

Self-Perceived Age:
Implications For Marketing To Older UK
Consumers

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ABSTRACT

The central argument of this thesis is that chronological age is a poor indicator of a person's consumer behaviour, and self-perceived age gives a better insight into the attitudes, values, and lifestyles of older adults. Additionally, whilst demographic and economic trends suggest that older consumers should be increasingly important to marketers, it seems that in reality many firms are still not including them in specific targeting strategies. This research therefore advances knowledge pertaining to self-perceived age among older UK adults, and evaluates the marketing implications of this phenomenon.

The literature reviewed in this thesis originates from a variety of disciplines, including gerontology, sociology, psychology, biology, and consumer behaviour. This is because ageing is multidimensional, and as such a wide range of perspectives needed to be considered. Based on the review of the literature, a number of propositions emerged, which were then tested empirically using an age-representative quota sample of 650 adults aged 50-79.

The research found that the majority of older adults do not perceive themselves to be old; indeed their cognitive age is an average of 10 years younger than their actual age. Additionally, self-perceived age was tested for an association with a range of socio-demographic, social, physiological, psychological, and marketing variables. Some of these variables had never before been considered in relation to self-perceived age among older UK adults. Others have never before been considered in this way anywhere in the world. Additionally, the research provides a multivariate segmentation model of the older consumer market in the United Kingdom, the first of its kind to include self-perceived age. The practical implications for marketing are discussed.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE RESEARCH

The rapidly ageing population of the industrialised world is well documented. The United Kingdom has experienced a 24 per cent increase in the number of people aged 50 and over in the last four decades (ONS, 2004a). Additionally, there is evidence to suggest older people are relatively affluent (Kavanagh, 1995; Nicholson-Lord, 1995; Oliver, 1995), while dwindling numbers and the mortgage trap are eroding the spending power of the younger age groups (Byrne, 1994) upon whom marketers have traditionally focused (Buck, 1990a; Lannon, 1994; Schewe, 1991). It is therefore now recognised that older consumers are an increasingly important market for a variety of goods and services (Burt and Gabbott, 1995; Chura, 2002; Kennett, Moschis and Bellenger, 1995; Miller and Soyoung, 1999; Schewe, 1991). Despite this recognition, the UK older consumer market is among the least intensively researched and understood (Ahmad, 2002; Gunter, 1998).

Whilst chronological age is the most frequently used demographic variable to describe consumer behaviour research and to segment consumer markets (Barak and Schiffman, 1981), its limitations have long been acknowledged (Adams, 1971; Butler, 1968a; Heron and Chown, 1967). Indeed, although chronological age may be a useful clue to performance during early life (Jarvik, 1975), ageing does not perfectly coincide with chronological age (Bell, 1972), so homogeneity in individual lifestyles and conditions among age groups cannot be assumed. Thus, the number of years lived is a poor indicator of a person's attitudes and consumer behaviour (Chua, Cote and Leong, 1990; Greco, 1987; Tynan and Drayton, 1985a; Van Auken, Barry and Anderson, 1993). Such observations have led to predictions that chronological age will progressively have less and less utility as a research variable (Maddox and Campbell, 1985).

Given the limitations of chronological age, the implications of the cliché that a person is as young, or as old, as they feel may be more useful in understanding the behaviour of older people. Research shows that the age a person perceives themselves to be, or identifies with, constrains them to recognise changes in themselves and to perceive that attitudes toward them have changed (Peters 1971). Thus, the age a person identifies with gives an insight into the behaviours that the individual thinks society expects from them (Guptill 1969). Likewise, an individual's self-perceived age gives a better insight into their likely consumer behaviour than does chronological age alone (Cleaver and Muller 2002; Schiffman and Sherman 1991; Stephens 1991). For these reasons, self-perceived age has been of interest to American gerontologists for over half a century (Cavan, Burgess, Havinghurst and Goldhamer, 1949; Havinghurst and Albrecht 1953) and American marketing researchers for over two decades (Barak, 1979; Barak and Schiffman 1981). The concept has, however, been given only a small amount of recent attention in the UK.

1.2 RESEARCH AIMS AND OBJECTIVES

Given the situation outlined above, the central aim of this research is to:

Advance knowledge pertaining to self-perceived age among older UK adults, and evaluate the marketing implications of this phenomenon.

Specifically, therefore, the research objectives are to:

1. Critically analyse the concept of self-perceived age. In so doing, literature from the fields of marketing, gerontology, psychology, and sociology will be synthesised.
2. Identify those demographic, social, physiological, psychological, and consumer behaviour variables that have been found to relate to self-

perceived age in studies conducted outside the UK, and test these using a sample of older British citizens.

3. Identify those consumer behaviour variables that relate particularly to older consumers and yet have not been examined in relation to self-perceived age, and test these empirically.
4. Develop a segmentation model of the older consumer market in the UK that utilises self-perceived age.

Essentially, the research finds that the concept of self-perceived age is indeed a useful concept for marketing to older adults, albeit when used in conjunction with a range of other variables.

1.3 OUTLINE OF THE THESIS

This thesis is divided into five chapters. Chapter 1 lays the foundations by introducing the research area and the central research aims and objectives. It then justifies the research and outlines the limitations imposed upon it.

Chapter 2 comprises a review of the literature. It begins by charting the development of the concept of self-perceived age from its beginnings in 1949 to its use in the present day, and analyses the gerontological literature concerned with the ideology of age. It then examines those studies that have measured self-perceived age in relation to a host of demographic, sociological, physiological, psychological, and consumer behaviour variables, and applies appropriate theories and concepts to add depth to the analysis. The chapter also evaluates the literature pertaining to the consumer behaviour of older adults in order to identify potentially important variables that have never been measured in relation to self-perceived age. Finally, the chapter reviews those studies that

have suggested ways to segment the older consumer market. From this review of the literature emerges a series of propositions that dictate the specific areas around which the primary data is gathered.

Chapter 3 justifies the predominantly positivist approach taken in this research, mainly on the basis that of approximately 130 empirical studies pertaining to self-perceived age that are reviewed in this thesis only 3 employ methodologies that fall within a phenomenological approach. The chapter also details the research methods employed to gather the primary data, including the development and piloting of the research instrument, the sampling technique and the associated incentives used to promote response, and discusses the ethical considerations of the research.

Chapter 4 presents the analyses of the data. After detailing the characteristics of respondents, it is structured around individual analyses of each proposition, which used univariate and bivariate statistical techniques including t-tests, Mann-Whitney tests, tests of correlation, chi-square tests, ANOVA and its nonparametric equivalents, and analysis of covariance. Multivariate analyses were also performed on each distinct set of variables, thus the chapter presents the results of multiple regression modelling for demographic, sociological, physiological, and psychological variables. Finally, the results of a cluster analysis that incorporates the full range of consumer behaviour variables is presented.

Chapter 5 presents the conclusions about the research and discusses the results in relation to existing literature. The chapter also considers the original contributions to knowledge that the research makes, before discussing the implications for theory, marketing practice, and further research.

1.4 JUSTIFICATION FOR THE RESEARCH

This research is justified on several theoretical and practical grounds, which include the growing importance of the older consumer market, the relative neglect of older consumers by marketers, the gaps in knowledge pertaining to older consumers, the relative neglect of self-perceived age studies in Britain, and the contributions to theory and practice that this thesis makes. These reasons are now explained.

1.4.1 The Older Consumer Market

There were 19.8 million people aged 50 and over in the UK in 2002, a rise of 24 per cent from 16 million in 1961, which means that the over 50s now account for almost one-third of the entire population. The number is projected to increase by a further 37 per cent by 2031, when there will be close to 27 million people aged 50 and over in this country. The increase in older people is due in part to the ‘baby boom’ that occurred after the Second World War, and in part due to the increases in longevity. Indeed, life expectancy in the UK is now 81 years for females and 76 years for males. In contrast, life expectancy in 1901 was 49 and 45 years respectively, while between 1981 and 2002 life expectancy at age 50 increased by 4.5 years for men and 3 years for women (ONS, 2004a). Moreover, when considering the lifetime value of consumers, adults spend longest at the later adulthood stage than in any other traditional marketing segment (Nielsen and Curry, 1997). Thus, in terms of sheer size the market for older consumers is an increasingly important one.

The relative wealth, personal disposable income and propensity to spend among older consumers are also important considerations. By 2001, 80 per cent of people aged 50-64 were owner-occupiers, and 61 per cent of those aged 65 and over owned their homes outright. Unemployment rates are much lower than the national average for older people, with the vast majority of those between 50 and retirement age who do not work being classified as ‘economically inactive’ rather than unemployed, reflecting the choice of many to take early retirement.

The average net incomes of pensioners in the UK rose by 25 per cent during the last 8 years (ONS, 2004a) and while there is no doubt that pockets of poverty do exist among older consumers in that 20 per cent of pensioners live below the official poverty line, in comparison to 17 per cent of the general population (ONS, 2004b), there is a great deal of affluence, too. For example, only 51 per cent of pensioners' incomes come from state benefits, with many enjoying occupational pensions and investment income (ONS, 2004a). Couples where one or both partners are over state retirement pension age are the most likely to have substantial savings, with three in ten having savings of at least £20,000, twice the proportion of the population as a whole (ONS, 2004b).

Additionally, it appears that older consumers are willing to spend. Analysis of household expenditure by age reveals that 50-64 year olds spend more per head on recreation and culture, including cars, cinema and theatre admissions, and holidays abroad than any other age group. Similarly, those aged 65-74 are the biggest spenders on newspapers, magazines, and UK holidays. Conversely, people over 50 spend considerably less on repaying loans to clear debts than do younger age groups (ONS, 2002, 2004a, b).

1.4.2 Untapped Marketing Opportunities

There are signs that some industries have recognised the importance of the demographic and economic trends outlined above. Most notable is the travel industry where many firms offer tailored package holidays to the over 50s (Ellitott, 1995; Mintel, 1996). The leisure industry is also slowly responding to the needs of the market, e.g., Wilson Sporting Goods has designed a line of golf clubs which are weighted to accommodate changes in muscle strength, and a version of the board game Scrabble with letter tiles fifty per cent larger than normal accommodates for vision defects (Schewe, 1989). Outside the tourism and leisure sectors, there are a few examples of firms that specifically target older adults, including Levi Strauss' 'loose fit' jeans (Aldersey-Williams, 1993), J. D. Williams' mail order catalogue called '50 Plus' (Oliver, 1995), and car

makers Vauxhall and Ford which tailored advertising copy and product design to meet older consumers' needs (Hinde and Ramesh, 1995).

Nevertheless, there appear to be many unrealised opportunities. Evidence suggests that older people are still routinely excluded from many market research samples (Flatters, 1994), advertising campaigns (Simcock and Sudbury, in press), and product design (Peters, 1994; Higham, 1999). Several reasons are often cited as possible explanations why marketers have been relatively slow to respond to the older consumer. These include the common misconception that older people are unwilling to adopt new products and services (Philp, Haynes and Helms, 1992; Uncles and Ehrenberg, 1990), or that older consumers have limited spending power (Gelb, 1978; Hauser and Scarisbrick-Hauser, 1995; Schewe and Meredith, 1994). It has also been argued that marketing is obsessed with youth, an obsession that manifests itself in the targeting of younger consumers because their brand preferences are not yet fully realised (Gunter, 1998), or the fear that younger buyers will be deterred if older adults are targeted (Aldersey-Williams, 1993), or that youth is glamorous whilst middle-aged is not (Schewe, 1991; Thomas, 1990; Whetton, 1990), or that marketers themselves are young and are therefore unable to empathise with older consumers (Blackett, 2002; Treguer, 2002).

A final possible reason why some companies have been reluctant to target older consumers is that there is a lack of valid and reliable research available to help guide marketing strategies. Much of the apprehension in targeting older adults may be due to lack of valid empirical evidence pertaining to them.

1.4.3 Research On Older Consumers

Twenty years ago, Tynan (1985) and her colleague (Tynan and Drayton, 1985a, b, 1988) drew attention to the importance of older consumers in this country, and noted the neglect of them. Since then, an abundance of literature pertaining to the older consumer market can be found. However, although the UK has

recently witnessed the emergence of a few empirical studies pertaining to the consumer behaviour of older adults, the vast majority of the extant literature is descriptive. Many articles stress the importance of the older consumer market in demographic and economic terms (Barr, 1994; Elliott, 1995; Kreitzman, 1994) and warn companies that they must do more to target this potentially lucrative segment (Aldersey-Williams, 1993; Banks, 1990; Flanagan, 1994; Fry, 1992; Nicholason-Lord, 1995; Philp, Haynes and Helms, 1992; Peters, 1994; Whetton, 1990), often offering advice on how to do so (Hauser and Skarisbrick-Hauser, 1995). Articles that accuse marketing of ageism and an inability to empathise with older consumers are plentiful (Byrne, 1994; Flatters, 1994; Higham, 1999; Thomas, 1990). There is also a growing body of research that describes those products and services that older consumers prefer (Abrams, 1990; Oliver, 1995).

What is lacking, however, is valid and reliable research into the underlying consumer behaviours of older people in the UK, in order to guide marketing strategies. At present, the knowledge derived from empirical studies pertaining to older UK consumers is highly disorganised, contains data that are misinterpreted or improperly used (Moschis, 1992), or relates to studies that were conducted in America with limited evidence that results can be generalised internationally. Thus, more rigorous and scientific research is needed in an attempt to better understand the behaviour of older British consumers, which is the second basis on which this research is justified.

1.4.4 Paucity Of Self-Perceived Age Research In Britain

Despite over 50 years of self-perceived age research by gerontologists, and over two decades of American research into the application of this phenomenon to marketing, there remains a paucity of such studies based on older UK adults. British research into the phenomenon of self-perceived age currently comprises one small-scale study that ascertained that 43 older people do not feel old (Thompson, Itzin and Abendstern, 1990); one study that found that the cognitive

age of older adults was not related to consumer innovativeness (Szmigin and Carrigan, 2000), and the results of a relatively small preliminary study conducted by the author and her colleagues (Sudbury, 2004; Sudbury, Simcock and Wright, 2004).

Clearly, therefore, the UK lags behind America in terms of knowledge relating to self-perceived age, and this research aims to fill a potentially important gap by considering the concept in relation to a host of variables in order to better understand the concept and both its usefulness and potential applications to marketing.

1.4.5 Original Contributions To Knowledge

Some of the original contributions to knowledge that emerge from this research do so because, never before, have many basic demographic variables, nor many of the marketing and gerontological concepts, theories, and related scales that were utilised been tested on older adults in the UK in relation to self-perceived age. These include:

- Demographic variables of marital status, socio-economic status, and progeny
- Health, activity levels and exercise
- Social relations
- Subjective-well being
- Self-esteem
- Self-confidence
- Public self-consciousness
- Consumer venturesomeness
- Central values
- Attitudes toward age-based marketing promotions
- Media usage
- Price consciousness

Other contributions to knowledge occur where established gerontological and marketing concepts are empirically tested for relationships with self-perceived age among older persons for the first time. These include:

- Social comparison
- Physical manifestations of ageing
- Market mavenism
- Materialism
- Attitudes toward marketing and consumerism
- Nostalgia
- Attitudes toward credit
- Attitudes toward healthy eating

Finally, a body of writing asserts that validity is a dynamic process that results from the accumulation of evidence over time (Wells, 1975; Neuman, 2000), and the aggregation of results (Peter, 1981). Indeed, Epstein (1980) argues that “there is no more fundamental requirement in science than that the replicability of findings be established” (p. 796). Clearly, the concept of Cognitive Age has been accepted into the mainstream consumer behaviour literature in America. Indeed, Van Auken, Barry and Bagozzi (in press) recently noted, “while much is known about cognitive age among US seniors, little is known about the appropriateness of the concept among seniors in other countries. If the construct is to reach its full potential, its validity in countries other than the United States must be investigated” (p.3). Thus, this research investigates the concept of cognitive age in order to establish its use in this country with the same assurance as given to it in America.

1.5 DEFINITIONS OF OLDER CONSUMERS

1.5.1 Terminology

Older consumers have been given a variety of names by researchers, ranging from jargon such as ‘Oldies,’ ‘Golden Oldies’ (Mazur, 1993) and ‘Wrinklies’ (Higham, 1999), through lifestyle segment descriptors using acronyms such as Muppies (MatureUp-scale Post Professionals); Woopies (Well Off Older People); Suppies (Senior Urban Professionals); Gumpies (Grown Up Mature People); Jollies (Jet-setting Oldies with Lots of Loot); Opals (Older People, Active Lifestyles); and Grampies (Growing Retired Active Monied People In an Excellent State) (Bone, 1991; Marshall, 1990; Merwe, 1987; Schewe, 1998, 1991). Many of these terms, in common with other caricatured portrayals, are amusing and even helpful (Hobman, 1990), as some do recognise the value and potential of this market. However, although such descriptors epitomise the nature of this market, the labels themselves could be distasteful to many older consumers.

Likewise, the term ‘grey’, which was first coined by Gelb (1978) who offered it as a segment descriptor similar to the “teen market,” and ‘black market’ is frequently used in the UK literature (Gunter, 1998; Johnson, 1990; Mitchell, 1996). However, perhaps because it is defined as “belonging to old age”, and derived from the concept of having grey hair or beard (Oxford English Dictionary, 2002, p.410), it too has been criticised as unkind (Thomas, 1990). Similarly, ‘senior citizens,’ and ‘seniors,’ which can be found in abundance in the literature (for example, Day, Davis, Dove and French, 1998; Moundlic, 1990) may be inappropriate because they refer primarily or exclusively to people over pensionable age (Johnson, 1990).

In contrast, Moschis (1992) suggests that the term ‘mature’ is often seen to be preferable to other descriptors because it may ‘signify special status gained through experience and knowledge’ (p. 22), while in its literal sense the term ‘older’ could include anyone over the median chronological age. Moreover, European Commission Research found the term ‘older’ was the preferred term

of the over 50s themselves (Flatters, 1994). Thus, the terms used to refer to the market under study here are ‘older consumers’ and ‘mature consumers’.

1.5.2 Age Parameters

Ambiguity among researchers surrounds the ages at which the older consumer market begins and ends. For example, the lower age has been placed as 45 (Key Note, 1994), 50 (Alexander, 1990; Banks, 1992; Oliver, 1995), 55 (Calver, Vierich and Phillips, 1993; Johnson, 1995; Moschis, 1992; Stephens, 1995; Tinker, 1994; Uncles and Ehrenberg, 1990; Van Auken, Barry and Anderson, 1993), 60 (Wilkes, 1992) and 65 (Day *et al.*, 1988). However, at least among market practitioners and UK service providers there does appear to be some agreement that age 50 is the starting point for this market. Such firms include SAGA, Age Concern, Tour Operators offering specialist holidays, and insurance firms offering age-related discounts. On this basis, age 50 was chosen as the lower parameter for the older consumer market.

There is even less agreement between researchers as to the upper age limit of this market. Many authors do not specify an upper age limit (Moschis, 1993; Uncles and Ehrenberg, 1990; Stephens, 1995; Key Note;), while others use the cut off points of 65 (Alexander, 1990) and 70 (Calver, Vierich and Phillips, 1993).

The Carnegie Inquiry into the Third Age was launched in Britain in 1990 to consider issues affecting the life of people who are experiencing a transitional period in terms of work and bringing up their children but who may have many years of active and independent life ahead of them. The Inquiry acknowledged that people enter and leave this stage of their lives at very different times, but, for statistical purposes, opted for the age parameters of 50-74. Likewise, Neugarten’s description of the ‘young-old’, which is echoed in many descriptions of the lifestyles and economic situations of the mature market, mainly included those people up to 75 years (Neugarten and Hagestad, 1976).

