	6.00 Durham The Gates	3.66133	3.15393	.996	-7.1091	14.4318
	7.00 Durham Arnison	2.08513	2.73138	1.000	-7.2424	11.4126
	8.00 Teeside Park	-1.59267	3.15393	1.000	-12.3631	9.1778
	9.00 Newcastle	-2.66700	3.15393	1.000	-13.4375	8.1035
	10.00 Blaydon Precinct	2.17850	3.45495	1.000	-9.6200	13.9770
	11.00 Galleries Washington	2.31700	2.99208	1.000	-7.9008	12.5348
	12.00 Consett	1.38333	3.15393	1.000	-9.3871	12.1538
	13.00 Sunderland	.16750	3.45495	1.000	-11.6310	11.9660
	15.00 Cleveland Centre Middlesbrough	2.80350	3.45495	1.000	-8.9950	14.6020

*. The mean difference is significant at the 0.05 level.

Approach-Avoidance

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
1.00 Metro Centre	64	70.3380	11.61736	1.45217	37.02	90.57
2.00 Eldon Shopping Centre	28	73.2251	14.63820	2.76636	17.92	90.57
3.00 Dalton Park	9	65.1643	9.21890	3.07297	50.02	76.31
4.00 Durham City	12	60.2798	10.15105	2.93036	34.36	77.08
6.00 Durham The Gates	3	40.5127	6.59363	3.80683	33.72	46.89
7.00 Durham Arnison	8	60.3305	10.41283	3.68149	50.11	75.98
8.00 Teeside Park	3	65.0613	4.67350	2.69825	60.39	69.73
9.00 Newcastle	3	64.3693	3.28833	1.89852	60.58	66.49
10.00 Blaydon Precinct	2	50.8210	9.26876	6.55400	44.27	57.37
11.00 Galleries Washington	4	59.8028	5.40632	2.70316	52.97	66.20
12.00 Consett	3	62.3300	6.83170	3.94429	54.64	67.71
13.00 Sunderland	2	62.8270	13.33321	9.42800	53.40	72.26
15.00 Cleveland Centre Middlesbrough	2	58.1645	24.76642	17.5125 0	40.65	75.68
16.00 Middlesbrough	2	71.4415	3.98030	2.81450	68.63	74.26
Total	145	67.3583	12.89856	1.07117	17.92	90.57

Multiple Comparisons

FAApproachAvoidance
Tukey HSD

(I) SC_Code	(J) SC_Code	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
1.00 Metro Centre	2.00 Eldon Shopping Centre	-2.88712	2.66237	.998	-11.9865	6.2122
	3.00 Dalton Park	5.17362	4.18306	.994	-9.1231	19.4703
	4.00 Durham City	10.05820	3.69633	.279	-2.5750	22.6914
	6.00 Durham The Gates	29.82529*	6.94114	.003	6.1021	53.5485
	7.00 Durham Arnison	10.00745	4.40631	.579	-5.0523	25.0672
	8.00 Teeside Park	5.27662	6.94114	1.000	-18.4466	28.9998
	9.00 Newcastle	5.96862	6.94114	1.000	-17.7546	29.6918
	10.00 Blaydon Precinct	19.51695	8.43745	.549	-9.3202	48.3541
	11.00 Galleries Washington	10.53520	6.05590	.898	-10.1624	31.2328
	12.00 Consett	8.00795	6.94114	.997	-15.7152	31.7311
	13.00 Sunderland	7.51095	8.43745	1.000	-21.3262	36.3481
	15.00 Cleveland Centre Middlesbrough	12.17345	8.43745	.975	-16.6637	41.0106
	16.00 Middlesbrough	-1.10355	8.43745	1.000	-29.9407	27.7336
2.00 Eldon Shopping Centre	1.00 Metro Centre	2.88712	2.66237	.998	-6.2122	11.9865
	3.00 Dalton Park	8.06074	4.50241	.877	-7.3274	23.4489
	4.00 Durham City	12.94532	4.05419	.093	-.9109	26.8016
	6.00 Durham The Gates	32.71240*	7.13815	.001	8.3159	57.1089
	7.00 Durham Arnison	12.89457	4.71055	.270	-3.2050	28.9941
	8.00 Teeside Park	8.16374	7.13815	.997	-16.2327	32.5602
	9.00 Newcastle	8.85574	7.13815	.993	-15.5407	33.2522
	10.00 Blaydon Precinct	22.40407	8.60025	.348	-6.9895	51.7977
	11.00 Galleries Washington	13.42232	6.28073	.674	-8.0437	34.8884
	12.00 Consett	10.89507	7.13815	.960	-13.5014	35.2916
	13.00 Sunderland	10.39807	8.60025	.995	-18.9955	39.7917
	15.00 Cleveland Centre Middlesbrough	15.06057	8.60025	.893	-14.3330	44.4542
	16.00 Middlesbrough	1.78357	8.60025	1.000	-27.6100	31.1772
3.00 Dalton	1.00 Metro Centre	-5.17362	4.18306	.994	-19.4703	9.1231