However, given that the state retirement age is 65¹, it seems to make sense to consider 65 as the median age for people in this market, thus the upper age parameter was set at 79 years. Defining the age limits in this way results in an older consumer market that presently comprises 17.3 million people, or 29% of the UK population.

1.6 CHAPTER SUMMARY

This chapter has laid the foundations for the thesis. A brief background to the research, and the research aims and objectives were presented. The structure of the thesis was then outlined, which included a brief overview of the methodology. The research was then justified on several bases, and the actual market defined. The thesis now proceeds with an in-depth analysis of the literature.

¹ At the current time, the state retirement age is 65 for males and 60 for females. However, a planned change to 65 for both genders will be phased in between April 2010 and March 2020 (ONS, 1999b).

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

As recognition of the limitations of chronological age grew, so too did the number of empirical studies that examined self-perceived age. These studies can be found in a range of disciplines, including gerontology, sociology, psychobiology, psychology, and marketing and consumer behaviour.

Additionally, there exists a range of theories and concepts, also from different disciplines, that have been applied to various findings and perspectives in attempts to better understand the phenomenon. It is the purpose of this chapter, therefore, to synthesise, review, and analyse these studies and theories, in order to identify those research issues that are either controversial or have not been answered fully by previous research. Additionally, the chapter reviews some literature pertaining to concepts that would intuitively be related to self-perceived age, but have not previously been considered by earlier research.

On the basis of the literature examined in each research area, a proposition is presented. These propositions form the basis for the primary research, and are therefore research issues that will be tested empirically. The reason for using more general propositions rather than specific hypotheses is a purely practical one, in that some propositions relate to several different variables, thus the number of individual research issues for testing was confined to a more manageable number.

The chapter begins by tracing the history of the measurement of self-perceived age from its inception as a one-dimensional construct, to the more modern multidimensional measures. After differentiating between the various self-perceived age measures, it examines some of the theoretical concepts that have been previously proffered in order to help understand why an older persons' self-perceived age is often different to their chronological age. The review then

moves on to examine specific studies that have measured self-perceived age in relation to demographic, sociological, physiological, psychological and finally consumer behaviour variables. Additionally, the literature pertaining to older consumers is examined, in order to identify those gaps in the self-perceived age literature that may be of use to marketers.

2.2 SELF-PERCEIVED AGE MEASURES

2.2.1 Age Classification and Identity Measures

Although methods of defining age include comparison with others (he was born before me), the placing of an individual in relation to an irregular event (before the flood), or by the passage of the seasons, the most usual form of classification is the age category (Goody, 1976). Such age categorisation schemes are embedded in every culture, and define the life course. The number of age categories range from the minimal distinction of young, adult, and old, to intricate systems with ten or more named grades (Keith, 1985).

The first major group of techniques to measure self-perceived age, defined here as age identity measures, are concerned with the age category with which people most closely identify. Early measures asked people to classify themselves into age categories such as young, middle-aged, elderly, or old (Bloom, 1961; Busse, Jeffers and Obrist, 1957; Cavan *et al.*, 1949; Matthews, 1979; Minnigerode, 1976; Shanas, 1950; Tuckman and Loriger, 1954). This basic technique, sometimes with slight modifications (Atchley and George, 1973; Atchley, 1976; Crook and Heinstein, 1958; Cleveland and Shore, 1992; Cutler, 1974; Heckhausen and Krueger, 1993; Markides, 1980; Markides and Pappas, 1983; Markides and Bolt, 1983; Miller, Gurin and Gurin, 1980; Montepare, 1996 a,b,c; Staats, 1996), became the standard and most popular technique for measuring self-perceived age amongst gerontologists (Barak, 1987).

A second, and more basic way of measuring self-perceived age, simply asks respondents “do you feel old?” The method has been utilised by several researchers (Bell, 1967; Preston, 1968, 1970; Preston and Williams, 1971) including the only known study of self-perceived age conducted in Britain (Thompson *et al.*, 1990). It is perhaps significant to note that the British study took place 41 years after the introduction of self-perceived age measures, and even then the most basic of all the techniques was utilised. Alternative methods are to ask subjects at what age they thought of themselves as old (Taves and Hansen, 1963) or as senior citizens (Griffiths, Farley, Dean and Boon, 1971) or to recall situations when they became aware of their growing older or felt old (Lehr and Puschner, 1964; Sherman, 1994).

A further alternative measure is comparative age (Batten, Barton, Durstine and Osborne, 1966; Baum and Boxley, 1983; Kutner, Fanshel, Togo and Langer, 1956; Linn and Hunter, 1979; Lowenthal and Haven, 1968), which asks respondents to state if they feel older or younger either than most people of their age, or younger or older than their actual age. Later, a modified form of comparative age was introduced by Steitz and McClary (1988), who noted that a limitation of the standard comparative age scale is that ‘perceiving the self as older than one’s chronological age at 75 may be a very different concept than perceiving the self as older at age 30 or 40’ (p. 83). They introduced a scale with seven response categories, ranging from over ten years younger, through the same, to over ten years older. Similar modifications to the original comparative age measure include five point scales ranging from much younger, through the same, to much older (Heckhausen and Krueger, 1993; Staats, 1996); and seven point scales with endpoints labelled ‘a lot younger than my age’ and ‘a lot older than my age’ (Montepare, 1996 a,b,c).

The basic age identity measure has in some cases become more sophisticated, evolving into semantic age identification (Guptill, 1969) and age role/identity measures (Burke and Tully, 1977; George, Mutran and Pennybacker, 1980; Mutran and Burke, 1979a,b). Guptill (1969) was concerned that the meanings of middle age or old age may differ among individuals, and therefore argued that it is essential to measure the meanings an individual attaches to these terms. Thus,

these procedures use the semantic differential technique to measure the meanings of three concepts: Middle Aged Person, Old Person, and Myself, and the distances between them. A relatively small number of further studies have utilised these techniques (Daum, 1978; Stephens, 1991). Despite the fact that these techniques have not been utilised as often as many of the others, probably due to their complexity in both data collection and interpretation, they nevertheless are useful because they emphasise the importance of interaction with others. Indeed, Burke and Tully (1977) conceptually define role/identities as ‘the meanings a person attributes to the self as an object in a social situation or social role’ (p. 883). Thus, these techniques give an indication of how a person conceptualises themselves in relation to rest of society (Baum and Boxley, 1983) as well as providing an indication of how a person positions themselves in their own life cycle (Guptill, 1969).

2.2.2 Functionality and Quantification

An alternative method of measuring self-perceived age, called feel age, was introduced to gerontology by Zola (1962). It simply quantifies self-perceived age by asking respondents how old they feel, and elicits a numerical response. Thus, it is a more precise measure of self-perceived age than those previously described, as this method allows the exact calculation of ‘youth bias’, which is any difference between a person’s chronological and self-perceived age. It has been utilised in many studies since its introduction (Barnes-Farrell and Piotrowski, 1989; Hublely and Hultsch, 1994; Lutsky, 1978; Plawecki and Plawecki, 1980, 1981; Terpstra, Terpstra, Plawecki and Streeter, 1989; Underhill and Cadwell, 1983; Uotinen, 1998).

Contrary to stereotypical expectations, emphasis on chronology is not the universal way of measuring age. Just as the age category is the most popular way of classifying age, in worldwide terms the most common way of measuring age is by functionality, and there is no clear-cut division between traditional and modern societies (Keith, 1985). Functional age simply refers to a measure of

age other than the chronological (Bell, 1972). Even in modern societies, it has been found that people associate factors such as loss of health, diminished mobility, and low activity levels as being markers of old age (Bultena and Powers, 1978).

Functional definitions of age fall into three major categories: social, physical or biological, and psychological. For example, a functional definition of age may involve reference to a change in role such as retirement or social habits (social), an assessment of health or appearance (physical), or reference to a change in mental attitude or aptitude (psychological), or even an assessment of age involving all three. This is in line with Birren's (1959) suggestion that there are three kinds of ageing: social, biological, and psychological. These three kinds of ageing can be seen as a hierarchy, whereby the concept of biological age (i.e., a prediction of residual life-span) is in turn partly subsumed under the concept psychological age, which is concerned with the capacity of the individual to adapt. At the next level, social age includes social roles and habits. Thus, ageing is multidimensional in nature (Birren, 1968; Moody, 1988; Moschis, 1994, 1996; Riley, 1992), and no single component of ageing can be understood without reference to the others (Riley, 1985). Indeed, as Butler (1968) suggests, a collaborative, multidisciplinary approach to the study of age and ageing is needed to allow for 'a more comprehensive evaluation of the many factors know, or believed, to determine the façade of chronological age' (p. 235), while Fozard (1972) postulates that biological, psychological, and social age would all be necessary to describe an individual's age.

In response to this acceptance of ageing being multidisciplinary, Kastenbaum, Derbin, Sabatini and Artt (1972) used the term 'personal age' to refer to 'how old a person seems to himself' (p.197), and developed a set of four functional age questions that requested respondents to specify an absolute age in response to the following:

I feel as though I were about age...

I look as though I were about age...

I do most things as though I were about age...

My interests are mostly those of a person about age...

Therefore, the Kastenbaum *et al.* (1972) instrument, termed ‘The Ages of Me’ contains feel age and adds the three further dimensions of look, do, and interests, successfully introducing the concept of self-perceived *ages*.

In 1979, Barak developed a multidimensional measure of self-perceived age called cognitive age, which was based on the ‘Ages of Me’ instrument. However, whereas the Katenbaum *et al.* (1972) instrument recorded responses to the four age questions as absolute years, Barak’s instrument simplified the measure by asking respondents to identify with age decades. The original ‘Ages of Me’ questions were modified slightly, to read:

I feel as though I am in my...

I look as though I am in my...

I do most things as though I were in my...

My interests are mostly those of a person in his/her...

Respondents replied to all four questions by checking “20s, 30s, 40s, 50s, 60s, 70s, or 80s” (Barak and Schiffman, 1981, p. 606).

Each respondent’s score, for each of the four dimensions, is assigned a midpoint value. For example, a response of ‘50s’ is recorded as 55. Thus, as Barak (1987) notes, the cognitive age scale is similar to identity age in its reliance on age-group referrals, but the referent groups are not amorphous, as respondents identify with specific chronological age decades (p. 111).

Just as the Kastenbaum *et al.* (1972) procedure maintained a distinction between the four dimensions, Barak and Schiffman (1981) suggested that each dimension could be scored separately. However, they also suggested that an overall composite score could be derived for each respondent by averaging the midpoint values of the four age dimensions, a concept later refined (Barak and Gould, 1985; Barak and Stern, 1986a).

Thus the cognitive age measure is now one whereby an overall composite score indicates a person's cognitive age. The cognitive age measure has also been refined to include 'preteens' and 'teens' as possible responses (Barak and Stern, 1986a).

The cognitive age scale has been fully accepted by investigators of self-perceived age, particularly those interested in the implications of this phenomenon for marketing (for example, Chua, Cote and Leong, 1990; Johnson, 1995, 1996; Ross, 1981; Sherman, Schiffman and Dillon, 1988; Smith and Moschis, 1984; Stephens, 1991; Van Auken, Barry and Anderson, 1993; Van Auken and Barry 1995; Wilkes, 1992).

The cognitive age scale is superior to other methods of ascertaining self-perceived age because it has simplified data collection, understanding and measurement, yet still incorporates the different types of ageing. Incorporation of the different types of ageing is important, especially as there has long been consensus among philosophers concerning the existential stances with regard to the human condition, which are knowing, feeling and acting (Bengston, Reedy and Gordon, 1985). Thus all types should be considered in order to better understand consumer behaviour in later life, as ageing processes are manifested in differences in attitudes and behaviour even among people of the same chronological age (Moschis, 1993). Thus, biological ageing is likely to alter consumer needs and the consumer's ability to function in the marketplace; psychological ageing has implications for a wide variety of consumer information processing and problem solving abilities (Moschis, 1994), while the social aspects of age and ageing are important because society has expectations from people of different ages, as society is age graded (Birren and Cunningham, 1985).

2.3 THE IDEOLOGY OF AGE

Despite Branco and Williamson's (1982) warning that it is "dangerously simplistic" (p. 380) to assume that all people view old age in negative terms, the existence of a negative stereotype of the old in American society is well documented (Baltes and Baltes, 1990; Butler and Lewis, 1982; Dychtwald, 1997; Guy, Rittenburg and Hawes, 1994), Leventhal, 1997; Neukam, Jacobs and Hershey, 2000; Tuckman and Lorge, 1952a,b,c,d, 1953c,d; Vacker and Key, 1993). Long ago Kuhlen (1959) noted "to get older, to move into middle and especially old age, means to move into a less highly regarded age group" (p. 863).

British writing provides support for the contention that in this country, too, old age is associated with negative characteristics. Long (1987) found that "there appears to be a strong feeling among today's elderly that, being retired, they are treated like second class citizens" (p.39). A variety of negative stereotypes found in British culture suggest that old age is viewed as a period of inevitable deterioration and irreversible decline (Henwood, 1990; Metal-Corbin and Corbin, 1987), providing a popular stereotype of an old person who is socially isolated, poor, ill, resistant to change, and enjoys living in the past (Lannon, 1990; Byrne, 1994; Scrutton, 1990). Among those accused of ageism are the press and broadcasting, civic and voluntary life, politics (Midwinter, 1992), the workplace (Laczko and Phillipson 1990; Donkin, 1995), and social security policies (Walker, 1990). Accusations of extreme ageism in the marketing industry are widespread (Kreitzman, 1994; Flatters, 1994; Hobman, 1990; Gabriel, 1990b; Higham 1999).

Stereotypes are entrenched in British culture. Greengross (1990) points to children's literature, where brave young heroes and gentle, nubile maidens triumph over wicked ageing stepmothers, and elderly witches and sorcerers. Such portrayals are especially pertinent when considered in light of research that shows that children develop early (by eight years old) perceptions of and attitudes toward old age (Cripps and Scherz, 2000). Everyday symbols in British society reinforce negative stereotypes; for example, the road sign to alert

motorists to older people crossing the road depicts two stooped, walking-stick dependent persons. Johnson (1990) points out that the two most dynamic old age lobby organisations in Britain, Help the Aged and Age Concern, have names which present a very downbeat image of what it is to be old. Indeed, Lannon (1994) suggests that the British are “probably less understanding and more out of touch with our old than any other old world culture” (p. 32).

In an attempt to understand the reasons why a negative view of old age is found in western society scholars have taken both cross-cultural and historical perspectives.

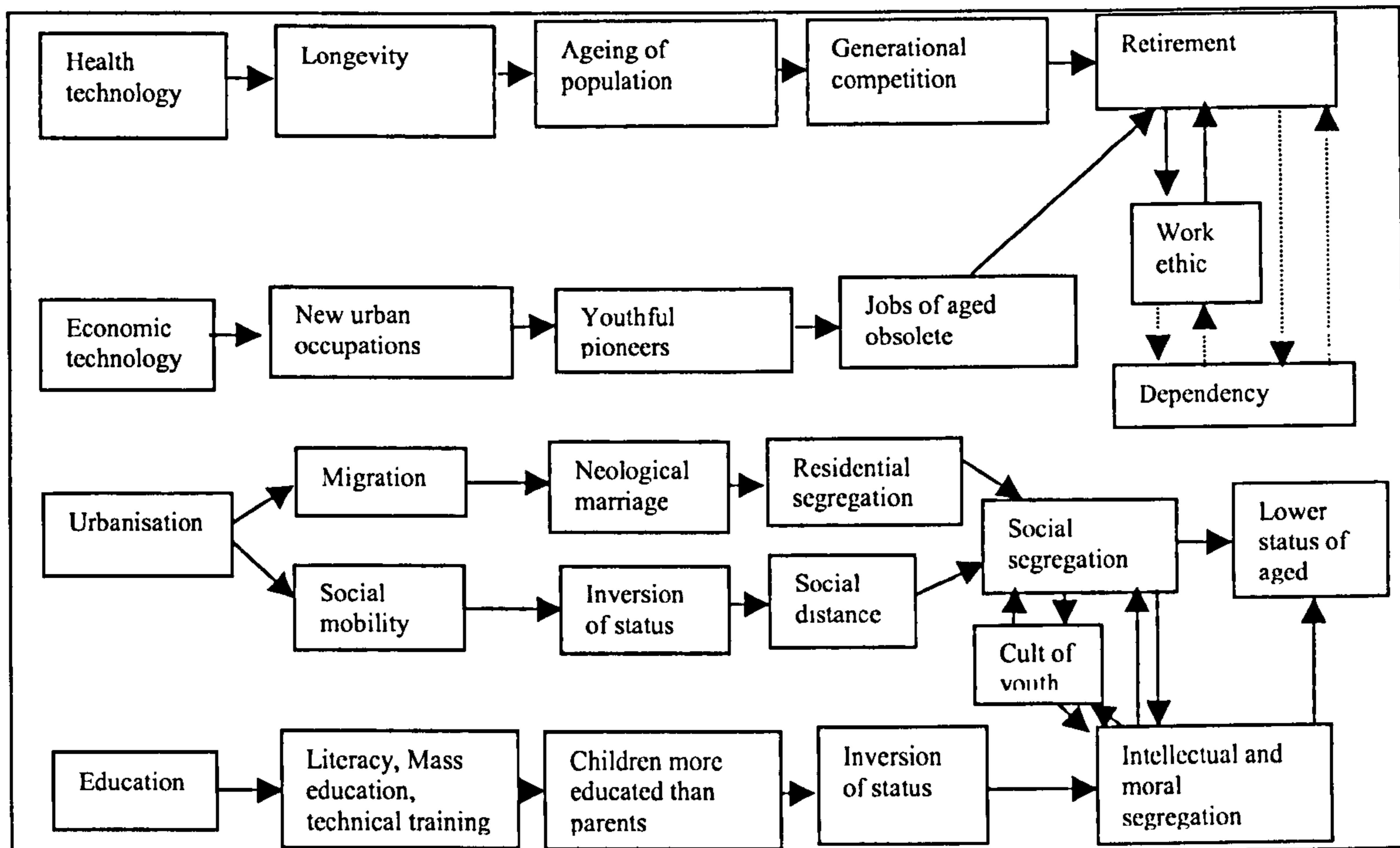
2.3.1 Modernisation Theory

Cowgill and Holmes (1972) developed the theory of modernisation, the central hypothesis of which is that “the role and status of the aged varies systematically with the degree of modernisation of society and that modernisation tends to decrease the relative status of the aged and to undermine their security within the social system” (p.13). The theory emerged as a result of studies conducted within societies at differing stages of modernisation, which found:

- The status of the aged is high in primitive societies and is lower and more ambiguous in modern societies.
- The individualistic value system of western society tends to reduce the security and status of older people.

Cowgill (1979) later identified four elements of modernisation that result in the lowered status of older people, the effects of which are shown in figure 2.1.

Fig. 2.1: The Impact of Modernisation on the Elderly



Source: Cowgill (1979, p.64)

The theory contends that advances in health technology lead to the ageing of a population. At the same time, changes in economic technology render the skills and knowledge of older people obsolete. Both longevity and obsolete skills in turn result in compulsory retirement. Indeed, it was found that in modernised countries, where the work role is the major determinant of status, the older person is left without valued roles to perform; thus their status is diminished. Industrialisation leads to urbanisation, so that considerable migration from rural to urban areas has the effect of breaking up families, therefore reducing the status of elders. In contrast, in less modern societies a large rural population may continue in the traditional way. Finally, better educated younger people means that older people lose the authority derived from superior knowledge, again undermining the status of elders.