Park	2.00 Eldon Shopping Centre	-8.06074	4.50241	.877	-23.4489	7.3274
	4.00 Durham City	4.88458	5.18134	1.000	-12.8240	22.5932
	6.00 Durham The Gates	24.65167	7.83345	.105	-2.1212	51.4245
	7.00 Durham Arnison	4.83383	5.70956	1.000	-14.6801	24.3477
	8.00 Teeside Park	.10300	7.83345	1.000	-26.6699	26.8759
	9.00 Newcastle	.79500	7.83345	1.000	-25.9779	27.5679
	10.00 Blaydon Precinct	14.34333	9.18553	.953	-17.0506	45.7373
	11.00 Galleries Washington	5.36158	7.06098	1.000	-18.7711	29.4943
	12.00 Consett	2.83433	7.83345	1.000	-23.9385	29.6072
	13.00 Sunderland	2.33733	9.18553	1.000	-29.0566	33.7313
	15.00 Cleveland Centre Middlesbrough	6.99983	9.18553	1.000	-24.3941	38.3938
	16.00 Middlesbrough	-6.27717	9.18553	1.000	-37.6711	25.1168
4.00 Durham City	1.00 Metro Centre	-10.05820	3.69633	.279	-22.6914	2.5750
	2.00 Eldon Shopping Centre	-12.94532	4.05419	.093	-26.8016	.9109
	3.00 Dalton Park	-4.88458	5.18134	1.000	-22.5932	12.8240
	6.00 Durham The Gates	19.76708	7.58470	.347	-6.1556	45.6898
	7.00 Durham Arnison	-.05075	5.36320	1.000	-18.3809	18.2794
	8.00 Teeside Park	-4.78158	7.58470	1.000	-30.7043	21.1411
	9.00 Newcastle	-4.08958	7.58470	1.000	-30.0123	21.8331
	10.00 Blaydon Precinct	9.45875	8.97434	.999	-21.2134	40.1309
	11.00 Galleries Washington	.47700	6.78397	1.000	-22.7090	23.6630
	12.00 Consett	-2.05025	7.58470	1.000	-27.9730	23.8725
	13.00 Sunderland	-2.54725	8.97434	1.000	-33.2194	28.1249
	15.00 Cleveland Centre Middlesbrough	2.11525	8.97434	1.000	-28.5569	32.7874
	16.00 Middlesbrough	-11.16175	8.97434	.993	-41.8339	19.5104
6.00 Durham The Gates	1.00 Metro Centre	-29.82529*	6.94114	.003	-53.5485	-6.1021
	2.00 Eldon Shopping Centre	-32.71240*	7.13815	.001	-57.1089	-8.3159
	3.00 Dalton Park	-24.65167	7.83345	.105	-51.4245	2.1212
	4.00 Durham City	-19.76708	7.58470	.347	-45.6898	6.1556
	7.00 Durham Arnison	-19.81783	7.95490	.422	-47.0058	7.3701
	8.00 Teeside Park	-24.54867	9.59398	.377	-57.3386	8.2413
	9.00 Newcastle	-23.85667	9.59398	.425	-56.6466	8.9333
	10.00 Blaydon Precinct	-10.30833	10.72639	.999	-46.9686	26.3519
	11.00 Galleries Washington	-19.29008	8.97434	.666	-49.9622	11.3821
	12.00 Consett	-21.81733	9.59398	.577	-54.6073	10.9726
	13.00 Sunderland	-22.31433	10.72639	.713	-58.9746	14.3459
	15.00 Cleveland Centre Middlesbrough	-17.65183	10.72639	.930	-54.3121	19.0084
	16.00 Middlesbrough	-30.92883	10.72639	.199	-67.5891	5.7314
7.00 Durham Arnison	1.00 Metro Centre	-10.00745	4.40631	.579	-25.0672	5.0523
	2.00 Eldon Shopping Centre	-12.89457	4.71055	.270	-28.9941	3.2050
	3.00 Dalton Park	-4.83383	5.70956	1.000	-24.3477	14.6801
	4.00 Durham City	.05075	5.36320	1.000	-18.2794	18.3809
	6.00 Durham The Gates	19.81783	7.95490	.422	-7.3701	47.0058
	8.00 Teeside Park	-4.73083	7.95490	1.000	-31.9188	22.4571
	9.00 Newcastle	-4.03883	7.95490	1.000	-31.2268	23.1491
	10.00 Blaydon Precinct	9.50950	9.28933	.999	-22.2392	41.2582
	11.00 Galleries Washington	.52775	7.19548	1.000	-24.0647	25.1202
	12.00 Consett	-1.99950	7.95490	1.000	-29.1875	25.1885
	13.00 Sunderland	-2.49650	9.28933	1.000	-34.2452	29.2522
	15.00 Cleveland Centre Middlesbrough	2.16600	9.28933	1.000	-29.5827	33.9147
	16.00 Middlesbrough	-11.11100	9.28933	.995	-42.8597	20.6377
8.00 Teeside Park	1.00 Metro Centre	-5.27662	6.94114	1.000	-28.9998	18.4466
	2.00 Eldon Shopping Centre	-8.16374	7.13815	.997	-32.5602	16.2327
	3.00 Dalton Park	-.10300	7.83345	1.000	-26.8759	26.6699
	4.00 Durham City	4.78158	7.58470	1.000	-21.1411	30.7043
	6.00 Durham The Gates	24.54867	9.59398	.377	-8.2413	57.3386
	7.00 Durham Arnison	4.73083	7.95490	1.000	-22.4571	31.9188
	9.00 Newcastle	.69200	9.59398	1.000	-32.0979	33.4819
	10.00 Blaydon Precinct	14.24033	10.72639	.988	-22.4199	50.9006
	11.00 Galleries Washington	5.25858	8.97434	1.000	-25.4136	35.9307
	12.00 Consett	2.73133	9.59398	1.000	-30.0586	35.5213