Methodologically, modernisation theory is problematic because evidence to support it came from twentieth century non-industrial societies intended to represent past societies (Passuth and Bengston, 1988). Revisions since have

resulted in modernisation no longer being seen as linearly related to reduced status of the old (Fry, 1988), when Palmore and Manton (1974) found a J-shaped relationship between modernisation and the elderly. This finding supports the decline in status of older people with modernisation, but suggests eventual stabilisation and the possibility that it may begin to be raised. In contrast, Cox (1990) suggested a curvilinear relationship, “with the old being accorded a low status in nomadic tribes, a high status in settled agricultural communities and a low status in modern industrial societies” (p. 61). Conversely, Streib and Binstock (1990) note that in recent forums of public discourse in the US, the stereotype of the old has begun to shift from that of a disadvantaged group to one marked with prosperity, hedonism, and selfishness, with the old emerging as a scapegoat for a list of American problems.

2.3.2 Historical Perspective

Probably the most highly disputed aspect of modernisation theory is its implicit assumption of a transition from a golden age of ageing (Passuth and Bengston, 1988). From an historical perspective, gerontophobic comments can be found in abundance in eighteenth century satirical writing, and in traditional England no provisions were made for the physical, emotional, or economic needs of old people superior to the provisions made today (Achenbaum, 1985; Laslett, 1985). Indeed, there appears to have been at least two concurrent stereotypes of the old traceable from seventeenth century England. The first is marked by activity and power, as the old held power in both the church and the family, and young people were taught to respect their elders. However, and perhaps provoked by this situation, some old people were commonly despised. The second points to a stereotype marked by sickness and decrepitude, where the old were viewed as burdensome, particularly if they were not supported by good estates (Kogan, 1961a,b; Kogan and Shelton, 1962a,b; Thompson, Itzin and Abendstern, 1990). Despite the ambivalence, neither position denies that there is an adverse attitude toward what it means to be old.

2.3.3 Denial Of Old Age

In light of the preceding discussion, it is perhaps unsurprising that a vast number of studies have found the majority of older subjects to deny that they feel old (Breytspraak, 1984; Busse, Jeffers and Obrist, 1957; Drevenstedt, 1976; Kogan, 1979; Preston and Williams, 1971; Tuckman and Lorge, 1954; Zepelin, Sills and Heath, 1987). This finding holds true in those studies that use age 60 or 65 (i.e. those near to or past retirement age) as the youngest age of respondents (Blau, 1956, 1973; Markides and Pappas, 1982; Suchman, Phillips and Streib, 1958); among sub-samples of older people (Barak and Stern, 1985; Bengston, Cuellar and Ragan, 1977; Bloom, 1961; Crook and Heinsteins, 1958; George, Mutran and Pennybacker, 1980; Minnigerode, 1976; Stephens, 1991); and even when subjects have applied to live in apartments for the aged (Carp, 1967). In the only known British study to use age identity, the response to the question 'Do you feel old?' "was an emphatic and virtually unanimous, 'No,' regardless of the age of the person interviewed" (Thompson, Itzin and Abendstern, 1990, p. 109).

Given the empirical evidence cited here, then, the logical conclusion leads to the first proposition in this thesis:

P1: The majority of people aged 50-79 will reject the status old.

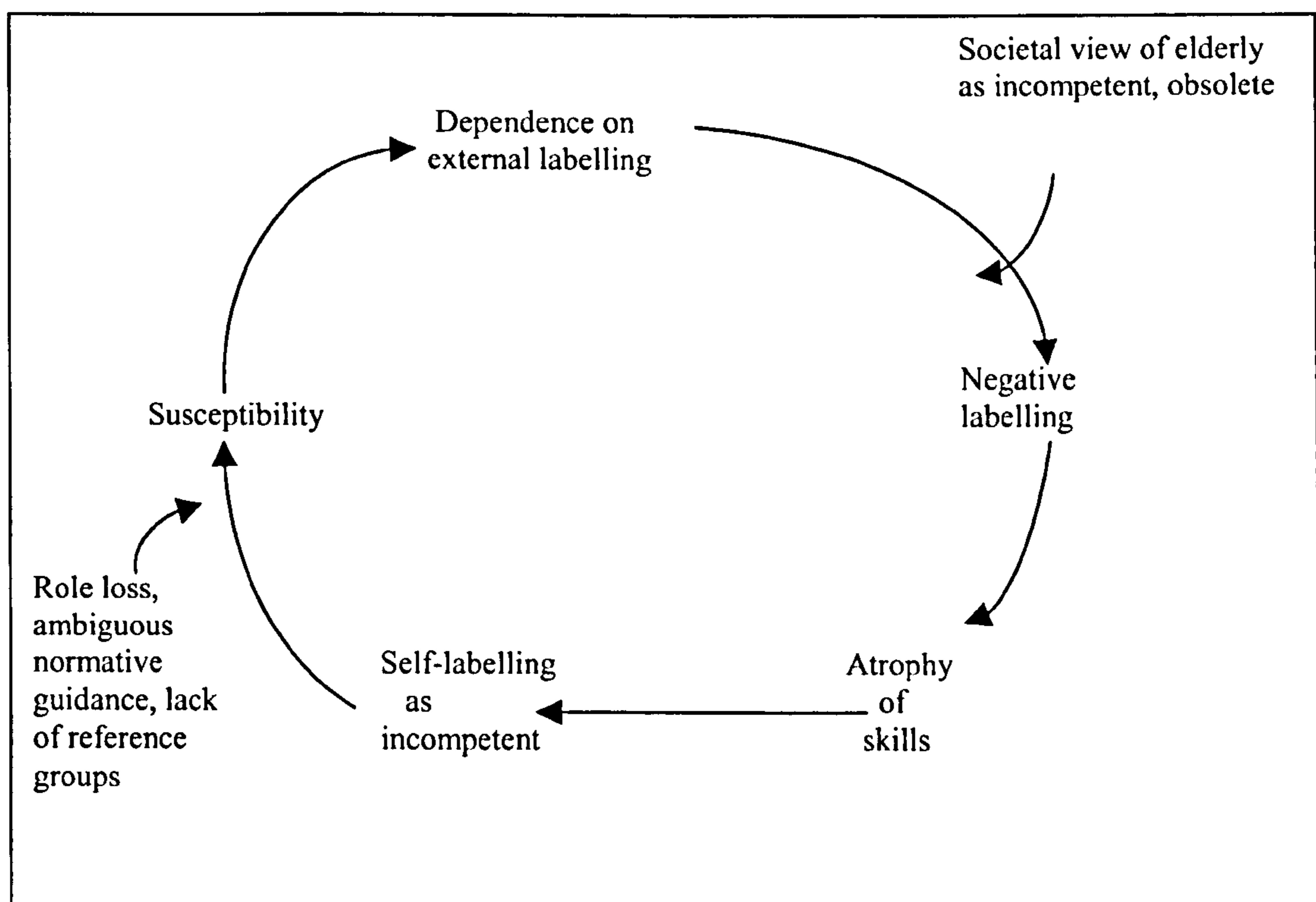
Two further theories, both based on the belief that a negative stereotype of what it means to be old exists in western society, augment understanding of why many people reject the status old. These theories are now explained.

2.3.4 Social Breakdown Syndrome

Social Breakdown Syndrome (Kuypers and Bengston, 1973) is a perspective that suggests that an individual's sense of self, an ability to mediate between self and society, and orientation to personal mastery are functions of the kind of social labelling and valuing that the individual experiences in ageing. The

process of social breakdown is viewed as a vicious circle, where three aspects of ageing - loss of normative guidance, loss of roles, and loss of reference groups - create a vulnerability to and dependence on sources of external labelling, which may eventually lead to self-labelling or self-identification as the negative stereotype prevalent in society becomes internalised. This cycle is shown in figure 2.2.

Figure 2.2: Social Breakdown Syndrome As Applied To Old Age



Source: Kuypers and Bengston (1973, p. 190)

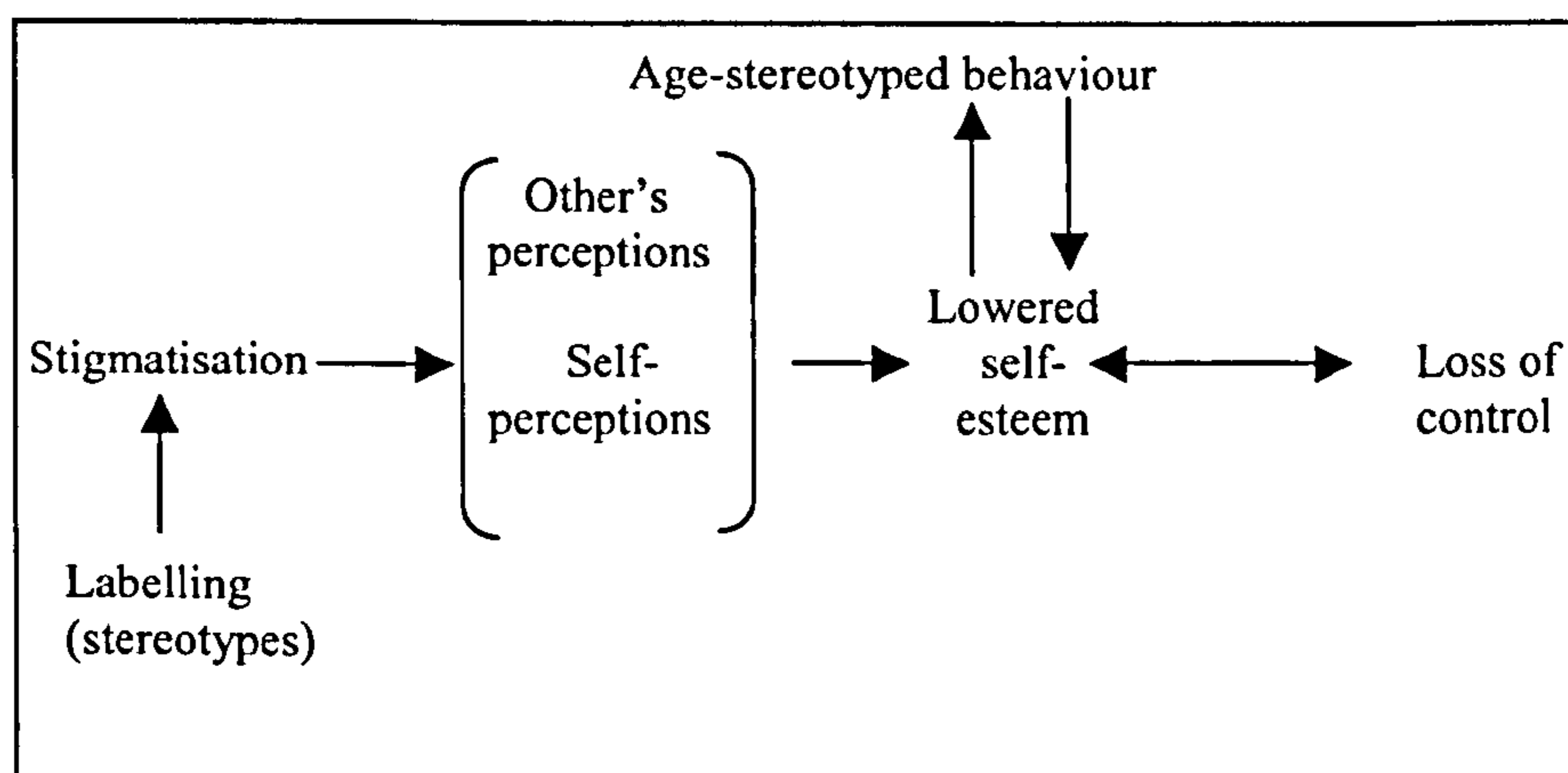
Crucial to the model is that the dominant societal view of assigning personal worth is through social utility, that is, productivity, and this dominant ethic in society is a fulcrum for creating a negative spiral of breakdown. The model is a useful heuristic device for sensitising practitioners in dealing with problems of ageing (Passuth and Bengston, 1988). Indeed, Kuypers and Bengston (1973) go to great lengths to explain how intervention through public policy changes can break the cycle. Moreover, the theory has been applied to mass media advertising, where it was found that exposure to advertising was negatively

related to self-esteem and perceptions of the elderly in general among older consumers (Smith, Moschis and Moore, 1984). The model may also be useful in explaining the rejection of the status old, in that rejection of the status may be a way of forestalling susceptibility and dependence on external labelling; that is, if one denies oneself as old, then society's (negative) view of the elderly is not applicable to oneself.

2.3.5 Labelling Theory

Labelling theory is an alternative attempt to explain causes and outcomes of labelling individuals with stigmatised statuses (Tepper, 1994). Rodin and Langer (1980) cite several unpublished studies that demonstrate that by manipulating expectations by labelling a person, behaviour that is seen as normal in a young person may be seized upon when engaged in by an older person as confirmation of the negative stereotype. The effects of negative labelling are shown in figure 2.3.

Figure 2.3 The Effects of Negative Labelling on Self-Esteem, Control and Behaviour



Source: Rodin and Langer (1980, p. 14)

Similarities between labelling theory and the social breakdown model are apparent. Both suggest that older people may internalise negative stereotypes, leading to lowered self-esteem, which in turn decreases their ability to exercise control over the environment. The models differ, however, in the starting point of the process. The social breakdown model suggests that an older person becomes susceptible to negative labelling because of the lack of normative guidance and role loss that typically accompanies the movement from middle to old age, while labelling theory suggests that merely the presence and application of negative labels and stereotypes can lead to negative outcomes. Both models agree that assigning people a label influences subsequent behaviour, a suggestion that has much empirical support (Tybout and Yalch, 1980; Breakwell, 1986). Thus, in addition to aiding understanding of why many people avoid the negative label old, these theories raise the question as to whether those who do admit to being old actually act differently to those who reject an old age status.

2.3.6 Beyond Age Categorisation

The theories and perspectives discussed so far derive from the belief that there is a negative stereotype of old in today's society, and thus offer explanations as to why most people reject an old label or status. However, theories based on negative labels and stereotypes which are manifested in threats to identity and the fear of stigmatisation, do not explain the tendency for substantial numbers of younger people to feel older than their chronological years. Yet, such a phenomenon has been observed among adolescents (Montepare, Rierdan, Koff and Stubbs, 1989), teenagers and those in their early twenties (Batten, Barton, Durstine and Osborne, 1966; Montepare, 1991; 1996b; Montepare and Lachman, 1989), and those under 30 (Barnes-Farrell and Piotrowski, 1989; Montepare 1996a, 1996c; Underhill and Cadwell, 1983). Amongst those aged 30-39, there is on average little discrepancy between chronological and self-perceived age (Barak, Stern and Gould, 1988; Barnes-Farrell and Piotrowski, 1989; Goldsmith and Heiens, 1992; Heckhausen and Krueger, 1993).

Thereafter, a bias toward a younger self-perceived age is observed, which becomes more pronounced with advancing chronological age (Barak and Schiffman, 1981; Goldsmith and Heiens, 1992; Johnson 1996, 1998; Kastenbaum *et al.*, 1971; Underhill and Cadwell, 1983). On this basis, the second proposition is offered:

P2: The majority of consumers aged 50-79 will have a self-perceived age that is several years younger than their actual age, and this discrepancy will increase with advancing chronological age.

Clearly, then, the study of self-perceived age goes beyond the denial of an old age status, otherwise older people would admit to feeling their age, but deny that this was old. A more in-depth analysis of the empirical findings related to self-perceived age is therefore warranted, and begins now with a review of those studies that have measured self-perceived age in relation to a host of demographic variables.

2.4 SOCIO-DEMOGRAPHICS AND SELF-PERCEIVED AGE

Demographic factors are the most popular bases for segmenting customer groups (Kotler, Armstrong, Saunders and Wong, 1999). Thus, this section reviews those studies that have tested self-perceived age against a number of demographic variables, and additionally considers such variables from a sociological perspective. The rationale for this consideration is that the basic demographic variables are limited (Roscoe, LeClaire and Schiffman, 1977). Thus, for example, gender and its relationship to self-perceived age is better understood with reference to the social meaning of being an older woman as opposed to an older man.

2.4.1 Chronological Age

Although a minority of studies have failed to find a relationship between chronological and self-perceived age (Baum and Boxley, 1983; Carp and Carp, 1981; Lowenthal and Haven, 1968; Muller and O’Cass, 2001; Preston, 1968, 1970), the majority support Barak and Stern’s (1986a) declaration that ‘it seems intuitively obvious that chronological age is an important positive correlate of subjective age’ (p. 574), and progress to find such a relationship (Barak, 1998; Barak and Rahtz, 1990; Barak, Stern and Gould, 1988; Barnes-Farrell and Piotrowski, 1989; Henderson, Goldsmith and Flynn, 1995; Hubley and Hultsch, 1994; Wilkes, 1992). Some studies have found chronological age to be the most important predictor of self-perceived age (Atchley and Seltzer, 1975; Markides, 1980; Steitz and McClary, 1988), and others have found high correlations (r ’s .70 and above) between the two age variables (Barak, 1998; Barak, Stern and Gould, 1988; Henderson, Goldsmith and Flynn, 1995; Johnson, 1993). In other studies, moderate relationships (r ’s .40 - .69) were found (Atchley and Seltzer, 1973; Barak and Rahtz, 1990; Barnes-Farrell and Piotrowski, 1989; Bloom, 1961; Chua, Cote and Leong, 1990), including the author’s (Sudbury, 2004) previous study ($r = .676, p < 0.01$). Finally, some investigations have found only a relatively weak (r ’s below .40) relationship (George, Mutran and Pennybacker, 1980; Hubley and Hultsch, 1994; Phillips, 1961).

The meaning of individual age categories is dependent on the given culture and social environment in which they are used (Maddox and Campbell, 1985). Thus, it is to be expected that the meanings of distinct categories will differ between cultures, but a degree of consensus would be found among people in the same culture, with only minor variation from one person to another (Fry, 1976).

Given that American society depicts old age to begin at the age of retirement, when a person becomes eligible for a pension (Blau, 1973; Matthews, 1979), one would expect the majority of people to mark old age as beginning at or around the age of retirement. However, this is not the case, as a body of research demonstrates. Rather, it has been found that as the age of an individual increases, so too does the age at which they perceive old age to begin (Tuckman

and Lorge, 1953a, 1953b; Shanas, 1962). Indeed, the tendency for older persons to perceive an age category as beginning later than younger persons is not limited to the category old. Rather, Cameron (1969) found a tendency for the age parameters of categories to rise with age, a finding that holds true not only for the category old, but also for middle age. Subsequent studies lend support for the existence of this pattern (Drevenstedt, 1976; Kogan, 1979; Zepelin, Sills and Heath, 1987) and even among people of advanced ages the pattern is the same, with those aged 85 and over perceiving old age to begin later than those aged 75-84 (Seccombe and Ishii-Kuntz, 1991).

Overall, therefore, it seems reasonable to assume that although chronological age is positively and significantly related to self-perceived age, the relationship is far from perfect. Nevertheless, it can be postulated that:

*P3: The older a person's chronological age,
the older their self-perceived age is likely to be.*

2.4.2 Gender

People's progress through life is influenced both by generation and gender (Oakley, 1987). Bell (1970) first suggested that there is a double standard of ageing, in that society gives men a 'decided psychological, sexual, and economic advantage over women' (p. 75). Sontag's (1972) extension of this viewpoint postulates that society believes that ageing enhances a man but progressively destroys a woman, noting that 'society is much more permissive about ageing in men' (p. 325). It is generally believed that these differences are primarily due to the sexual differences in the way status is given in society. For women, status is defined in terms of events in the reproductive cycle and sexual attractiveness, while for men it is acquired through employment (Arber and Ginn, 1991). These differences lead to greater stigmatisation and discrimination for the older woman than the older man, manifested in the ongoing difficulty women face in finding leisure time of their own (Bernard and Meade, 1993), in the treatment they receive from GPs (Sidell, 1993), in the labour market

structure (Groves, 1993), and in relative income (Sherman and Schiffman, 1991).

Even if one argues that there is greater sexual equality today than ever before, it is of no value examining a segment of a woman's life without appreciation of the potential effects of previous events and social attitudes that she has faced (Bernard, Meade and Tinker, 1993; Berkun, 1983). That today's older woman faced different expectations than previous generations is borne out by Karp's (1985) study, which clearly shows that female professors were socialised to think of careers in negative terms, as "obstacles to the pursuit of the 'proper' kind of life" (p. 12). For most of these women, a 'dormant professional identity' had lain hidden under the weight of cultural expectations. Often influenced by the women's movement, they had eventually turned to a professional career. For some, the price to pay was divorce, while almost all report being treated as second-class citizens.

That being old and female (often referred to as double jeopardy) is worse than being old and male appears to be borne out by studies that found women are perceived to age more quickly than men (Drevenstedt, 1976; Jackson, 1974; Kogan, 1979; Lipka, 1987; Seccombe and Ishii-Kuntz, 1991; Shanas, 1950; Zepelin, Sills and Heath, 1987), and that women select younger ages than men as the best age to be (Staats, 1996).

The apparent disadvantage faced by older women does not immediately appear to affect self-perceived age, in that the vast majority of studies have found no gender differences (Barak, 1998; Barak, Stern and Gould, 1988; Barak and Rahtz, 1990; Barnes-Farrell and Piotrowski, 1989; Baum and Boxley, 1983; Bultena and Powers, 1978; Busse, Jeffers and Obrist, 1957; George, Mutran and Pennybacker, 1980; Linn and Hunter, 1979; Lowenthal and Haven, 1968; Montepare, 1996a, c; Mutran and George, 1982; Preston, 1968, 1970; Preston and Williams, 1971; Togonu-Bickersteth, 1986; Tuckman and Lavell, 1957; Tuckman and Lorge, 1954; Uotinen, 1998; Zola, 1962). It is unusual, therefore, that the only British study other than the author's own work found markedly

different cognitive ages for men and women, with men perceiving themselves to be older than women (Szmigin and Carrigan, 2000).

Thus, despite the fact that there is little dispute that the double standard of ageing exists, this double standard does not appear to manifest itself in self-perceived age, and Szmigin and Carrigan's study aside, it seems reasonable to assume that no significant differences are likely to be found between the self-perceived ages of men and women. Indeed, it has been suggested (Barak, 1998) that it is acceptable to use a sample drawn solely from one gender, and generalise the findings across men and women. On this basis:

P4: Gender is unlikely to be related to self-perceived age.

The demographic variables that offer potential explanations for the lack of overall gender differences regarding self-perceived age include the relative significance of work status for men (Atchley and George, 1973; Karp, 1985), and family life-cycle variable for women (Safilios-Rothschild, 1979). These variables are therefore now examined.

2.4.3 Work And Retirement

Although there is no single dominant gerontological theory of retirement, several general theories of ageing can be applied in order to better understand its possible effects on older people (Burnett, 1989).

Early writings suggested that retirement is 'a social pattern than implies invidious judgement about old people's lack of fitness to perform a culturally significant and coveted role. By social definition, therefore, retirement signifies old age' (Blau, 1973, p. 105). Thus, from a role theory perspective, retirement has been described as a period of permanent role losses that are mainly involuntary, unwelcome, and result in role ambiguity (Cunningham and

Brookbank, 1988; Kuhlen, 1959; Rosow, 1967, 1974, 1985). From a variety of implicit doctrines that appeared to suggest that old age was only a state of mind that could be banished if one kept busy (Havinghurst, 1949), and substituted new roles for those lost (Passuth and Bengston, 1988), these doctrines became known as activity theory, which proffers,

“Activity provides various role-supports necessary for reaffirming one’s self-concept. The more intimate and the more frequent the activity, the more reinforcing and the more specific will be the role supports. Role supports are necessary for the maintenance of a positive self-concept which in turn is associated with high life satisfaction” (Lemon, Bengston and Peterson, 1972, p. 515).

Latent assumptions of activity theory include the view that the individual who ages optimally is the one who stays active and who manages to resist the shrinkage of their social world (Barrow and Smith, 1983), and that it is better to be as much like a middle-aged person as possible (Burbank, 1986; Havinghurst, Neugarten and Tobin, 1968).

While there is some debate as to whether or not disengagement theory (Cumming and Henry, 1961) is the antithesis of activity theory (Burbank, 1986) disengagement theory nevertheless provides an alternative framework for viewing role loss in old age. According to this theory, as a person ages they become less involved in the life around them than when they were younger. Thus, in one sense disengagement theory does not differ from activity theory in that neither assumes old age is characterised by anything other than a decrease in social interaction (Dowd, 1975). However, the crucial difference is that disengagement theory postulates ageing is a process marked by an *inevitable* and *mutual* withdrawal or disengagement between the individual and society. Contrary to this being problematic, however, Cumming and Henry (1961) suggested that ‘demoralisation is only temporary among older people in that, following a plateau in the late forties and through the fifties, there is a crisis, marked by anxiety, between 60 and 65. After this, most people become more contented’ (p. 202).

Disengagement theory has been severely criticised on methodological (Maddox, 1964, 1970a) and theoretical (Dowd, 1975; Hochschild, 1975, 1976; Maddox, 1968a, 1970b) grounds. Nevertheless, disengagement theory was the first challenge to activity theory, and sparked a debate among investigators that resulted in a richer understanding of optimal ageing.

A final perspective that can be applied to retirement is that of continuity theory, which postulates that older adults attempt to preserve and maintain existing ways of life through the application of familiar strategies, in order to maintain a consistency of self-concept and identity (Atchley, 1989). This perspective therefore suggests that role theorists who assume that retirement will cause an identity crisis have overestimated the effects of change. Indeed, it has been shown that when some people retire, they retain identification with their former occupational status (Atchley, 1976b; Rowe, 1976; Strauss, Aldrich and Lipman, 1976). Conversely, for others, retirement from a job that offered little opportunity for personalisation and reinforcement of identity is likely to be easy.

In sum, the theories of activity, disengagement and continuity offer very different perspectives on the likely impact of retirement for the individual. A disengagement theory perspective would suggest that retirement is likely to be associated with an older self-perceived age, on the basis that the echelon commonly reaches retirement age before the individual has experienced sufficient inner change to prepare for disengagement (Cumming and Henry, 1961). No such change would be likely, however, if a continuity perspective was taken, as 'just because logic suggests that there ought to be an identity crisis connected with retirement, it does not follow that there will usually be one' (Atchley, 1989, p. 187). Finally, activity theory would suggest that retirement might be associated with an older self-perceived age unless substitute roles or activities have been found, in which case no change would be likely.

American research into self-perceived age fails to unanimously support any of these perspectives. The number of studies that have found no relationship between retirement and self-perceived age (Atchley and Seltzer, 1975; Baum and Boxley, 1983; Cutler, 1982; Mutran and Reitzes, 1981; Streib and

Schneider, 1971; Wilkes, 1992) are almost equal to the number that have, even when chronological age was held constant (Barak and Rahtz, 1990; Blau, 1956; George, Mutran and Pennybacker, 1980; Guptill, 1969; Johnson, 1993; Mutran and George, 1982).

Unfortunately, many researchers appear to have preconceptions regarding the likely association between retirement and self-perceived age. When the results of individual studies appear to bear these preconceptions out, there is a tendency for the findings to be accepted on the basis that such a result was expected, with little exploration of quite why this might be the case. Perhaps what is missing from these studies is a full consideration of the circumstances in which a person retired. For example, there may be a difference between those who chose to retire, perhaps earlier than retirement age, and those who were forced to retire from a job they enjoyed. Seltzer (1976) suggests that the more an individual views the scheduling of events (such as retirement) as under their control, the more likely they are to perceive themselves as younger. Although there is no empirical evidence to support such a hypothesis, one self-perceived age study did find that a number of subjects who took charge of the timing of their retirement, even if only by days or weeks, felt empowered by doing so (Thompson, Itzin and Abendstern, 1991). Nevertheless, on balance the theoretical perspectives suggest that retirement does not necessarily lead to an identity crisis, thus it can be expected that:

P5: Retirement per se is unlikely to be related to self-perceived age.

2.4.4 Marital Status

As Fooker (1985) notes, the manifestation of a given marital status, that is, being either married, no longer married, or never married, refers to quite different life experiences. However, even this classification does not fully account for all statuses, given that the no longer married could consist of the divorced and the widowed, perhaps both having very different experiences to

each other. Yet there is little consistency in the self-perceived age literature as to how marital status should be coded. Some authors fail to explain the statuses considered, while others choose to compare those who are married with those who are not (the latter category presumably consisting of subjects who have never married), those who are separated or divorced, and those who are widowed. Indeed, the wide range of combinations used by researchers makes comparison between results difficult, and this is compounded by the assortment of self-perceived age measures that are utilised.

A number of studies fail to explain the classifications used, and then report that there is no relationship between marital status and self-perceived age (Atchley and Seltzer, 1987; Busse, Jeffers and Obrist, 1957; Markides, 1980; Henderson, Goldsmith and Flynn, Study 1, 1995). Of those who have compared married with non-married, some research has found no significant difference (Baum and Boxley, 1983; Guptill, 1969), while several studies have found married persons to have younger self-perceived ages than all others (Barak and Rahtz, 1990; Mutran and Reitzes, 1981; Wilkes, 1992).

As long ago as 1976, Gubrium found that single persons (never married) view the ageing process differently to others in that singles feel their lives are not structured into ages but rather that 'life seems to be as it always has been' (p. 185). Fooker's (1985) data from the Bonn longitudinal study also found singles to be different to other marital statuses in that they tended to exhibit growing stability and more congruence between their desired and achieved goals. Finally, in a review of the small amount of literature available on older single women, Braito and Anderson (1983) make the generalisation that they tend to have a positive relationship with family and are highly committed to work. This last point is in contrast to the older married woman, whose employment tends to be viewed as secondary to the servicing requirements of their families (Mason, 1987).

Given this discussion, it is regrettable that older persons who have never married have never been compared to others in studies of self-perceived age. While the relatively small number of bachelors and spinsters in the mature

market may mean that single people do not constitute a viable market segment, it is nevertheless apparent that those who have never married may have very different perceptions of ageing compared to their married, divorced or widowed counterparts, suggesting the need to consider these possible differences when codifying and analysing data.

In contrast to bachelorhood/spinsterhood, widowhood is one marital status that has been given particular attention in self-perceived age research. Widowhood has been viewed as a crucial role loss, in that the role expectations of being a spouse (confidant, lover, part of a couple) are lost (Cunningham and Brookbank, 1988; Rosow, 1976, 1985; Schewe and Balazs, 1992). Unlike role losses that typically occur in the earlier stages of life, where one role is often exchanged for another (for example, the loss of the role student is replaced with the role employee), widowhood designates a permanent loss of an important social role (Blau, 1956). On this basis, researchers expected widowhood to be associated with an older self-perceived age, and this expectation has been supported in a minority of studies (Mutran and George, 1982¹; Jykirila, 1960). However, the majority of studies have found no relationship between widowhood and self-perceived age (Blau, 1956; Cutler, 1982; Keith, 1977; Mutran and Burke, 1979a). Even in a longitudinal study that attempted to overcome the obvious drawbacks associated with cross-sectional data, Markides and Boldt (1983) found that widowhood was not a significant predictor of change in self-perceived age. However, these authors do acknowledge that only eight per cent of the sample became widowed during the study period, making generalisations difficult.

In sum, this section has highlighted the need to establish whether or not marital status is indeed related to self-perceived age. While it is appreciated that small numbers often necessitate the grouping of statuses for data analysis purposes, rich information may be lost if very different statuses are codified as representing a homogeneous group. This is particularly important as, from a marketing perspective there may be implications for the family life cycle,

¹ True in age role identity measures, but not for age identity measure.

especially as a greater proportion of older consumers will be divorced or separated than previous generations (Falkingham, 1997). The only logical proposition to emerge, therefore, is:

P6: Persons with different marital status will have different self-perceived ages.

2.4.5 Progeny

A further area that has potential implications for the family life cycle concept is progeny. Although sociologists and gerontologists have long been interested in the affects of family on the ageing experience, few self-perceived age researchers have been concerned with family relationships. However, those researchers that have not neglected this potentially important area have found that ageing awareness is partly caused by the growth of children or by the demands they make (Brooks, 1981; Hori, 1994; Lehr and Puschner, 1964), while cognitive age has been shown to correlate significantly and positively with the age of children (Barak and Gould, 1985; Barak, 1987). When Barak and Gould (1985) regressed the ages of children with youth bias², it was found that a significant and positive, albeit weak, relationship remained. A stronger relationship was found to exist between youth bias and the age of the youngest child ($r = .25$) rather than the oldest child ($r = .19$).

The relatively weak relationships may be due to the fact that the presence of children does not necessarily add to the psychological well being of parents of any age (Hess and Waring, 1983). It is likely that the age of the youngest child has more impact than the oldest child because it is more likely to affect the timing of the empty nest than older children. In contrast, the relative paucity of studies that have considered grandparenthood in relation to self-perceived age have found the age of the oldest grandchild to have the strongest positive relationship (Barak and Gould, 1985; Barak, 1987). Thus, it may be that

² Youth bias, sometimes referred to as youth age, is the difference between actual and cognitive age.

becoming a grandparent and the experience of grandchildren growing up is more pertinent than the number of grandchildren a person has.

Given that most people in Britain who become grandparents do so when in their fifties, some people may find it difficult to reconcile being a grandparent with their youthful self-image (Jerrome, 1993). Nevertheless, although there is variability in the performance of the role, research suggests that grandparenthood can constitute a source of renewal and renewed purpose (Knipshceer, 1988; Neugarten and Weinstein, 1968; Thompson, Itzin and Abendstern, 1991), with many grandparents taking pleasure from the role, especially in 'spoiling' their grandchildren (Bengston, Rosenthal and Burton, 1990).

The possibility of associations between parenthood, grandparenthood and self-perceived age is important in this thesis for three major reasons. First, the paucity of research in this area suggests the need for further study. Second, findings may have implications for the traditional family life cycle. Third, grandparenthood may provide untapped marketing opportunities. On this basis:

P7: The ages of children and the presence and ages of grandchildren are related to self-perceived age.

2.4.6 Socio-Economic Status

On the whole, the self-perceived age literature is consistent with regards to socio-economic status (SES), in that persons with younger self-perceived ages tend to be of higher SES (Griffiths, Farley, Dean and Boon, 1971; Guptill, 1969; Jykirla, 1960; Kutner, 1956; Linn and Hunter, 1979). This finding may be because those in higher SES groups have a configuration of advantages associated with greater financial resources, including better health and health care, better nutrition, extended longevity, better housing, and therefore higher morale, than lower SES groups (Bengston, Kasschau, and Ragan, 1977;

Griffiths *et al.*, 1971; Kuhlen, 1959; Mutran and Reitzes, 1981). On this basis, Rosow (1957) suggested that an old age identity is more threatening to middle class than to working class people. Moreover, class differences have been found in the timing of life events, with the leaving of the parental home, marriage, and the birth of children occurring later for those in higher SES groups (Neugarten and Moore, 1968). Consequently, the onset of old age is perceived to occur later among those in higher SES groups (Neugarten and Peterson, 1957).

Of the three individual measures of SES (occupation, education, and income), occupation correlates least with self-perceived age (Atchley and Seltzer, 1975; Back and Gergen, 1963; George, Mutran and Pennybacker, 1980; Markides, 1980; Mutran and Reitzes, 1981; Preston and Williams, 1971; Streib and Schneider, 1971). Educational attainment is less conclusive, with several studies finding no association (Atchley, 1975; Baum and Boxley, 1983; Cutler, 1982; George, Mutran and Pennybacker, 1980; Henderson, Goldsmith and Flynn, 1995; Mutran 1981; Preston 1971; Stevens 1991; Uotinen, 1998), and several finding that higher levels of education are associated with younger self-perceived ages (Back, 1963; Bultena and Powers, 1978; Gwinner and Stephens, 2001; Markides, 1980, 1983; Miller, 1980; Underhill and Cadwell, 1983). In contrast, income levels appear to better predict self-perceived age than other socio-economic variables, in that the vast majority of studies have found that those on lower incomes perceive themselves to be older than their financially better-off counterparts (Barak and Rahtz, 1990; Baum and Boxley, 1983; George, Mutran and Pennybacker, 1980; Miller, Gurin and Gurin, 1980; Gwinner and Stephens, 2001; Mutran and Reitzes, 1982; Stephens 1991; Underhill and Cadwell, 1983; Wilkes, 1992).

Given that educational attainment and occupational prestige are likely correlates of income, it is unclear why the former variables are not related to self-perceived age to the same extent as income. However, the literature provides no clues as to why this is the case, thus any attempt to understand the underlying reasons for this enigma would be mere speculation. Moreover, as income is likely to be more relevant to marketers than the alternative socio-economic

variables, it can be argued that income is the preferred variable to gauge SES in this thesis. On this basis:

P8: Persons with higher income are likely to have younger self-perceived ages than those with lower income.

2.5 WIDER SOCIAL ISSUES

Undoubtedly, the various socio-demographic factors considered so far contribute to an understanding of self-perceived age. Nevertheless, because ageing is multidimensional, the review now turns to the concept of social relations, which encompasses social support, integration and networking (Antonucci, 1990). The ways in which older people pass their time and interact with others is particularly relevant to this thesis because it has been speculated that a new set of societal norms and values have emerged for a period of life where a degree of normative ambiguity previously existed. In other words, the work ethic is perhaps being replaced with ‘the busy ethic’ and it is plausible that leisure may have a role in maintaining the identities and self-concepts of older people (Cutler and Hendricks, 1990).

2.5.1 Leisure Activities

It is difficult to make direct comparisons between studies that measure self-perceived age in relation to leisure activities because the ways in which such activities are measured differ substantially. Some, for example, use a battery of community activities ranging from passive activities such as visiting parks to active involvement type activities such as participation in volunteer groups (Mutran and Reitzes, 1981) while others are more concerned with social networks, and have used a series of questions relating to group memberships, interpersonal relationships, and solitary activities (Chua, Cote and Leong, 1990). Nevertheless, it is well established that those who are relatively active

have younger age identities than those who are relatively inactive (Chua, Cote and Leong, 1990; Daum. 1978; Keith, 1977; Mutran and Reitzes, 1981; Ward, 1977). Indeed, while the direction of causality cannot be determined, the cognitively young prefer attending parties to staying at home (Barak and Rahtz, 1990; Barak, 1998). On this basis:

P9: Persons with relatively younger self-perceived ages will participate in relatively energetic activities, while persons with older self-perceived ages will participate in more relatively sedentary activities.

2.5.2 Social Relations

While it is clear that those who have younger self-perceived ages are more active than their cognitively older counterparts, research has failed to establish whether or not interaction with other people is associated with self-perceived age. The amount of interactions with family certainly does not appear to be related to self-perceived age (Baum and Boxley, 1983; Bultena and Powers, 1978; Chua, Cote and Leong, 1990). However, while figures suggest that most adults in Britain have frequent contact with their adult children (ONS, 1999a), it has also been suggested that approximately 40% of older people suffer from loneliness (Parpura-Gill and Cohen-Mansfield, 2000). When loneliness was the indicator used, Barak and Rahtz (1990) found an inverse relationship with self-perceived age, Mutran and Burke (1979a) found no relationship, and Atchley and Seltzer (1975) found loneliness to have only an indirect effect.

Similarly, of studies that attempt to measure general social interaction, Gwinner and Stephens (2001) found that cognitively young people had greater social support, but Wilkes (1992) found no direct relationship. On the other hand, Lowenthal and Haven (1968) measured social interaction with a scale ranging from minimum contact only to participation in organisations, and found high social interaction to be related to feeling young. However, one year later, these

authors found that although improvements in social interaction were related to feeling young, losses in interaction were not associated with feeling old.