	13.00 Sunderland	2.23433	10.72639	1.000	-34.4259	38.8946
	15.00 Cleveland Centre Middlesbrough	6.89683	10.72639	1.000	-29.7634	43.5571
	16.00 Middlesbrough	-6.38017	10.72639	1.000	-43.0404	30.2801
9.00 Newcastle	1.00 Metro Centre	-5.96862	6.94114	1.000	-29.6918	17.7546
	2.00 Eldon Shopping Centre	-8.85574	7.13815	.993	-33.2522	15.5407
	3.00 Dalton Park	-.79500	7.83345	1.000	-27.5679	25.9779
	4.00 Durham City	4.08958	7.58470	1.000	-21.8331	30.0123
	6.00 Durham The Gates	23.85667	9.59398	.425	-8.9333	56.6466
	7.00 Durham Arnison	4.03883	7.95490	1.000	-23.1491	31.2268
	8.00 Teeside Park	-.69200	9.59398	1.000	-33.4819	32.0979
	10.00 Blaydon Precinct	13.54833	10.72639	.992	-23.1119	50.2086
	11.00 Galleries Washington	4.56658	8.97434	1.000	-26.1056	35.2387
	12.00 Consett	2.03933	9.59398	1.000	-30.7506	34.8293
	13.00 Sunderland	1.54233	10.72639	1.000	-35.1179	38.2026
	15.00 Cleveland Centre Middlesbrough	6.20483	10.72639	1.000	-30.4554	42.8651
	16.00 Middlesbrough	-7.07217	10.72639	1.000	-43.7324	29.5881
10.00 Blaydon Precinct	1.00 Metro Centre	-19.51695	8.43745	.549	-48.3541	9.3202
	2.00 Eldon Shopping Centre	-22.40407	8.60025	.348	-51.7977	6.9895
	3.00 Dalton Park	-14.34333	9.18553	.953	-45.7373	17.0506
	4.00 Durham City	-9.45875	8.97434	.999	-40.1309	21.2134
	6.00 Durham The Gates	10.30833	10.72639	.999	-26.3519	46.9686
	7.00 Durham Arnison	-9.50950	9.28933	.999	-41.2582	22.2392
	8.00 Teeside Park	-14.24033	10.72639	.988	-50.9006	22.4199
	9.00 Newcastle	-13.54833	10.72639	.992	-50.2086	23.1119
	11.00 Galleries Washington	-8.98175	10.17595	1.000	-43.7607	25.7972
	12.00 Consett	-11.50900	10.72639	.998	-48.1692	25.1512
	13.00 Sunderland	-12.00600	11.75017	.999	-52.1653	28.1533
	15.00 Cleveland Centre Middlesbrough	-7.34350	11.75017	1.000	-47.5028	32.8158
	16.00 Middlesbrough	-20.62050	11.75017	.892	-60.7798	19.5388
11.00 Galleries Washington	1.00 Metro Centre	-10.53520	6.05590	.898	-31.2328	10.1624
	2.00 Eldon Shopping Centre	-13.42232	6.28073	.674	-34.8884	8.0437
	3.00 Dalton Park	-5.36158	7.06098	1.000	-29.4943	18.7711
	4.00 Durham City	-.47700	6.78397	1.000	-23.6630	22.7090
	6.00 Durham The Gates	19.29008	8.97434	.666	-11.3821	49.9622
	7.00 Durham Arnison	-.52775	7.19548	1.000	-25.1202	24.0647
	8.00 Teeside Park	-5.25858	8.97434	1.000	-35.9307	25.4136
	9.00 Newcastle	-4.56658	8.97434	1.000	-35.2387	26.1056
	10.00 Blaydon Precinct	8.98175	10.17595	1.000	-25.7972	43.7607
	12.00 Consett	-2.52725	8.97434	1.000	-33.1994	28.1449
	13.00 Sunderland	-3.02425	10.17595	1.000	-37.8032	31.7547
	15.00 Cleveland Centre Middlesbrough	1.63825	10.17595	1.000	-33.1407	36.4172
	16.00 Middlesbrough	-11.63875	10.17595	.997	-46.4177	23.1402
12.00 Consett	1.00 Metro Centre	-8.00795	6.94114	.997	-31.7311	15.7152
	2.00 Eldon Shopping Centre	-10.89507	7.13815	.960	-35.2916	13.5014
	3.00 Dalton Park	-2.83433	7.83345	1.000	-29.6072	23.9385
	4.00 Durham City	2.05025	7.58470	1.000	-23.8725	27.9730
	6.00 Durham The Gates	21.81733	9.59398	.577	-10.9726	54.6073
	7.00 Durham Arnison	1.99950	7.95490	1.000	-25.1885	29.1875
	8.00 Teeside Park	-2.73133	9.59398	1.000	-35.5213	30.0586
	9.00 Newcastle	-2.03933	9.59398	1.000	-34.8293	30.7506
	10.00 Blaydon Precinct	11.50900	10.72639	.998	-25.1512	48.1692
	11.00 Galleries Washington	2.52725	8.97434	1.000	-28.1449	33.1994
	13.00 Sunderland	-.49700	10.72639	1.000	-37.1572	36.1632
	15.00 Cleveland Centre Middlesbrough	4.16550	10.72639	1.000	-32.4947	40.8257
	16.00 Middlesbrough	-9.11150	10.72639	1.000	-45.7717	27.5487
13.00 Sunderland	1.00 Metro Centre	-7.51095	8.43745	1.000	-36.3481	21.3262
	2.00 Eldon Shopping Centre	-10.39807	8.60025	.995	-39.7917	18.9955
	3.00 Dalton Park	-2.33733	9.18553	1.000	-33.7313	29.0566
	4.00 Durham City	2.54725	8.97434	1.000	-28.1249	33.2194
	6.00 Durham The Gates	22.31433	10.72639	.713	-14.3459	58.9746
	7.00 Durham Arnison	2.49650	9.28933	1.000	-29.2522	34.2452