The association between formal organisational membership and self-perceived age is equally unclear. On the one hand, five studies have found no relationship (Atchley and Seltzer, 1975; Bultena and Powers, 1978; Johnson, 1993; Keith, 1977; Taietz, 1976). On the other, just as many have found affiliation with clubs to be related to a younger self-perceived age (Baum and Boxley, 1983; George, 1985; Guptill, 1969; Jykirila, 1960; Taietz, 1976). Taietz (1976) hypothesised that older people who felt old or elderly would more likely be members of a senior centre than those who felt middle aged. However, members did not differ from non-members in age identification or in preference for organisations exclusively for older people.

Informal friendship groups, too, have been studied in relation to self-perceived age, and once again results are inconsistent. Blau (1956) found neither the number of friendships nor the frequency of contact with a close friend to be significantly related to age identification; however, at least among those over 70, being a member of a friendship group did make a considerable difference in that members of a friendship clique considered themselves to be middle aged (as opposed to old) significantly more than those who did not belong to such a friendship group. Jyrkila (1960) also found differences between members and non-members of a friendship group, with non-members significantly more likely to consider themselves old. Despite these findings, many more self-perceived age studies have found no relationship between self-perceived ages and the number or amount of contact with friends (Atchley and Seltzer, 1975; Baum and Boxley, 1983; Bultena and Powers, 1978; Johnson, 1993; Lowenthal and Haven, 1968).

Group affiliation is important in the study of self-perceived age because, as Breakwell (1986) explained, a person may cope with a threat to their identity through a group, especially if there is scope for the development of a subculture with its own ideology. Rose (1962, 1965) first proposed that a subculture of older people was emerging in American society, resulting from the diminished

status of older people in wider society, coupled with a positive affinity with other older people being the driving forces behind its development. The status system within the aged subculture gives some value to income, occupational prestige, former holding of power, and education, but these are seen as less important than physical and mental health and social activity, which are given special value in conferring status among the aged. Certainly, Schiffman and Sherman's (1991) identification of the 'new-age elderly' as an emerging age-subcultural segment is consistent with this perspective, particularly given their "especially strong convictions that age is a state of mind and that it has little to do with one's chronological age. They perceive themselves to be different from other older people. They feel younger, think younger, and do younger. They have a genuinely youthful outlook about all that they undertake" (p. 188).

Clearly, given the potential importance of social interaction and the lack of consensus among self-perceived age studies, more research needs to be conducted. Inconsistencies may be due to the way activities and interactions are coded (Liang, Dvorkin, Kahana, and Mazian, 1980). Indeed, there is support for the contention that it is the quality, not the quantity, of social interaction that is important (Antonucci, 1985; Lemon, *et al.*, 1972). Thus, as Williams and Loeb (1968) suggest, there is a need to develop a conceptual framework that considers individual patterns of social relations from three major dimensions: number, intensity, and complexity. Only in this way, these authors argue, can an individual's 'social map' be constructed. Moreover, as Liang *et al.* (1980) note, it is an individual's perception of situations, as well as objective reality, that determines a person's behaviour. In other words, objective measures of interaction that depend on, for example, the number of organisations to which a person belongs or the number of friends a person has may not be as relevant as how important that participation and social interaction is to the individual.

Nevertheless, and the above caveat notwithstanding, on balance the tentative conclusion based on previous findings would suggest that the *amount* of social interaction an individual has with others is unrelated to age self-perception. Thus;

P10: *Self-perceived age is unrelated to measures of social relations.*

2.5.3 Social Comparison

A further possible explanation for the inconclusive research findings outlined above is that measures of social interaction have too often been related to the amount rather than the nature and importance of the interaction. Of the few authors that have not ignored the possible importance of the effect others may have on an individual's self-perceived age, it has been found that people expect others to perceive them as similar to the age they perceive themselves to be (Barak, 1998; Lutsky, 1978). Indeed, Blau (1956) long ago found that 'regardless of their actual age, people come to believe that *others* consider them old only if they consider *themselves* old' (p. 199). These findings, however, are in stark contrast to George's (1985) longitudinal study, which found 'strong evidence that individuals changed their self-perceptions to match their perceptions of other's appraisals' (p. 333). It would seem likely therefore that the relationship is one in which the perceived evaluations of others are predictive of the individual's own self-appraisals. Indeed, support for this contention is found in Hori's (1994) study, where, at least in the age group 60-69, the event that made respondents feel that they had become old more than any other was being called old by other people.

What the above studies demonstrate is the need to identify *who* is potentially influential in contributing to an individual's age self-perception. Given that a reference group is 'an actual or imaginary individual or group conceived of having significant relevance upon an individual's evaluations, aspirations, or behaviour' (Cohen and Golden, 1972), the concept of a reference group may be particularly useful in understanding self-perceived age. According to Williams (1970) there are three major types of reference groups: normative reference groups (the source of values assimilated by individuals who may or may not be members of the groups), aspiration groups (groups from which the individual

seeks acceptance), and negative reference groups (groups to whose norms persons form their attitudes in opposition). Thus, an individual is motivated to either emulate or avoid a particular reference group (Englis and Solomon, 1995). A potential negative reference group for many older people comprises the stereotypical old (Bultena and Powers, 1978; Kears, 1982; Matthews, 1979). Certainly, the body of empirical research that shows many older people do not identify as old lends support for the contention that, at least for the majority of older people who identify themselves as middle aged, the stereotypical old represents an avoidance group. Conversely, for those older people who do identify as old, the old age group may constitute the normative reference group.

Given the above argument, logic suggests two possible positive reference groups for older people who identify themselves as middle aged. First, it is possible that the middle aged in society comprise the normative (or aspiration) reference group. Certainly, a self-perception of oneself as middle aged implies that one's evaluations, aspirations, and behaviour would be akin to that expected from a middle-aged person. Second, there is the possibility that the normative reference group for older people who identify themselves as middle age are those older people who also identify with middle age. In other words, it is not necessarily those who are chronologically middle aged (according to society's definition) who constitute their normative reference group, but those who also perceive themselves to be middle aged. This argument is of course akin to the new-age elderly as a subculture, and is given further credence in that many older individuals view both themselves and their closest friends as outsiders to the potentially negative reference group of the stereotypical old (Kalish, 1979).

A central problem in reference group theory is the identification of an important reference group (Williams, 1970). One possible way to overcome this problem is to use the concept of a comparison group (a group that serves as a comparison point for an individual), which is often (but not universally) acknowledged to fall under the rubric of reference group theory (Bultena and Powers, 1978; Childers and Rao, 1992).

Festinger's (1954) original social comparison theory was based on the premise that comparisons with other people are a valuable source of knowledge about

oneself, and, in the absence of any objective standards, individuals compare themselves with others. Central to the original theory were three major hypotheses:

1. The primary purpose of social comparison is accurate self-evaluation
2. The need for accurate self-evaluation results in a preference to compare oneself with similar others
3. People feel a need to continually improve.

In the original theory, therefore, self-perceptions and self-evaluations depended on the way one measured up to relevant peers (Lyubomirsky and Ross, 1997). Substantial expansions and revisions to social comparison theory have occurred since (Gulas and McKeage, 2000). In addition to the self-evaluation and self-improvement dimensions, it is now recognised that social comparison serves as a basis for self-enhancement, aimed at protecting or enhancing one's self esteem. Clearly, the self-enhancement motive is contrary to the original theory, but is justified on the basis that substantial research demonstrates that 'people are not unbiased; they often harbour unrealistically positive views of themselves and bias information in a self serving manner' (Wood, 1989, p. 232).

Moreover, it is now accepted that social comparisons can consist of both upward social comparisons, which are comparisons with others who are superior or more fortunate, and downward social comparisons, which are comparisons with others who are inferior or less fortunate (Gulas and McKeage, 2000; Heckhausen and Krueger, 1993; Wood, 1989). Generally, upward social comparisons are viewed as threatening to self-esteem, whereas downward social comparisons are viewed as self-enhancing (Lyubomirsky and Ross, 1997). Bultena and Powers (1978) studied age identity using a comparative index that asked subjects to compare several aspects of their lives³ with those of other people their age. When controls were applied, the data revealed that this comparative index explained the greatest amount of variance in age identity,

³ These aspects were personal mobility; dependency in meeting daily needs; interaction with children, siblings and friends; group participation; health status; and financial well being.

greater even than chronological age and health. These findings not only suggest that comparisons with others are important to the formulation of age identities, but also that people tend to prefer downward comparisons when faced with a threat to self-esteem.

Moreover, 'if no inferior comparison targets are readily available, one may imagine one' (Wood, p. 241). In this context, the stereotypical old person in society may form the comparison target, lending support for the concept of relative advantage (Kearl, 1982), which suggests that older individuals derive relative satisfaction from comparing themselves to the negative reference group made up of stereotypical others; satisfactions are therefore gauged "not against who one is but rather who one is not" (p. 280). This discussion therefore leads to the following proposition:

P11: Self-perceived age will be associated with a measure of social comparison.

2.6 THE MIND-BODY NEXUS

This next major section reviews the interrelationships between physical aspects of ageing and self-perceived age. While most gerontologists agree that the human life span is intrinsically regulated (Cristofalo, 1988), there is less agreement as to what causes the ageing process. Possibilities include decrements of either the immune system (immunologic theory) or in neurons and their associated hormones (neuroendocrine theory), the damaging effects of the formation of free radicals, wear and tear (entropy theory, exhaustion theory), or a combination of external and internal factors where extrinsic factors such as stress or infection alter the actions of intrinsic factors such as genetic programming (Barrow and Smith, 1983; Cohen, 1988; Cristofalo, 1988; Shock, 1977). Whatever the process, however, there is no doubt that wide individual differences exist, with the physical manifestations of age-related changes occurring much earlier and to a more marked degree in some people than in

others (Jarvik, 1975). These physical manifestations of ageing have important implications both for self-perceived age and for marketing to older consumers.

2.6.1 Health

The prevalent social view of good health is that it is for the young, while ageing is associated with inevitable decline, illness, and decrepitude (Bernard, 1985; Kastenbaum, 1971; Riley and Bond, 1983). Harris *et al.* (1976) found that more than half of their 4254 respondents felt that poor health was a very serious problem to most people over 65. This is in stark contrast to respondents over 65, of whom only 21 per cent felt that poor health was a problem to them personally. This prevailing view appears to be held by people irrespective of their own health status, or the health of older people who are known to them personally. For example, Shanas (1962) found a contrast between experience and belief, in that although many of her younger respondents had parents and older relatives whose health was good, these respondents still felt that most other older people are in only fair health. Indeed, several studies have found the onset of illness or physical handicap to be one of the primary reasons why people begin to feel old (Aisenberg, 1964; Bultena and Powers, 1978; Hori, 1994; Kastenbaum and Durkee, 1964; Sherman, 1994; Neugarten and Peterson, 1957; Neugarten, 1968a).

Eisdorfer and Wilkie (1977) make a distinction between biological or primary ageing (those ageing processes that are independent of stress and disease) and secondary ageing (relating to those disabilities resulting from trauma and illness). This distinction is based on the argument that the obliteration of all disease would not eliminate the physical signs of ageing (Dovenmuehle, 1970). While this distinction makes inherent sense, given that ageing is not the same thing as illness, in practice the two are often used interchangeably under the rubrics 'health', 'disability', or 'impairment'. For example, one comprehensive study into disability among the UK population (OCPS, 1988) takes its

definitions from the International Classification of Impairments, Disabilities and Handicaps (ICIDH), which are as follows:

- *Impairment*: Any loss or abnormality of psychological, physiological, or anatomical structure or function.
- *Disability*: Any restriction or lack of ability (resulting from an impairment) to perform an activity in the manner or within the range considered normal for a human being.

Based on these definitions, the study included disabilities resulting from both primary and secondary ageing processes, on the basis that ‘the ageing process takes its toll and restricts the activities that the elderly can perform’ (p. 7).

Similarly, a UK study profiling people over 60 includes both illness and non-illness age-related physical changes in its definition of health (Askham, Barry, Grundy, Hancock, and Tinker, 1992). Both these studies appear to conform to the definition of health as a state of complete physical, mental, and social well being, as provided by the World Health Organisation. Likewise, the social model defines health as a state of optimal capacity for the performance of one’s roles and tasks. However, such definitions are in contrast to the medical model, which defines health by the absence of disease (Liang, 1986).

Health Measures

It is not always obvious what is meant by the word health when it is used in different empirical studies. For example, Chua, Cote and Leong (1990) state that ‘even healthy older people experience declines’ (p. 880), suggesting that these authors are referring to the medical model. On the other hand, Sherman (1994) implies a wider perspective, given that she includes physical limitations (which may or may not be a result of illness) in her definition of health.

Health has been assessed in a variety of ways in self-perceived age studies. A minority of studies have employed physicians to conduct medical examinations

in order to assess the health status of respondents (George, 1985; Suchman, Phillips and Streib, 1958). Plawecki, Krueger and Plawecki (1986) studied the age self-perceptions of insulin-dependent diabetics and compared these to non-diabetics. Usually, however, studies utilise respondent self-assessed health measures. These instruments fall into two main categories: objective and subjective. The former typically utilise questions that ask respondents to indicate the number and or type of illnesses suffered, or the number of days spent in bed due to illness, or the number of doctors visits or time hospitalised within a recent time period (Markides, 1980; Markides and Boldt, 1983; Markides and Pappas, 1982; Mutran and Reitzes, 1981; Ward, 1977). Other studies have used the Cornell Medical Index (Brodman, Erdmann, Lorge, Wolfe and Broadbent, 1949), which consists of a battery of questions relating to chronic or recovering health problems, including bodily symptoms, mood, and feelings (Baum and Boxley, 1983; Preston, 1968, 1970; Tuckman and Lorge, 1954). Alternatively, there are those studies that utilise subjective assessments of health, typically asking respondents to rate their health as excellent, good, fair, or poor (Barak, 1998; Barak and Rahtz, 1990; Guptill, 1969; Tuckman and Lavelle, 1957). Others use a combination of both objective and subjective self-reported measures (George, Mutran and Pennybacker, 1980; Jykirila, 1960; Mutran and George, 1982).

Clearly, therefore, and contrary to wider definitions of health, many of these measures, such as physician's examinations and objective questions pertaining to doctor and hospital visits, are concerned with the presence or absence of illness. Likewise, it can be assumed that those studies that use a combination of self-reported objective and subjective measures are referring to the absence of illness, given that the objective questions relate also to hospital/doctor visits or days spent in bed due to illness. What is less clear, however, is what the term health means to those researchers who utilise subjective self-rated health measures. Or, perhaps more importantly, what it means to those respondents who are asked to rate their own health on a scale from excellent to poor.

Validity of Self-Rated Health

Thus, the validity of self-reported subjective health has been questioned (Maddox and Douglas, 1973). However, several researchers have found a persistent, positive congruence between self-ratings of health and those made by a physician (Maddox and Douglas, 1973; Heyman and Jeffers, 1970; Suchman, Phillips and Streib, 1958). Likewise, self-assessed objective measures of health have been shown to correlate significantly with subjective measures (Ferraro, 1980; Fillenbaum, 1979; Markides and Martin, 1979; Rosencrantz and Pihlblad, 1970). Thus, there is a body of support for the contention that self-assessments of health are a valid and economical way of ascertaining the health status of individuals in social science research when medical examinations or long inventories containing a battery of objective health questions are not viable. That said, a number of caveats should be noted.

First, some socio-demographic and socio-economic factors have been shown to have significant, albeit sometimes small, direct effects on self-rated health. Males and those of lower SES tend to subjectively evaluate their health less positively than others of similar objective health status (Ferraro, 1980; Fillenbaum, 1979; Markides and Martin, 1979). Such findings do not invalidate the use of self-rated health measures. Rather, the researcher needs to take such variables into account in order to enhance the usefulness of the information obtained.

Second, it has been suggested that older people frequently overestimate their health status. When incongruity exists between physician's ratings and self-ratings of health, the tendency is for the individual to be more optimistic (Maddox and Douglas, 1973; Suchman, Phillips and Streib 1958). Studies have also found that older people, especially once into the sixth decade, perceive their own health more positively than younger adults (Cockerham, Sharp and Wilcox, 1983; Ferraro, 1980). Indeed, an early study of 50 male patients aged 35-67, hospitalised due to a heart attack, found that it was those men in their fifties who responded to their condition with more overt depression than the older patients, suggesting that the older men more readily accepted the illness, perhaps viewing

the condition as part of ageing (Rosen and Bibring, 1968). This tendency has been explained using social comparison theory (Van Doorn, 1999), as outlined in the previous section of this thesis.

There is not full support, however, for the view that older people are health optimists. The Duke Longitudinal studies have found that approximately one third of people who disagree with physician's judgements are divided between those who are health optimists and those who rate their own health pessimistically (Maddox, 1970c, 1987). Furthermore, after controlling for medical diagnoses, depression, gender, and education, Levkoff, Cleary and Wetle (1985) found no support for the view that older people overestimate their health. Thus, while it is not fully known whether or not older people are optimistic in their self-ratings of health, caution is clearly needed, especially since one early study found that older people in Britain are more likely than Danes or Americans to rate their health as good. These self-ratings of good health existed despite the British respondent's scoring higher on an objective measure⁴ of health status than those from the other two countries (Shanas, Townsend, Wedderburn, Frills, Milhøj and Stehouwer 1968). That said, it has been speculated that people are less likely to rate their health as good when they are better informed and when they receive medical treatment for conditions that were previously unknown (Evans *et al.*, 1992). Thus, improvements in medical technology may mean that people are less likely to overestimate their health status than they were several decades ago.

These caveats notwithstanding, it would seem that, with proper caution, self-ratings of health are a valid way in which to estimate the health status of older adults, given that self-ratings appear to derive from numerous objective elements of health. Moreover, to the social scientist, self-perception of health perhaps has a greater meaning than actual physical health, in that self-ratings appear to be within the framework of a value system (Taves and Hansen, 1963)

⁴ The objective measure used in this instance was the 'index of incapacity' primarily derived from the work of Peter Townsend in Britain. It focuses on the ability of the older person to be independent, and consists of tasks such as going outdoors, walking up and down stairs, getting about the house, washing, and dressing.

that includes an assessment of how much the individual's life is disrupted by a condition (Cockerham, Sharp and Wilcox, 1983), and may influence the individual's activities, behaviour, and outlook on the future (Tuckman and Lavelle, 1957). Thus, it appears that self-ratings of health incorporate both subjective and objective elements (Tissue, 1972).

There are further instances when subjective self-rated health is more useful than objective measures. Health self-perception appears to be more closely related to self-perceived age than objective measures of health status (Atchley, 1975; Busse, Jeffers and Obrist, 1957; Carp and Carp, 1981; Suchman, Phillips and Streib, 1958). These studies therefore suggest that while self-rated subjective health is often used as a euphemism for perceived illness status (Rakowski, 1984), it is perhaps assessing something more than the medical definition of health. Indeed, self-rated health has been found to correlate significantly with overall life satisfaction (George and Landerman, 1984), community satisfaction, job satisfaction and marital satisfaction (Willits and Crider, 1988). At the same time, self-ratings of health clearly derive from elements of objective health as defined by the medical model, given that longitudinal studies show that self-ratings of health tend to be a better predictor of future physician's ratings than the reverse (Maddox and Douglas, 1973).

Perhaps the most pivotal of all self-rated health correlations is its association with survival. For example, Kaplan, Barell and Lutsky's (1988) longitudinal study found self-rating of health to be an independent predictor of survival, after controlling for age, gender, continent of origin, number of conditions and medications reported, heart disease, and activities of daily living. Indeed, one quarter, or 300, of their subjects died during the five-year period between the initial and follow-up study. A strong, significant and linear relationship was found between self-rating of health and mortality: the lower the reported health status, the higher the risk of dying during the five years following the initial interview. Those who rated their health as very poor had a risk of dying that was five times higher than that of those who rated themselves as healthy. Similarly, Mossey and Shapiro's (1982) analysis of the data from the Manitoba Longitudinal Study on Ageing found the increased risk of death associated with

poor self-rated health was greater than objective health status, poor life satisfaction, low income, and being male. This led Idler and Kasl (1991) to suggest several possible explanations:

1. Methodological shortcomings of previous studies render the association spurious.
2. Other psychosocial influences on mortality are involved and explain the association.
3. Self-evaluations of health status have a direct and independent effect of their own.

After controlling for the contribution of numerous indicators of health problems, disabilities, risk factors, the presence of external social resources, the existence of internal emotional resources, and making adjustments of standard errors for the complex sample design, it was found that older people who perceived their health as poor were up to six times more likely to die during the four year follow-up period than those who perceived their health as excellent. This led these authors to favour the third of the above possibilities, stating,

‘The association of self-rated health with mortality survives the methodological challenges we bring to it: self-rated health appears to have a unique, predictive, and thus far inexplicable relationship with mortality. It would appear that some sort of independent effect is present’ (p. S64).

These authors, while acknowledging their inability to identify the crucial underlying variable or mechanisms that explain such findings, suggest two alternative causal models. First, it is possible that self-perceived health status, whether optimistic or pessimistic, can actually alter the risk of mortality by bringing health status into line with self-perceptions. The second possibility is that, based on a broad range of factors such as family disease history and longevity of parents and grandparents, self-rated health may be a remarkably accurate estimate of life expectancy.

In Birren’s (1959) original typology of age, biological age refers to the individual’s position in the life span. In attempts to assess a person’s biological

age, a series of functional age measures were developed (Bell, 1972), which considered the functional capacities of vital organ systems in order to predict whether the individual is older or younger than other persons of the same chronological age (Birren and Renner, 1977). However, rather than conduct such tests, perhaps all that is needed to estimate biological age in older samples is the self-rated health status of the individual. If self-rated health is indeed a proxy for biological age, then the findings that some groups (women and those of higher SES) assess their health more positively than others of similar objective health makes inherent sense, given the extra expected longevity of women and those of higher SES.

Self-Rated Health and Self-Perceived Age

More important, however, is the clear relationship between self-rated health and self-perceived age. Previously, this thesis has presented possible social reasons for the phenomenon of self-perceived age. In this instance, however, it is clearly possible that self-perceived age also has biological antecedents. In one longitudinal study self-perceived age was found to discriminate survivors and deceased more than self-rated health, objective health ratings, and actuarial life expectancy using life tables and accounting for age and gender (Markides and Pappas, 1982). Additionally, Powers and Bultena's (1972) ten-year longitudinal study revealed that although there was no difference in self-ratings of health between survivors and deceased, those who had died during the decade between studies had been significantly more likely to have older age identities than those who survived. Indeed, some authors have already suggested that another indicator of self-perceived age may be the number of years an individual expects to live (Bengston, Kasschau and Ragan, 1977).

Given the preceding discussion, it is unsurprising that there is overwhelming empirical evidence demonstrating that better levels of health are associated with a lower self-perceived age. Indeed, none of the empirical studies cited in this thesis have found poor health to be associated with a younger self-perceived age, while only two (Mutran and Burke, 1979a, 1979b) have failed to find an

association. Although both of these studies utilised the typical age/role identity measure, the reasons for the failure to find a relationship is unclear, given that the typical age/role identity measure has correlated with health in the only other studies (Mutran and George, 1982; Mutran and Reitzes, 1981) known to measure typical age/role identity.

The literature reviewed in this section clearly leads to the following proposition:

P12: Respondents who rate their health as good will have younger self-perceived ages than those who rate their health as poor.

2.6.2 Physical Manifestations Of Ageing

While it is clear from the above discussion that self-rated health considers secondary ageing factors, the extent to which self-rated health considers primary ageing is less obvious. Some of the more obvious age-related anthropometrical changes can lead to less muscle flexibility and increased stiffness (Montepare and Zebrowitz, 1998) and are therefore likely to be considered in the same way as arthritis, as each results in mobility problems. However, more subtle age-related physical decrements may also have implications for self-perceived age. Such decrements include changes to:

Vision

Due to loss of elasticity of the eye lenses, presbyopia is common among older people (Ross, 1981). The lens of the eye also becomes increasingly opaque, resulting in difficulty in differentiating some colours, especially those at the green, blue, and purple end of the spectrum (Lannon, 1994). The ability to detect contrast also diminishes with age, which can create problems in distinguishing target from background (Moschis, 1992). Light sensitivity also changes with age (Fozard, Wolf, Bell, McFarland and Podolsky 1977), resulting in greater difficulty in adapting to glare (Schewe, 1988), while those over 50

have diminished vision under poor illumination in comparison to younger people (Kosnik, Sekuler and Rasinski, 1985).

Hearing

Part of the natural ageing process comprises loss of tiny hair cells in the cochlea, the part of the ear that processes sounds for the brain to interpret. Presbycusis is the natural hearing loss that results (RNID, 1999).

Taste and Smell

Some authors contend that olfactory sensitivity appears to decline more quickly after the age of 60 (Moschis, 1992), while a slight but progressive overall decline in taste sensitivity appears to be marked in people over 70 (Cunningham and Brookbank, 1988). Although there is not full agreement regarding these changes (Engen, 1977), the wearing of upper dentures may affect taste.

Anthropometric Changes

As people age, their height, weight, and contours of their body change. After about age 50, fat is lost in the face, legs, and lower arms, while it is gained in the upper arms, abdomen, and buttocks, producing 'middle-aged spread' (Montepare and Sebrowitz, 1998). Even those who gain no weight may see dramatic changes in their body shape, such as increases to the breadth of the pelvis, nose, and ears; increases to the length of ears; and decreases in sitting height, arm span, range of motion, and trunk height (Schewe, 1988).

Skeletal Muscle

The changes associated with ageing in striated muscle are similar to those observed following denervation of the muscle or long-term muscle inactivity (Cunningham and Brookbank, 1988). Muscles need longer periods of rest between strenuous activities, and muscle strength gradually decreases with age,

which can result in a loss in grip strength from about the age of 50 (Moschis, 1992, Shewe, 1988). Reduced flexibility of muscles also makes it more difficult for older adults to maintain a straight posture (Montepare and Zebrowitz, 1998). Moreover, it is generally found that movements show substantial slowing with age. This slowing may be due to muscular limitations (Welford, 1977), although the causes of slowness of behaviour associated with ageing are not yet fully known (Salthouse, 1985).

Skin

The ageing process causes changes in the tissue of the dermis, resulting in a loss of elasticity to the epidermis, leading to wrinkles (Cunningham and Brookbank, 1988). Other changes to the quality of the skin result in blemishes and a more leathery texture, while drooping eyes and a double chin are caused by related changes in connective tissue, bone loss, and the resorption of fatty tissue (Montepare and Zebrowitz, 1998).

Montepare (1996c) suggests that while social age may be a more important aspect of the self-concept in younger adulthood, psychological and physical age appear to be more central to the self-concept in later adulthood. Additionally, Karp (1986, 1988) found that with the exception of those who had experienced major illnesses, the majority of his respondents described the more subtle physiological changes as pertinent reminders that they were getting older. Indeed, from the relatively small number of studies that have considered such factors, self-perceived age has been found to correlate negatively with psychomotor capabilities, including grip strength and finger movement (Burgess, 1962), and positively with impairment, which included hearing, sight and limb impairment (Linn and Hunter, 1979).

More than two decades ago, Rossi (1980) observed that while making 'ritual nods' (p. 17) toward biological variables, researchers have on the whole made little effort to relate physical ageing directly to self-perceived age. In an attempt to do so, she utilised an ageing-symptoms index based on nine factors: eyesight, shape of body, teeth, energy level, weight, sex life, health, hearing, and hair

condition, and results demonstrated that the higher the ageing-symptoms score, the older her female respondents felt. It is unfortunate that Rossi's (1980) study utilised only women aged 33-56, thus the consideration of such factors as they relate to males or an older sample is unknown. However, while Rossi's (1980) methodology can be criticised on the basis that chronological age may account for these findings, this study nevertheless lends support for the contention that a wide range of physical changes need to be considered in self-perceived age research. On this basis, therefore:

P13: Physical manifestations of ageing are as salient as social and psychological variables for self-perceived age.

This need has been addressed somewhat with the introduction of multi-dimensional self-perceived age measures that incorporate 'look age,' most notably the cognitive age scale (Barak, 1979; Barak and Schiffman, 1981). The majority of empirical studies that have used personal or cognitive age have found that older subjects tend to rate their look age as closest of all age dimensions to their chronological age (Barak, 1998; Clark, Long and Schiffman, 1999; Heckhausen and Krueger, 1993; Johnson, 1995, 1996; Kastenbaum *et al.*, 1972; Ross, 1981; Stephens, 1991; Wilkes, 1992).

In noting this trend, Wilkes (1992) suggested that, due to the lower reliability of the look component of the cognitive age measure, future studies might eliminate this component. His argument was based on the observation that self-perceived age 'means something other than the external, purely physiological self' (p. 298). By the same reasoning, however, it is argued here that this component is important enough to remain part of the self-perceived age measurement scale, precisely because self-perceived age is multidimensional, and must consider as many dimensions as possible in order to arrive at an overall self-perceived age. Thus, while some factors may make some people feel a great deal younger than their actual age, physical appearance is one of the most striking manifestations of the ageing process (Damon, 1972) and appears to act as a reality check. Indeed, it has been noted that many older people do not recognise the 'old

person' they see in the mirror as themselves (Clark, Long and Schiffman, 1999). Changes such as greying or loss of hair, which have no evident functional significance, may have a 'consequential threat to the self that may be as or even more significant psychologically than any actual diminution in functioning capacity' (Kuhlen, 1959, p. 863). Rather than distort overall cognitive age, therefore, look age merely taps into a different aspect of self-perceived age than do the other dimensions. This does not make the look age dimension any less useful.

P14: Of all dimensions of self-perceived age, look-age will correspond most closely with chronological age.

2.6.3 Fitness And Exercise

It has long been recognised that poor health is related to less activity (Jeffers and Nichols, 1970), and there is growing consensus that exercise has a significant role in the maintenance of physical and mental health as well as functional ability for older people (Evans *et al.*, 1992). For example, older active men's reaction times are faster than their younger, sedentary counterparts (Allman, 1995), while despite increasing age, strength may be maintained through the use of muscles, and exercise increases physical stamina and joint suppleness (Evans *et al.*, 1992). Indeed, it has been noted that one of the greatest contributions that sport has to make to society is to help people stay younger for longer (Hook, 1987). Thus, as Barak (1998) notes, it makes inherent sense that exercise activities form an important element of self-perceived age.

Of those few studies that have not neglected this potentially important area, only Burgess (1962) found there to be practically no correlation between physical fitness (as assessed by a physician) and self-perceived age. On the other hand, Barak and Gould (1985) found an inverse relationship between the frequency of exercise activity (measured by the number of hours per day spent on exercise) and cognitive age. Barak (1998) also measured exercise activity based on the

frequency of health club usage, dancing, swimming, and running/jogging, and found cognitive age to be significantly and inversely related to dancing and running or jogging.

Perhaps the most significant study to consider the relationship of exercise to self-perceived age is that conducted by Clark, Long and Schiffman (1999). These authors examined the *levels* of physical activity, using an existing scale known as the AADL scale (Physical Advanced Activities of Daily Living Scale). Based on questionnaire responses, subjects were categorised into 4 groups:

- *Frequent Vigorous Exercisers* (those who frequently [at least 3 times per week] participate in active sports or other similar activities that cause the individual to work up a sweat or become winded).
- *Long Walkers* (those who frequently walk a mile or more at a time without resting).
- *Short Walkers* (those who frequently walk a quarter of a mile at a time without resting).
- *Inactives* (those who participate in none of the above).

The results clearly showed that greater participation in physical exercise is related to a younger cognitive age. Frequent participants in physical activities have younger cognitive ages than do infrequent or non-participants. On this basis:

P15: People who partake in vigorous exercise on a regular basis will have younger feel, look, do, and interest ages than those who do not.

However, there is evidence to suggest that older British adults are not as fit and active as they claim to be. The National Fitness Survey (1992) provided the first comprehensive report concerning the fitness and activity levels of the UK population. Participant's self-assessments showed that among men aged 55-74, 23 per cent thought themselves very fit, and 56 per cent fairly fit. Among

women of the same age, 26 per cent rated themselves as very fit, and 60 per cent as fairly fit. In stark contrast, among those aged 55-64, 30 per cent of men and 51 per cent of women were not fit enough to sustain continuous normal paced walking on ground level at 3 miles per hour, while these figures rose to 45 and 79 per cent respectively for those aged 65-74. Indeed, the main message from the survey was that British people are not active enough. Thus, while research findings suggest that fitness and exercise are important considerations in relation to self-perceived age, it appears that researchers cannot rely on subjective self-assessments of fitness levels among older people.

The consideration of the relationship between biological aspects of ageing and self-perceived age is now complete. This thesis now turns to those psychological variables that have been shown to relate to self-perceived age.

2.7 PSYCHOLOGICAL ISSUES

As Hendricks and Hendricks (1979) note, the range of topics and issues that can conceivably be included in a psychological analysis of ageing is exceedingly diverse. For the sake of brevity and cohesion, therefore, strict delimitations have been made to the content of this section. The most obvious delimitation arises from the need to consider those aspects of psychology that have been examined in relation to self-perceived age. Thus, there are major psychological themes in the gerontological literature (for example, life-span classifications) that will not be considered here. The second delimitation arises from the need to consider those psychological issues that are of most relevance to marketers attempting to target older consumers. As a result, the remaining array of factors have been classified into three broad areas, which are:

- Cognitive abilities (including mental health, psychological functioning and psychiatric symptoms)

- Subjective well being (including successful ageing, life satisfaction, adjustment, morale, quality of life measures, emotional tone, purpose in life, and affect)
- The self (including self-concept, self-esteem, and self-consciousness)

2.7.1 Cognitive Abilities

Perlmutter (1988) defines cognition as the ‘psychological ability that accounts for all of mental life’ (p. 250). Cognition therefore includes perception, learning, memory, and intelligence. For many years, the majority of gerontological research was concerned ‘almost enthusiastically’ (Butler, 1968b) with age-related declines in cognition. Since then, a number of factors that affect the magnitude of age-related differences in cognitive ability have been recognised. These factors include levels of education (Jarvik, 1987), motivation with the testing situation (Rabbitt, 1977), cultural change (Kuhlen, 1968), the magnitude and number of life crises experienced (Amster and Krauss, 1974), the individual’s response to stressors (House and Robbins, 1983), health (Siegler and Costa, 1985; Sorce, 1995), and methodological issues such as a lack of experimental control and cohort differences (Cunningham and Brookbank, 1988). Consequently, the focus has shifted toward a less restrictive view that allows for consideration of both positive and negative changes in cognitive abilities with age (Coleman and McCulloch, 1985; Fiske and Chiriboga, 1985; Henry, 1988; Hess, 1994).

Nevertheless, with age, there is a decline in perceptual speed (Schaie, 1990) over and above the perceptual problems experienced by some older adults as a result of declines in sensory processes (Salthouse, 1985). Furthermore, older adults are more susceptible to interference from irrelevant stimuli or other noise than are younger adults (Cole and Gaeth, 1990). Indeed, recent evidence suggests that age-related cognitive declines are ‘fairly broad, begin early in adulthood, and are cumulative across the life span’ (Salthouse, 2004 p. 141).

However, the adage 'you can't teach an old dog new tricks' is simply not true when applied to adult learning: older people can generally learn anything that younger people can once factors such as general health, motivation, type of language and meaningfulness of the material used, and anxiety with the testing situation are taken into account (Atchley, 1987; Baltes, Mayr, Borchelt, Maas, and Wilms 1993; Barrow and Smith, 1983; Cohen, 1988; Light, 1988; Luszcz, 1993; Perlmutter, 1983). Nevertheless, a wealth of studies demonstrate the superiority of the young over older adults when comparing memory performance (Arenberg and Robertson-Tchabo, 1977; Atchley, 1987; Cole and Houston, 1987; Craik, 1977; Maylor, 1993). Whether this is due to differences at the encoding stage, possibly due to a failing on the part of many older adults to spontaneously employ deep processing (John and Cole, 1986), or the retrieval stage, due to either difficulties in using organisation strategies, and/or difficulties in the ability to self-generate associative cues to aid retrieval (Cole and Houston, 1987), is unknown (Moschis, 2000). Temporary retrieval failures, marked by tip-of-the-tongue (TOT) states, also increase with age (Maylor, 1990), while recent memory (involving information stored for hours or days) is impaired with increasing age (Barrow and Smith, 1983; Ross, 1981; Salthouse, 1991).

While there is no simple response to the question of age-related changes to intelligence (Rybash, Roodin and Hoyer, 1995), on the whole age-related decrement is more reliably found in some tasks involving cognitive abilities than in others. Fluid intelligence (needed to perform unfamiliar or novel tasks, often requiring flexibility, and not based on specific knowledge or previous learning) is likely to deteriorate with age. On the other hand, crystallised intelligence (long-standing knowledge and skills) shows little or no negative age-related effects (Perlmutter, 1988; Salthouse, 1991; Sorce, 1995; Smith and Baltes, 1990; Thompson and Wilson, 1970). That said, many individuals have been found to show little or no decrement on primary mental abilities in many major studies (Cunningham and Owens, 1983; Palmore 1985a ; Schaie, 1983, 1990; Siegler, 1983; Smith and Baltes, 1993; Wilkie and Eisdorfer, 1985).

A minority of self-perceived age studies have considered intelligence (measured by a variety of tests) in relation to self-perceived age. While Busse, Jeffers and Obrist (1957) found there to be no relationship between intelligence and self-perceived age, other studies (Burgess, 1962; Carp and Carp, 1981; Linn and Hunter, 1979) have found a negative association. However, Linn and Hunter (1979) found the relationship to disappear once social class was held constant, indicating that findings of an association between self-perceived age and intelligence may be spurious, as factors such as class and education are likely to vitiate results.

The area of cognitive functioning in terms of speed of processing and memory performance has received no attention in the self-perceived age literature. Yet, as Maylor (1996) suggests, as they get older most people report that their memories are not what they used to be. Indeed, many older people, possessing theories of decline, exaggerate age-related changes in memory (Li, Petersen, Smith, and Tangalos, 1993; McFarland, Ross and Giltrow, 1992). The possibility exists, therefore, that a person who experiences memory loss or a reduction in cognitive speed may see it as indicative that they are ageing. As Cunningham and Brookbank (1988) note, when a young person forgets something, it is because they forgot. When an older person forgets something, is it attributed to the fact that they are old or getting older? Certainly, Maylor's (1990) work on age-related increases in tip-of-the-tongue responses points to the possibility of frustrations and the fact that such experiences may have social significance, while lower perceived memory adequacy influences self-esteem (Cromwell, 1993).