	8.00 Teeside Park	-2.23433	10.72639	1.000	-38.8946	34.4259
	9.00 Newcastle	-1.54233	10.72639	1.000	-38.2026	35.1179
	10.00 Blaydon Precinct	12.00600	11.75017	.999	-28.1533	52.1653
	11.00 Galleries Washington	3.02425	10.17595	1.000	-31.7547	37.8032
	12.00 Consett	.49700	10.72639	1.000	-36.1632	37.1572
	15.00 Cleveland Centre Middlesbrough	4.66250	11.75017	1.000	-35.4968	44.8218
	16.00 Middlesbrough	-8.61450	11.75017	1.000	-48.7738	31.5448
15.00 Cleveland Centre Middlesbrough	1.00 Metro Centre	-12.17345	8.43745	.975	-41.0106	16.6637
	2.00 Eldon Shopping Centre	-15.06057	8.60025	.893	-44.4542	14.3330
	3.00 Dalton Park	-6.99983	9.18553	1.000	-38.3938	24.3941
	4.00 Durham City	-2.11525	8.97434	1.000	-32.7874	28.5569
	6.00 Durham The Gates	17.65183	10.72639	.930	-19.0084	54.3121
	7.00 Durham Arnison	-2.16600	9.28933	1.000	-33.9147	29.5827
	8.00 Teeside Park	-6.89683	10.72639	1.000	-43.5571	29.7634
	9.00 Newcastle	-6.20483	10.72639	1.000	-42.8651	30.4554
	10.00 Blaydon Precinct	7.34350	11.75017	1.000	-32.8158	47.5028
	11.00 Galleries Washington	-1.63825	10.17595	1.000	-36.4172	33.1407
	12.00 Consett	-4.16550	10.72639	1.000	-40.8257	32.4947
	13.00 Sunderland	-4.66250	11.75017	1.000	-44.8218	35.4968
	16.00 Middlesbrough	-13.27700	11.75017	.997	-53.4363	26.8823
16.00 Middlesbrough	1.00 Metro Centre	1.10355	8.43745	1.000	-27.7336	29.9407
	2.00 Eldon Shopping Centre	-1.78357	8.60025	1.000	-31.1772	27.6100
	3.00 Dalton Park	6.27717	9.18553	1.000	-25.1168	37.6711
	4.00 Durham City	11.16175	8.97434	.993	-19.5104	41.8339
	6.00 Durham The Gates	30.92883	10.72639	.199	-5.7314	67.5891
	7.00 Durham Arnison	11.11100	9.28933	.995	-20.6377	42.8597
	8.00 Teeside Park	6.38017	10.72639	1.000	-30.2801	43.0404
	9.00 Newcastle	7.07217	10.72639	1.000	-29.5881	43.7324
	10.00 Blaydon Precinct	20.62050	11.75017	.892	-19.5388	60.7798
	11.00 Galleries Washington	11.63875	10.17595	.997	-23.1402	46.4177
	12.00 Consett	9.11150	10.72639	1.000	-27.5487	45.7717
	13.00 Sunderland	8.61450	11.75017	1.000	-31.5448	48.7738
	15.00 Cleveland Centre Middlesbrough	13.27700	11.75017	.997	-26.8823	53.4363