Moreover, research demonstrates that a person's perception of their ability corresponds to their actual ability in a variety of tasks. Such tasks include conversational language performance, where older subjects have been shown to demonstrate less favourable self-perceptions (Ryan, See, Meneer and Trovato, 1992), and in the area of memory self-efficacy, which correlates negatively with actual memory performance, and where older adults report significantly poorer memory self-efficacy than do young adults (Luszcz, 1993). Clearly, there are two possible underlying reasons for such results. First, it is possible that older

adults are able to assess their own performance accurately, and are aware of age-related declines. Second, it is possible that a person's perception of their performance affects actual performance, and if age-related declines are expected, the self-fulfilling prophecy is borne out. Either way, the possibility that a person's perception of their cognitive abilities may correlate with their self-perceived age is worthy of investigation, especially in light of Furstenberg's (1994) findings that some of her participants advocated mental activity as a way of resisting getting old. On this basis:

P16: Self-ratings of cognitive abilities will correlate with self-perceived age.

2.7.2 Subjective Well Being

A few studies have considered self-perceived age in terms of psychological functioning and indices of mental health. Several have found no relationship with various psychoneurotic symptoms (Busse, Jeffers and Obrist, 1957; Linn and Hunter, 1979); others have suggested that older people who classified themselves as not old show more psychiatric symptoms than those who accepted an old age status (Kastenbaum and Durkee, 1964; Perlin and Butler, 1963) while a further group suggest a younger self-perceived age to be associated with positive mental health (Baum and Boxley, 1983; Carp and Carp, 1981; Derogatis and Cleary, 1977). However, when positive mental health is operationalised as subjective, as opposed to objective measures, a different picture emerges.

Subjective well being is the most extensively investigated topic within social gerontology (George, 1981; Gubrium and Lynott, 1983; Stock, Haring and Witter, 1983), and is indexed by any global measure of morale, life satisfaction, adjustment, quality of life, purpose in life, adaptation, competence, the balance between aspirations and achievements, or happiness (Adams, 1971; Bradburn, 1969; Crumbaugh and Maholick, 1964; Geller and Nimmer, 1987; Herzog and Rodgers, 1981a; Neugarten, Havinghurst and Tobin, 1961; Nydegger, 1986;

Ryff, 1982; Staats and Stassen, 1987). Moderate to high intercorrelations among the measures are suggestive of a single global construct (Reker and Wong, 1984), referring to life as a whole rather than to specific domains of life (e.g., work, family). It is a subjective phenomenon (George, 1981) that is multidimensional (Cutler, 1979) and especially relevant during a person's later years (Featherman, Smith and Peterson, 1990).

Subjective well being has been of interest to self-perceived age researchers over the years, and results are fairly consistent in that the majority of studies have found an inverse relationship between these two variables (Barak, 1979, 1998; Barak and Gould, 1985; Barak and Rahtz, 1990; Carp and Carp, 1981; Chua, Cote and Leong, 1990; George, Mutran and Pennybacker, 1980; Linn and Hunter, 1979; Meadow, Mentzer, Rantz and Sirgy, 1992; Mutran and George, 1982; Pihlblad and McNamara, 1965; Shanas, 1950; Sherman, Schiffman and Dillon, 1988; Staats, Heaphey, Miller; Partlo, Romine and Stubbs, 1993). Only a few studies have found no relationship between subjective well being and self-perceived age (Busse, Jeffers and Obrist, 1957; Steitz and McClary, 1988; Togonu-Bickersteth, 1986; Youn and Seo, 2000), while even fewer have found a positive relationship (Daum. 1978; Montepare and Lachman, 1989). On balance, therefore, it seems safe to conclude that a younger self-perceived age is associated with higher levels of subjective well being.

Although early studies suggested that older people have a tendency to report higher levels of subjective well being than their younger counterparts (Cutler, 1979; Herzog and Rodgers, 1981b), it appears that once controls are introduced, the total and direct effect of chronological age on subjective well being is minimised (George, Okun and Landerman, 1985; Youmans, 1977) or disappears (Larson, 1978; Stock *et al.*, 1983), suggesting that self-perceived, rather than chronological age, is important here. On this basis, then:

P17: Subjective well being and self-perceived age are inversely related.

2.7.3 The Self

Even a cursory glance at self-concept literature leads to agreement with Bengston, Reedy and Gordon's (1985) claim that the terms 'self' and 'self-concept' invoke "some of the oldest, most enduring, and yet most perplexing themes in social gerontology" (p. 546). This state is replicated in consumer behaviour studies pertaining to the self, which provoked Sirgy (1982) to describe the literature as "fragmented, incoherent, and highly diffuse" (p. 287). Even definitions of and terminology applied to the concept of the self are varied, ambiguous, and confusing in that often the same term is used in very different ways (Breytspraak, 1984) or different terms are used to describe what is essentially the same thing.

Bengston, Reedy and Gordon (1985) point to consensus among philosophers relating to three existential stances with regard to the human condition: these being knowing (cognitive), feeling (affective), and acting (conative). Based on this classification, self-concept is viewed here as the cognitive component of the self, emerging as a description of how the self is perceived by the individual in terms of specific attributes. Self-esteem refers to the affect associated with an evaluation of one's self. The conative component refers to the individual's orientations to action which reflect the self. In contrast to self-esteem, which is usually viewed as a global measure, self-concept is made up of various elements of self-perception (Breytspraak and George, 1979, 1982).

As George and Okun (1985) note, the potential value of self-concept research is primarily to do with the way in which it may influence an individual's attitudes and behaviour. Central to this thesis, then, is the question of whether or not self-perceived age, as a specific element of self-concept, correlates with attitudes and/or conative or behavioural components, at least in terms of consumer behaviour. While not everyone accepts the assumption that self-perceived age is an important element of self-concept (McCrae and Costa, 1988), general agreement does provide a satisfactory rubric for viewing self-perceived age as a dimension of self-concept (Barak and Gould, 1985; Bloom, 1961; Cutler, 1982; Stern, Barak and Gould, 1987; Guiot, 2001). Indeed, Turner (1979) posits that

self-perceived age is one of the four most commonly studied dimensions of self-concept, while Montepare and Zebrowitz (1998) illustrate the richness and importance of people's age-based self-perceptions, drawing on numerous developmental studies and social-psychological investigations. They conclude that because age appears to be one of the most fundamental attributes people use to both differentiate themselves from some people and to develop a sense of membership of some social groups, it is indeed a basis for defining selfhood, and a major criterion by which people organise information about themselves.

Ward (1977) found no relationship between age identity and self-esteem. Other research, however, consistently demonstrates that perceiving oneself as not old is associated with positive feelings toward oneself: i.e., having higher self-esteem (Barak and Gould, 1985; Barak and Rahtz, 1990; Carp and Carp, 1981; Linn and Hunter, 1979; Mason, 1954; Montepare, 1996c; Puglisi and Jackson, 1978).

While most researchers conclude that a younger self-perceived age is therefore beneficial to one's self-esteem, Brubaker and Powers (1976) argue that the nature of the stereotype of old age is likely to be influenced by the amount of contact and experience the individual has with other older people. The more direct experience the individual has, they suggest, the more positive will be the stereotype adopted. Indeed, studies do suggest that older subjects who have frequent interactions with others are most likely to have high self-esteem (Anderson, 1967; Longino, McClelland ; and Peterson, 1980; McClelland, 1982). On the other hand, however, it has long been recognised that an individual's perceptions and evaluations of other people may be profoundly influenced by his or her evaluations of self (Deutsch and Solomon, 1959). Overall, therefore, while it is possible to argue that research is unable to determine the antecedent in the relationship between self-perceived age and self-esteem, the fact remains that most studies show that individual's with lower self-perceived ages have higher self-esteem than those who feel older than their age. Thus;

P18: Self-perceived age and self-esteem are inversely related.

Older people with younger self-perceived ages have also been found to possess higher self-confidence (Barak, 1979, 1998; Barak and Gould, 1985; Wilkes, 1992) and higher public self-consciousness (Barak, 1998; Barak and Gould, 1987; Gould and Barak, 1988). The latter characteristic, originally identified by Fenigstein, Scheier and Buss (1975), refers to a process of self-focused attention. Thus, it would seem that people with younger self-perceived ages are more concerned with the kind of public impression they make, as well as being less shy or embarrassed with strangers (Barak, 1998). Indeed, it would seem that the development of a sense of self occurs through the process of social interaction (George, Mutran and Pennybacker, 1980). These constructs may have particular importance for marketing to older adults, given that information processing is facilitated, and therefore memory is improved, if external stimuli are congruent with the information presented (Zinkhan and Hong, 1991), and because public self-consciousness may be an important segmentation variable (Burnkrant and Page, 1982). Thus;

P19: Self-perceived age and self-confidence are inversely related.

P20: Self-perceived age and public self-consciousness are inversely related.

Consideration of the multidimensional aspects that affect ageing is now complete, and this thesis turns to the final major section of this literature review: the consumer behaviour of older adults in relation to self-perceived age.

2.8 CONSUMER BEHAVIOUR AND SELF-PERCEIVED AGE

This final section of the literature review has two main aims. First, it aims to identify and analyse those consumer behaviours that have been measured in relation to self-perceived age. These are minute in number in comparison to the range of variables that have been considered in this context within the wider

social sciences. The second aim is to utilise the general literature pertaining to older consumers in order to identify ambiguities and unanswered questions for which self-perceived age may hold the key.

The section is divided into five major parts. It begins with consideration of those consumer traits that have been measured in relation to self-perceived age, and, perhaps due to the relative paucity of studies, notes the lack of consensus in this area. The discussion then moves to values, in which even fewer self-perceived age studies exist. Third, consumer attitudes toward a range of marketing stimuli are analysed, before examining those variables that may affect the purchase and consumption decisions of older consumers. Finally, the chapter considers the segmentation literature pertaining to older adults.

2.8.1 Consumer Traits

The Cautiousness-Venturesomeness Continuum

A cursory glance at the literature reveals a focus on a continuum, where traits tend to cluster around the extremes of cautiousness and high perceived risk at one end and venturesomeness⁵ (*sic*) at the other. Some literature portrays older consumers as cautious and risk averse in both savings and investments (Morin and Suarez, 1983) and shopping behaviours (Flanagan, 1994; Kavanagh, 1994; Mazur 1993; Ross, 1981), and suggests that risk reducers such as guarantees, warranties, and brand/store loyalty are particularly important to older consumers (Dychtwald and Flower, 1989; Moschis, 1994b, Lumpkin and Festervand, 1988; Meyer, 1990; Silman and Poustie, 1994; Oliver, 1995).

A few authors, however, warn against assuming that brand loyalty comes with age (Learned, 2003; McEwen, 2002), and posit that brand loyalty among older consumers is only a little higher than that of their younger counterparts (Buck, 1990b; Uncles and Ehrenberg, 1990; Tongren, 1988). One study found 75% of

⁵ Venturesomeness is defined by Schiffman and Kanuk (2000) as a measure of a “consumer’s willingness to accept the risk of purchasing innovative products” (p. G-14).

over 50s had tried at least one new brand within the previous year (Ostroff, 1989), another found that over 5 years, there was significantly more agreement with the statement 'I enjoy trying new products when they first come out' (Fox, Roscoe and Feigenbaum, 1984), and some authors do point out that older consumers are 'selectively innovative' (Schiffman and Sherman, 1991, p.190; Moschis, 1994b; Wolfe, 1992).

Still others maintain that there are cohort effects within this market, and make a distinction between baby boomers (born after 1946) and their older counterparts, positing that the former are less risk averse than the latter (Schewe and Meredith, 1994; Philp, Haynes and Helms, 1992). However, the author and her associates (Simcock, Sudbury and Wright, 2002, 2003) found that when making a high involvement purchase (buying a car), perceived risk did not increase uniformly with age, suggesting that any relationship between chronological age and risk is more complex than many have previously advocated.

The relationship between these consumer traits and self-perceived age is no less complex. On the one hand, cognitively younger consumers have been found to display less consumption-related cautiousness (Stephens, 1991), more brand switching (Barak, 1979), greater consumer venturesomeness (Sherman, Schiffman and Dillon, 1988), and a higher propensity to try new brands (Stephens, 1991) than their cognitively older counterparts. On the other hand, no such relationship was found regarding new brand trial or brand innovation (Barak, 1998), consumer innovativeness using holidays as the domain (Szmigin and Carrigan, 2000), supermarket loyalty (Barak, 1998), or perceived risk (Barak, 1979).

Fashion has been the focus of some research in this area, with Wilkes (1992) finding cognitive age and an interest in fashion to be inversely related. Again, however, it is unclear whether or not cognitively young consumers are the true leaders when it comes to fashion in this sector. Barak and Gould (1987) found no relationship between chronological age and fashion innovation, but they did find an inverse correlation between cognitive age and innovativeness among the

males in their sample. Later, however, Barak (1998) found no such relationship to exist in another sample. Clearly, more research is needed in this area, and on this basis:

P21: Self-perceived age will correlate with a venturesome trait.

Consumer Involvement, Activity & Opinion Leadership

Barak (1998) found cognitive age to be inversely related to supermarket involvement, suggesting the cognitively young are more likely to enjoy shopping in supermarkets, take the process more seriously, and are less likely to begrudge the time needed to shop successfully than the cognitively old. Similarly, such a relationship was found when Stephens (1991) utilised elements of Raju's (1980) Exploratory Shopping Behaviour scale, with the subscale of information seeking⁶ measuring a person's liking for shopping and window shopping, browsing, sampling different brands, and general curiosity regarding advertisements and products. Barak and Rahtz (1990), too, found an inverse relationship with a trait called information seeking, described as someone who displays "a higher level of consumer involvement and activity ... reminiscent of opinion leadership" (p. 63). Indeed, three studies suggest that the cognitively young are opinion leaders to their peers (Barak, 1979, 1998; Barak and Gould, 1987).

Besides the problems of identification of meaningful correlates (Hirschman and Adcock, 1979), a major problem with the measurement of opinion leadership is that the construct tends to be category-specific, although there is an element of overlap among similar product categories (Schiffman and Kanuk, 2000, 2004). Barak and Gould (1987) focused on fashion, but Barak's (1998) measure of opinion leadership comprised three questions, one relating to clothes, one to grooming and cosmetic products, and one to supermarket sales. While there may be some relation among the product categories of fashion and grooming/cosmetics, supermarket sales are clearly unrelated. Further, empirical

⁶ Not to be confused with the AIO information seeker identified by Wells and Tigert, 1971. The AIO information seeker is someone who often and actively seeks out the advice of others regarding which brands to buy: in other words, he or she is the recipient of the information provided by opinion leaders.

studies concerned with consumer activity and involvement in this field are also scarce. This area is, therefore, under researched, and more work needs to be done.

Perhaps an alternative in more wide-ranging studies, such as this thesis, to the measurement of opinion leadership is the market maven. In contrast to the opinion leader, the maven possesses a wide range of information about many different types of products, retail outlets and other aspects of markets and is similar to an opinion leader in that they like to share this information with others (Alpert, 1993; Elliott and Warfield, 1993; Feick and Price, 1987; Feick, Price and Higie, 1986; Higie, Feick and Price, 1987; Price, Feick and Guskey-Federouch, 1988; Price, Feick and Guskey, 1995). The maven is therefore close to the function of generalised opinion leader (Solomon, Bamossy and Askengard, 1999), and is an information seeker and diffuser (Price, Feick and Higie, 1987). The general older consumer literature suggests that many older people are active shoppers who use shopping for social and recreational reasons (Hare, Kirk and Lang, 1999; Moschis, 1994b; Tongren, 1988). Moreover, no clear socio-economic or demographic profile of the maven has been identified (Feick and Price, 1987), although Schiffman and Scherman (1991) speculate that as consumers, the 'new age elderly' are discerning, skilful and knowledgeable. To date, no research has considered the market maven in relation to self-perceived age. Therefore:

P22: Self-perceived age will correlate with market mavenism.

2.8.2 Values

General Values

The literature devoted to older consumers clearly suggests that older people have different values to younger people. Yovovich (1983) for example, suggests that older people are not as concerned with environmental preservation as younger generations. In contrast, however, most authors paint a picture of a less selfish older consumer who has "compassion for others and concern for the

world about them” (Wolfe, 1988, p. 50), and is less concerned with success or being streetwise and places more importance on the values of trustworthiness and being responsible and sensible (De Jonquieres, 1993). Security and safety, too, are cited as key to the older generation (Dychtwald and Flower, 1989; Schewe, 1990) as well as a sense of purpose, social connectedness, and spirituality (Schewe, 1991). Indeed, based on Maslow’s Hierarchy of Needs, Wolfe (1994, 2003) identifies 5 key values that he suggests form the root motivations of older consumers: autonomy and self-sufficiency, social and spiritual connectedness, altruism, personal growth, and revitalisation.

As Kahle and Kennedy (1988) point out, business has too often neglected the importance of values, despite the prominence given to them by philosophers and social scientists. Values not only have hierarchical primacy over attitudes (Homer and Kahle, 1988; Kahle, Liu and Watkins, 1992), but influence a variety of consumer behaviours, including reactions to products (Batra, Homer and Kahle, 2001; Kahle, 1986), media preferences (Beatty, Kahle, Homer and Misra, 1985), positioning (Kennedy, Best and Kahle, 1988), advertising, packaging, personal selling, and retailing (Beatty, Homer and Kahle, 1988). Moreover, age differences in the importance placed on different values have been identified (Kahle, Beatty and Homer, 1986; Kahle, Poulos and Sukhdial, 1988).

Despite the obvious importance of values in consumer behaviour, the relatively large amount of writing devoted to the values of older consumers, and the fact that age differences have been identified in values research, only one recent Australian study has investigated values in relation to self-perceived age. Using Kahle’s (1983) List of Values (LOV)⁷, Cleaver and Muller (2002) found that the importance placed on the value *fun and enjoyment in life* was predictive of a younger feel age, while those who felt closer to their actual age placed more importance on *security*. On this basis:

⁷ LOV comprises 9 values: Sense of belonging, Excitement, Warm relationships with others, Self-fulfilment, Being well respected, Fun and enjoyment of life, Security, Self-respect, and A sense of accomplishment. After rating the importance of each value, respondents are asked to identify the value most important to them.

P23: The central value basis of older consumers will be related to their self-perceived age.

Materialism

In addition to the general values outlined above, materialism⁸ may be a value that is worth specific investigation for this thesis. Theory suggests that the relationship a person has with material items changes over time (Belk, 1988; Richins and Dawson, 1990). Indeed, Belk (1985) found materialistic traits to be weaker among older than younger people. Often viewed as a Western characteristic (Ger and Belk, 1990), it is known that people who place high importance on material possessions are less satisfied with their lives (Sirgy, 1998), and place greater emphasis on financial security and less on personal relationships (Richins and Dawson, 1992). Of particular relevance to marketers are the findings that compared to low-materialism consumers, high-materialism consumers spend more on themselves and less on others (*ibid*), are more concerned with design and aesthetics of their possessions (Richins, 1994a), and experience more negative affect following acquisition of goods (Richins, McKeage and Najjar, 1992).

Writings within the older consumer literature suggest that as a person ages they become less materialistic (Haller, 1995) and more interested in experiences than things (Dychtwald and Flower, 1989; Wolfe, 1988; 1990; 1992). This observation, however, goes against much of the gerontological literature that indicates that possessions become increasingly important in later life (Moschis, 1992). Schiffman and Sherman (1991) suggest that ‘new age elderly’ are less interested in accumulating possessions, while Meikle (2000) predicts a segment of older consumers that is concerned with self-fulfilment and is more self-focused as it imitates “the lifestyles of the young” (p. 9). Given that “low-materialism consumers are more hedonically orientated than their high-

⁸ As Richins and Dawson (1990) explain, materialism is best viewed as a value rather than an attitude or a trait. It is defined as “the importance a consumer attaches to worldly possessions” (Ger and Belk, 1990, p.186).

materialism counterparts” (Richins, 1994a, p. 530), it would seem to be an omission that materialism has never been empirically measured against self-perceived age. Thus:

P24: Materialism will correlate negatively with self-perceived age.