*. The mean difference is significant at the 0.05 level.

Appendix N: Study 2 Descriptive Statistics and Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
FAApproachAvoidance	66.3191	13.37685	162
FASurroundings	46.5686	9.99297	177
FATemporal	11.6038	6.68850	177
FARegulatory	2.3939	2.39198	177
New Util	27.3566	4.83799	169
New Info	16.9475	3.64128	169
New Avers	7.8677	5.93719	169
FALHUtil	19.6132	3.66973	152
FALHInfo	29.4029	6.98800	152
FAPleasure	34.3327	6.51683	156
FAArousal	4.6593	2.51609	156

Correlations

		ApproachAvoidance	Surroundings	Temporal	Regulatory	UtiliReinf	InforReinf	AversCons	LHUtil	LHInfo	Pleasure	Arousal
ApproachAv	Pearson Correlation	1	.627**	-.198*	-.010	.620**	.600**	-.151	-.217**	.525**	.741**	-.032
	Sig. (2-tailed)		.000	.012	.902	.000	.000	.055	.007	.000	.000	.696
	N	162	162	162	162	162	162	162	152	152	156	156
Surroundings	Pearson Correlation	**.627****	1	.018	-.019	**.313****	**.483****	.086	-.155	**.340****	**.454****	**.157***
	Sig. (2-tailed)	**.000**		.817	.802	**.000**	**.000**	.269	.056	**.000**	**.000**	**.050**
	N	**162**	177	177	177	**169**	**169**	169	152	**152**	**156**	**156**
Temporal	Pearson Correlation	**-.198***	.018	1	.092	**-.425****	**.153***	**.593****	-.089	.012	-.087	**.370****
	Sig. (2-tailed)	**.012**	.817		.222	**.000**	**.047**	**.000**	.278	.888	.282	**.000**
	N	**162**	177	177	177	**169**	**169**	**169**	152	152	156	**156**
Regulatory	Pearson Correlation	-.010	-.019	.092	1	-.070	-.079	.132	.005	.058	-.040	.099
	Sig. (2-tailed)	.902	.802	.222		.367	.307	.086	.949	.476	.624	.220
	N	162	177	177	177	169	169	169	152	152	156	156
UtilReinf	Pearson Correlation	**.620****	.313**	-.425**	-.070	1	**.573****	**-.296****	-.066	**.341****	**.641****	**-.190***
	Sig. (2-tailed)	**.000**	.000	.000	.367		**.000**	**.000**	.418	**.000**	**.000**	**.017**
	N	**162**	169	169	169	169	**169**	**169**	152	**152**	**156**	**156**
InfoReinf	Pearson Correlation	**.600****	.483**	.153*	-.079	.573**	1	**.247****	-.157	**.560****	**.610****	**.206****
	Sig. (2-tailed)	**.000**	.000	.047	.307	.000		**.001**	.053	**.000**	**.000**	**.010**
	N	**162**	169	169	169	169	169	**169**	152	**152**	**156**	**156**
AversCons	Pearson Correlation	-.151	.086	.593**	.132	-.296**	.247**	1	-.073	.118	-.010	**.333****
	Sig. (2-tailed)	.055	.269	.000	.086	.000	.001		.370	.147	.899	**.000**
	N	162	169	169	169	169	169	169	152	152	156	**156**
LHUtil	Pearson Correlation	**-.217****	-.155	-.089	.005	-.066	-.157	-.073	1	**-.163***	**-.191***	**-.215****
	Sig. (2-tailed)	**.007**	.056	.278	.949	.418	.053	.370		**.045**	**.018**	**.008**
	N	**152**	152	152	152	152	152	152	152	**152**	**152**	**152**
LHInfo	Pearson Correlation	**.525****	.340**	.012	.058	.341**	.560**	.118	-.163*	1	**.397****	.140
	Sig. (2-tailed)	**.000**	.000	.888	.476	.000	.000	.147	.045		**.000**	.084
	N	**152**	152	152	152	152	152	152	152	152	**152**	152
Pleasure	Pearson Correlation	**.741****	.454**	-.087	-.040	.641**	.610**	-.010	-.191*	.397**	1	-.051
	Sig. (2-tailed)	**.000**	.000	.282	.624	.000	.000	.899	.018	.000		.530
	N	**156**	156	156	156	156	156	156	152	152	156	156
Arousal	Pearson Correlation	-.032	.157*	.370**	.099	-.190*	.206**	.333**	-.215**	.140	-.051	1
	Sig. (2-tailed)	.696	.050	.000	.220	.017	.010	.000	.008	.084	.530	
	N	156	156	156	156	156	156	156	152	152	156	156

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix O: Study 2 Main Regression Figures

Model Summary[b]

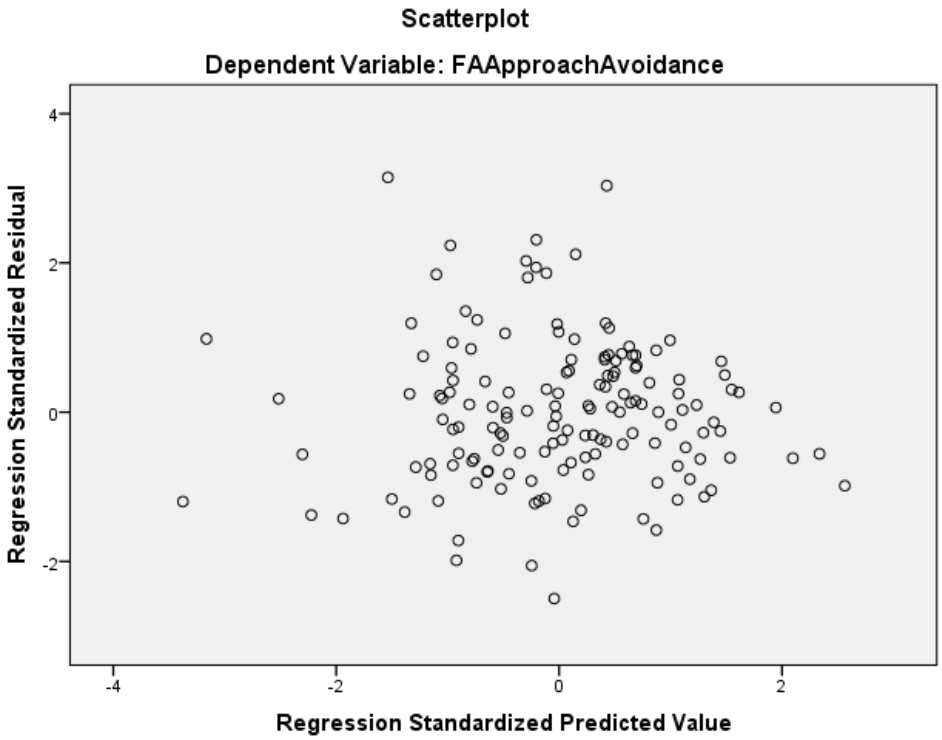
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.791	.777	6.37842

a. Predictors: (Constant), Arousal, Pleasure, Regulatory, LHUtil, AversCon, LHInfo, Surroundings, Temporal, UtilReinf, InfoReinf
b. Dependent Variable: ApproachAvoidance

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21765.615	10	2176.561	53.499	.000[a]
	Residual	5736.470	141	40.684		
	Total	27502.085	151			

a. Predictors: (Constant), Arousal, Pleasure, Regulatory, LHUtil, AversCon, LHInfo, Surroundings, Temporal, UtilReinf, InfoReinf
b. Dependent Variable: ApproachAvoidance



Correlations

		Approach Avoidance	Surroun-dings	Temporal	Regula-tory	UtilReinf	InfoReinf	AversCon	LHUtil	LHInfo	Pleasure	Arousal
Pearson Correlation	ApproachAvoidance	1.000	.680	-.176	-.037	.638	.619	-.137	-.217	.525	.767	-.022
	Surroundings	.680	1.000	.010	-.048	.369	.557	.087	-.155	.340	.466	.143
	Temporal	-.176	.010	1.000	.117	-.453	.155	.604	-.089	.012	-.101	.368
	Regulatory	-.037	-.048	.117	1.000	-.108	-.070	.146	.005	.058	-.046	.098
	UtilReinf	.638	.369	-.453	-.108	1.000	.555	-.294	-.066	.341	.672	-.177
	InfoReinf	.619	.557	.155	-.070	.555	1.000	.281	-.157	.560	.632	.229
	AversCon	-.137	.087	.604	.146	-.294	.281	1.000	-.073	.118	-.019	.338
	LHUtil	-.217	-.155	-.089	.005	-.066	-.157	-.073	1.000	-.163	-.191	-.215
	LHInfo	.525	.340	.012	.058	.341	.560	.118	-.163	1.000	.397	.140
	Pleasure	.767	.466	-.101	-.046	.672	.632	-.019	-.191	.397	1.000	-.060
	Arousal	-.022	.143	.368	.098	-.177	.229	.338	-.215	.140	-.060	1.000
Sig. (1-tailed)	ApproachAvoidance	.	.000	.015	.325	.000	.000	.047	.004	.000	.000	.395
	Surroundings	.000	.	.452	.277	.000	.000	.142	.028	.000	.000	.039
	Temporal	.015	.452	.	.075	.000	.028	.000	.139	.444	.107	.000
	Regulatory	.325	.277	.075	.	.092	.195	.036	.474	.238	.289	.115
	UtilReinf	.000	.000	.000	.092	.	.000	.000	.209	.000	.000	.015
	InfoReinf	.000	.000	.028	.195	.000	.	.000	.027	.000	.000	.002
	AversCon	.047	.142	.000	.036	.000	.000	.	.185	.074	.407	.000
	LHUtil	.004	.028	.139	.474	.209	.027	.185	.	.023	.009	.004
	LHInfo	.000	.000	.444	.238	.000	.000	.074	.023	.	.000	.042
	Pleasure	.000	.000	.107	.289	.000	.000	.407	.009	.000	.	.230
	Arousal	.395	.039	.000	.115	.015	.002	.000	.004	.042	.230	.
N	ApproachAvoidance	152	152	152	152	152	152	152	152	152	152	152
	Surroundings	152	152	152	152	152	152	152	152	152	152	152
	Temporal	152	152	152	152	152	152	152	152	152	152	152
	Regulatory	152	152	152	152	152	152	152	152	152	152	152
	UtilReinf	152	152	152	152	152	152	152	152	152	152	152
	InfoReinf	152	152	152	152	152	152	152	152	152	152	152
	AversCon	152	152	152	152	152	152	152	152	152	152	152
	LHUtil	152	152	152	152	152	152	152	152	152	152	152
	LHInfo	152	152	152	152	152	152	152	152	152	152	152
	Pleasure	152	152	152	152	152	152	152	152	152	152	152
	Arousal	152	152	152	152	152	152	152	152	152	152	152

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.147	5.827		.197	.844		
	Surroundings	.515	.064	.379	7.988	.000	.658	1.519
	Temporal	-.035	.114	-.017	-.304	.762	.466	2.145
	Regulatory	.163	.225	.029	.728	.468	.938	1.066
	UtilReinf	.139	.200	.050	.694	.489	.289	3.456
	InfoReinf	.183	.272	.049	.671	.503	.272	3.672
	AversCon	-.386	.118	-.171	-3.269	.001	.538	1.857
	LHUtil	-.197	.149	-.054	-1.323	.188	.900	1.111
	LHInfo	.375	.091	.194	4.101	.000	.660	1.515
	Pleasure	.894	.123	.433	7.249	.000	.414	2.413
	Arousal	-.160	.239	-.030	-.669	.505	.740	1.351

a. Dependent Variable: ApproachAvoidance

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions										
				(Constant)	Surroundings	Temporal	Regulatory	UtilReinf	InfoReinf	Avers Con	LHUtil	LHInfo	Pleasure	Arousal
1	1	9.635	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.497	4.402	.00	.00	.01	.66	.00	.00	.04	.00	.00	.00	.00
	3	.433	4.720	.00	.00	.05	.29	.00	.00	.17	.00	.00	.00	.02
	4	.175	7.422	.00	.00	.00	.00	.00	.00	.18	.00	.00	.00	.76
	5	.118	9.034	.00	.00	.62	.00	.00	.00	.45	.01	.00	.00	.06
	6	.060	12.721	.01	.02	.06	.01	.00	.02	.04	.31	.06	.01	.04
	7	.033	17.174	.00	.20	.00	.01	.00	.00	.00	.02	.72	.02	.00
	8	.023	20.273	.00	.71	.01	.00	.05	.02	.00	.01	.09	.10	.02
	9	.013	27.411	.11	.00	.00	.03	.00	.54	.05	.18	.04	.16	.00
	10	.009	33.120	.17	.00	.02	.00	.29	.00	.01	.31	.01	.70	.04
	11	.005	45.273	.71	.06	.23	.00	.65	.42	.05	.17	.07	.00	.06

a. Dependent Variable: ApproachAvoidance

Appendix P: Shopping Centres visited in Study 2

	Frequency	Percent	Valid Percent	Cumulative Percent
1.00 Metro Centre	74	36.6	36.6	36.6
2.00 Eldon Shopping Centre	40	19.8	19.8	56.4
3.00 Dalton Park	12	5.9	5.9	62.4
4.00 Durham City	15	7.4	7.4	69.8
5.00 Durham Prince Bishops	2	1.0	1.0	70.8
6.00 Durham The Gates	3	1.5	1.5	72.3
7.00 Durham Arniston	10	5.0	5.0	77.2
8.00 Teeside Park	5	2.5	2.5	79.7
9.00 Newcastle	4	2.0	2.0	81.7
10.00 Blaydon Precinct	2	1.0	1.0	82.7
11.00 Galleries Washington	4	2.0	2.0	84.7
12.00 Consett	3	1.5	1.5	86.1
13.00 Sunderland	3	1.5	1.5	87.6
14.00 Darlington	2	1.0	1.0	88.6
15.00 Cleveland Centre Middlesbrough	2	1.0	1.0	89.6
16.00 Middlesbrough	2	1.0	1.0	90.6
17.00 Byron Place	2	1.0	1.0	91.6
99.00 Other	17	8.4	8.4	100.0
Total	202	100.0	100.0	

The following centres were also visited by single respondents:
Cornmill Shopping Centre, Darlington
Viking Precinct Jarrow
Hull
Beacon Shopping Centre, North Shields
Keel Row, Blyth
Parkway Shopping Centre, Coulby Newham
Jarrow
Peterlee
South Shields
Silverlink Retail Park, No Shields

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