2.8.3 Attitudes

Marketing and Consumerism

A number of studies have found that older consumers have many of the same requirements and satisfaction levels as younger consumers in terms of store and product related attributes (Burt and Gabbott, 1995; Lumpkin, Barnett and Goldstucker, 1985; Lumpkin, Caballero and Chanko, 1989; Mason and Himes, 1973; Tongren, 1988), and therefore do not demand special treatment or feel particularly alienated from the marketplace (Kaiser and Chandler, 1984).

However, much of the literature portrays the older consumer as either victimised, disadvantaged, dissatisfied, and alienated from the marketplace (Barnes and Peters, 1982; Hare, Kirk and Lang, 1999; Johnson, 1995, 1996; Waddell, 1975), or as a particularly difficult (Kreitzman, 1994b), demanding (Calver *et al.*, 1993), discerning group that place higher value on quality of service than the younger generation (Gabriel, 1990; Hobman, 1990; Mazur, 1993; Morall, 1995; Lambert, 1979) and are more cynical of marketing and advertising (Byrne, 1994; Elliott, 1995). Paradoxically, it is also well established that older consumers complain less than other age groups (Bernhardt, 1981), although it has been suggested that this may be due to the older generation’s reluctance to exercise their consumer rights because consumer concerns were of less importance when they were young (Oumlil, Williams and Oumlil, 2000).

Despite such ambiguities, few pieces of self-perceived age research have explicitly examined these issues. Johnson (1995, 1996) used consumer

alienation⁹ as one approach to measure the marketplace dissatisfaction of older consumers, and, contrary to expectations, found no difference between cognitively older and cognitively younger consumers, except for those in their 50s. However, again contrary to expectations, those people in their 50s who felt younger had significantly higher alienation scores than those who felt their chronological age. Johnson (1996) interprets this unexpected finding by suggesting that, due to incorrect segmentation, (i.e., these people feel in the 40s or younger), these consumers feel even more alienated when marketers treat them as old. While this is one possible interpretation, it does not explain the lack of such a relationship among the other subjects in the sample.

A further study, which focused on the outcome of health care complaints of older patients, found that those with younger cognitive ages were less satisfied with the outcomes of their complaints than were their cognitively older peers (Dolinsky, 1997), while those who were cognitively younger were more likely to complain (Dolinsky and Gould, 1998). This finding implies that the cognitively young are a more demanding group than the cognitively old. Conversely, Smith and Moschis (1984), in a study examining consumer socialisation of older consumers, found a positive relationship between cognitive age and attitudes toward advertising, indicating that those who feel younger are more favourable toward advertising. Unfortunately, these authors provide no more details, presumably because the focus of the research was socialisation. Clearly, once again, more research is needed in this area, and on this basis:

P25: Consumers with older self-perceived ages will have different attitudes toward marketing and consumerism than their younger-feeling counterparts.

⁹Johnson (1995, 1996) defines alienation as a reflection of an individual's feelings of marketplace powerlessness (inability to help determine market practices), normlessness (belief that marketers behave in ways that are unethical, unjust, and undesirable); isolation (feelings of estrangement from the market system); and self-estrangement (inability to identify with behaviour traditionally associated with the consumption role).

Senior Promotions

A number of researchers have conducted studies into the reactions to senior promotions, and have found very different types of consumer behaviour. Gillett and Schneider (1978) studied the reasons for non-use of a senior discount card. Respondents were asked to tick boxes such as 'lack of participating stores nearby', and 'not patronising the stores in the programme'. However, 22% of those who did not use the card ticked the box 'other' as a reason for non-use. In a further study, Tepper (1994) utilised labelling theory (outlined in section 2.3.5) as the conceptual basis for a study into low participation rates in senior citizen discount programmes¹⁰. In a study of 38 consumers aged 50 and over, she identified three overall reactions to senior discount cards: resistance to self-labelling, resistance to social labelling, and unqualified disclosure. The first reaction comprises denial or rejection of the status. Consumers who employed these strategies typically refused to acknowledge eligibility or resisted usage of the card because they did not want to accept a senior citizen status. Resistance to social labelling, the second reaction, was manifested in secrecy and selective concealment of the discount card. People who used these strategies would only use the card if they could conceal their usage from others. The third reaction was unqualified disclosure, a reaction that involved open usage of the card. Individuals in this category typically viewed the discounts as rewards and experienced positive affect as a result. These individuals tended to redefine the senior citizen status, attaching pride and respect to the label. Tepper's (1994) study suggests that, at least in terms of age-related discounts, acceptance of an old age status does indeed result in different consumer behaviour to that exhibited by people who reject the status old. Indeed, Long (1987), too, found that for some older Scottish people, a 'little green card' offering concessions was seen by some as "a poisoned chalice" (p. 39).

Some have speculated that the underlying reasons for such behaviours is the type of marketing strategy used (Moshcis, 1994b). Others have used different theories to offer possible explanations, including socialisation theory (Moschis, Mathur and Smith, 1993), labelling theory (Tepper, 1994), and reference group

theory (Blazey, 1987). Spiller and Hamilton (1993) profiled users and not users on the basis of socio-demographic and health factors, while Blazey (*ibid*) found differences in gender, retirement and health status between participants and non-participants in a senior travel programme, but proposed that reference group theory may better explain why some older people do not use senior promotions. This latter suggestion is consistent with Goodwin's (1992) suggestion that concealment of purchase, use, possession and consumption of some non-deviant products and services could be as a result of avoiding interference from disapproving reference groups, or to resolve cognitive discomfort associated with self-discrepancy.

Clearly, these authors have recognised the possibility that some older consumers do not respond positively to marketing stimuli that explicitly refers to age, probably due to their refusal to accept an old age status. However, the possibility that self-perceived age is the crucial variable has to date never been tested. On this basis:

P26: Consumers with younger self-perceived ages will have different usage intentions toward age-based sales promotions than those who feel closer to their chronological age.

Attitudes Toward the Past

Goulding (1999) points to the increasing wave of nostalgia¹¹ recently witnessed in popular culture in both the US and the UK. Holbrook and Schindler (1991) attribute this increase to the possibility that Baby Boomers have reached an age where nostalgia matters greatly. Consequently, Schewe (1991) advocates using nostalgia and elderheroes (*sic*) as the basis for positioning strategies when marketing to older adults. Intuitively, such advice makes sense.

¹⁰ At age 50, American consumers are eligible for an American Association of Retired Persons membership card, entitling the holder to discounts from a variety of retailers.

¹¹ Nostalgia is "a longing for or favourable affect toward things from the past" (Holbrook and Schindler, 1991, p. 331). It is classified here as an attitude because it involves an emotional rather than cognitive memory (Belk, 1990).

However, when the empirical evidence relating to nostalgia is examined, a more complex picture emerges. Goulding (1999) for example, in her study of heritage visiting among older consumers, found two types of individuals who demonstrated “almost polar opposite behaviours” (p.194) and yet were of comparable ages. Holbrook and Schindler (1994), too, failed to find any correlation between the level or range of attitude toward the past (measured using a nostalgia scale) and age. These authors offer two possible explanations for this finding. On the one hand, it may be that a positive attitude toward the past does not pertain only to older people, or on the other it may be as a “result from processes occurring later in life” (p. 419) some older consumers look to the past with greater fondness than do others. Thus, attitude toward the past appears to be an individual characteristic (Holbrook and Schindler, 1996). Of course, the possibility remains that self-perceived age may impact on an older consumer’s attitude toward the past, and therefore the usefulness of nostalgia to marketers. This possibility, however, has never been examined, thus:

P27: Attitudes toward the past will correlate with self-perceived age.

2.8.4 Consumer Decisions

Media Usage & Information Sources

While the available literature on information sources used by older consumers reports somewhat conflicting results (Lumpkin, 1985), it is generally suggested that older people are heavy users of mass media. For example, in the UK the use of television increases with age (Bennett, 1990), the majority of people aged 50-80 in Britain read at least one newspaper every day (Sturges, 1990), and although Buck (1990a) suggests that radio is less effective for reaching this market because it primarily listens to the British Broadcasting Company, Gunter (1998) reports a more recent movement towards commercial stations.

The relative importance of mass media in comparison to other information sources for older people is unclear. On the one hand, some suggest that informal sources (friends, family, neighbours) are more important than mass media (Lumpkin, Caballero and Chanko, 1989). In contrast, Wolfe (1992) suggests that although older consumers do consult friends, they are more likely to rely on prior experience and internal sources to make their own minds up rather than external sources such as word of mouth or advertising, a view supported by Schiffman and Sherman (1991) in their description of the new age elderly. Still others suggest that older consumers are highly dependant on mass media (Stephens, 1981; Tongren, 1988). Indeed, Lumpkin and Festervand (1988) found that older adults rely more heavily on advertiser-supplied information when forming price/quality evaluations, and were *not* more reliant on their own experience or that of significant others for purchase related information as previous research suggests: rather, they too found that older consumers rely more heavily on mass media than their younger counterparts.

One possible reason for the lack of consensus is that sources of information and the relative importance of these may differ between type of product (Moschis, 1994b), the level of involvement and relative innovativeness of a product (Strutton and Lumpkin, 1992), or even the nature of social relations and reference group affiliation, which were cited as some of the differences between those older consumers who use the Internet and those who do not (Trocchia and Janda, 2000). While these former studies may be quite correct, clearly, the last study suggests that lifestyle and self-perceptions may be more important than other variables in determining use and importance of various media. Indeed, McMellon and Schiffman (2000) found some evidence to suggest that internet usage among older adults may be related to some mobility limitations, while the one study into cognitive age and older adults found the cognitively young to be higher users (Eastman and Iyer, 2005).

However, whether or not self-perceived age is related to media usage is still unknown. On the one hand, studies have failed to find any relationship between self-perceived age and mass media interaction (Smith and Moschis, 1994), TV viewing (Barak, 1979), radio listening (Barak and Gould, 1985), and newspaper

and magazine reading (Barak and Gould, 1985). On the other hand, an inverse relationship with radio listening (Barak, 1979) and a positive relationship with TV usage (Barak and Gould, 1985; Johnson, 1993) have also been reported. Furthermore, although Johnson (1993) questioned the usefulness of self-perceived age over chronological age for explaining TV viewing due to small differences in correlation coefficients, she nevertheless did find that self-perceived age was more highly correlated with television orientation and usage than was chronological age. Clearly, more research to establish the value of self-perceived age to media planning is needed, and thus:

P28: Media usage will correlate with self-perceived age

Price Consciousness

One area in the literature relating to older consumers that is highly contentious is price consciousness. Some authors depict older consumers as price conscious (for example, Lewis, 1994; Morall, 1995; Moschis, 1991) while others explicitly state that older people have higher concern for other attributes over cost (for example, Dychtwald and Flower, 1989). A meta analysis of relevant literature led Tongren (1988) to conclude that, overall, research supports a generalisation that older consumers are *less* price conscious than the younger generation.

Only two studies have examined the relationship between price consciousness and self-perceived age, and the results are inconclusive. Barak and Gould (1985) found a small positive correlation between the two variables, but no such relationship was found in a later study (Barak, 1998). Obviously, the relative importance placed on price by a target market is important to marketers, and more research is required in this area. Therefore:

P29: Price consciousness will correlate with self-perceived age.

Credit

Early studies found an aversion to credit among older consumers (Bernhardt and Kinnear, 1976). Since then, despite Thomas' (1994) suggestion that mature customers have accepted credit, it appears that there are marked differences in the use of and attitudes toward credit in this market (Banks, 1990; Mason and Bearden, 1980). Moreover, it would seem that the relationship between age and credit use is not a straightforward inverse relationship (Mathur and Moschis, 1994). It is not known whether or not self-perceived age is a more useful variable when applied to attitudes toward and use of credit, thus:

P30: Attitudes toward credit will correlate with self-perceived age.

Health Foods

A growing body of literature argues that older adults are more concerned with healthy eating than any other age group (Dychtwald and Gable, 1990; Meyer, 1990; Whetton, 1990). While Burton and Andrews (1996) found that older (70+) Americans were somewhat less responsive to product nutrition levels both in terms of attitude and purchase likelihood, the UK's National Diet and Nutrition Survey (Wynne, 1999) found that those over 65 met healthy eating recommendations set out by the Department of Health for total fat intake, and found this to be lower than the population average.

As Davis and Randall (1983) point out, nutrition has implications for the development of specific diseases prevalent at older ages (e.g., diabetes, hypertension, cardiovascular disease). Moreover, these authors advance the theory that nutritional status may not only affect the nature and rate of physiological ageing, but may also have concomitant potential for social and psychological functioning. Given this argument, the absence of any investigation into self-perceived age and nutritional status is an obvious omission. On this basis:

P31: Self-perceived age will correlate with attitudes toward healthy eating.

2.9 SEGMENTATION OF THE OLDER CONSUMER MARKET

Researchers have long realised that grouping all older consumers into one age-based category may result in marketers overlooking crucial segments of this important market (Greco, 1986). Segmentation is necessary in order to simplify an unmanageable number of variables, identify key targets, better understand and predict consumer behaviour, and enhance relationships with consumers (Bickert, 1997). Moreover, Moschis (1996) asserts that no other consumer market justifies segmentation more than older consumers, because as people age they become more dissimilar with respect to lifestyles, needs and consumption habits.

Early attempts to segment older consumers tended to be based on chronological age groupings. McCann (1974) for example, segmented older consumers using housewife age, but while this technique identified different levels of responsiveness to price, no differences between segments in terms of advertising responsiveness or deal proneness were found. In response to the realisation that age alone is not a significant enough factor in explaining apparent differences in behaviour (Burt and Gabbott, 1995; Moschis and Mathur, 1993) alternative segmentation models based on a wider range of variables began to emerge.

French and Fox (1985) asked 200 gerontologists to rate how well a set of attitudes and behaviours described nine sets of older people who were grouped on the basis of adjustment to retirement, and suggested this as a segmentation model. Leventhal (1991) proposed segmenting older consumers on the basis of

chronological age, and then taking into consideration factors such as buying power, marital status, and health. Lumpkin (1984) offered a model based on retirement and age to ascertain different segments, and then tested this for differences along the dimensions of 'shopping efficiency and economics' and 'shopping value'. This model was later refined (Lumpkin, Greenberg and Goldstucker, 1985) and on the bases of different shopping orientations toward apparel and some lifestyle factors, three unique segments emerged. Many other segmentation methods for use with older consumers are also based on specific product categories. These include five segments for over the counter drugs (Oates, Shufeldt and Vaught, 1996); six segments applicable for financial services (Bank Advertising News, 1988); and two of the three different strategies proposed by Morgan and Levy (1994) for health products and food. Two studies also offer ways of segmenting the travel market for older consumers, one of which identified three segments of tourists (Lieux, Weaver and McLeary, 1993), and a more recent one that includes cognitive age as one of the variables (Sellick, 2004). While all are no doubt useful in particular circumstances, the obvious limitation of these models is that they are based on specific product categories, and are therefore only applicable to that category.

A further group of studies that are not applicable to specific product categories, and which have the benefit of using multiple segmentation bases, do exist for segmenting older Americans. These include Towle and Martin's (1976) model comprising six segments, based on buying styles, personality traits, self-concept measures and demographic variables; Sorce, Tyler and Loomis' (1989) six segment model based on lifestyle dimensions; and finally the most comprehensive segmentation model of older Americans, which is the gerontographics method proposed by George Moschis and his colleagues at the Centre for Mature Consumer Studies at Georgia State University (Moschis, 1993, 1996, 2003; Moschis, Lee and Mathur, 1997; Moschis and Mathur, 1993). Gerontographics is based on a variety of social, psychological, and biophysical variables, which offers four distinctive segments called healthy hermits, ailing outgoers, frail recluses, and healthy indulgers. Research has found the model to predict responses to consumer behaviour twice as accurately as segments based on chronological or even cognitive age groupings (Moschis and Mathur, 1993).

The one drawback to these methods is that few demographic differences between segments emerge, and, as Ostroff (1989) notes, the best and most useful profiles of older consumer segments integrate a wide variety of variables, including demographic data, to be most useful to marketing practice.

Nevertheless, these methods, particularly gerontographics, do offer American marketers the chance to target specific segments of older consumers with specific offerings. Knowledge of the average cognitive age of a segment, however, would have obvious benefits to the marketer.

In contrast to these American models, the UK is a poor relation. Tynan (1985) and Tynan and Drayton (1985a, b) identified a potentially important segment for a variety of products and services, which were known as Methuselahs, a segment that is akin to Schiffman and Sherman's (1991) 'new age elderly' in America. Other than this, there are two known pieces of commercial research to have identified segments of older consumers. One used the target group index to identify five segments which differ solely on the basis of attitudes toward money, travel, and the media (Silman and Poustie, 1994), while the other identified two segments, the splurgers and the squirrels, based on personality types. However, across a wealth of studies, results of attempts to relate personality to consumer behaviour have been described as "mixed at best" (Arnould, Price and Zinkhan, 2002, p.256), leading to the suggestion that if one wants to know about a particular consumer behaviour, it is best to ask about it (Solomon, Bamossy and Askedgaard, 1999). Indeed, personality factors have been found to be poor predictors of consumer behaviour in general (Moschis, 1992). More recently, UK researchers have suggested that a potentially useful way to segment the older consumer market would be on the basis of benefits sought (Ahmad, 2003) or lifegroups (Carrigan, 1998a, 1999). Of course the major drawback with the former is that it would be limited to specific product categories, with grocery shopping and holiday purchasing being cited as hypothetical examples. The latter is problematic because it is based on lifegroups, and research suggests that lifestage or lifecycle models are severely limited in their ability to predict a wide range of consumer behaviours, even when the number of stages is increased (Silvers, 1997; Wagner and Hanna, 1983). Moreover, while both of these authors explain the potential uses and

benefits of their suggestions, neither has actually gone on to segment the older consumer market in the UK empirically.

There is therefore an obvious need for a comprehensive, empirically based model that segments the older consumer market in the UK, using a range of multiple segmentation bases, and which incorporates a wide variety of consumer behaviour variables, and is not limited to specific product categories, or dependent upon lifecycles or life-stages. It would also be advantageous if the resulting segments were differentiated on the basis of cognitive age, thus giving marketers even more insight into how to effectively target one or more of the segments derived from the model. On this basis:

P32: The older consumer market in the UK can be segmented using a variety of variables, including cognitive age.

2.10 CHAPTER SUMMARY

In a discussion of the different techniques available to measure self-perceived age, it was shown that there is a diverse range of methods from which to choose. These include several techniques that assess the age category that people identify with, including complex procedures such as the semantic age identity method and the role/identity measures. One-dimensional measures such as comparative age (non-numeric) and feel age (which elicits a numeric response) were also explained, while the multidimensional measures of personal and cognitive age were introduced.

A discussion of the ideology of age then highlighted the existence of a negative stereotype of the old in western society today. Modernisation theory and the historical perspective present possible explanations for the prevalence of a negative stereotype, whilst labelling theory and the social breakdown model illustrate the possible negative outcomes of stigmatisation of this status. A

substantial number of empirical studies then provided overwhelming support for the contention that the majority of people between the ages of 50 and 79 reject that they feel old, and noted a pattern whereby as a person's chronological age increases, so too does the age they believe marks the onset of old age. These findings led to the first propositions of this thesis.

The discussion then argued that negative stereotypes alone do not fully explain the paradox that younger people feel older while older people feel younger than their actual age, even in the absence of negative labels and stigmatised age categories. Thus, the review turned to examine those studies that have measured a whole range of variables in relation to self-perceived age.

In terms of socio-demographic variables, a discussion of gender and ageing highlighted the apparent double standard that exists in society, which puts women at a disadvantage to their male counterparts. Then, in the absence of a dominant gerontological theory of retirement, the three different perspectives of activity theory, disengagement theory, and continuity theory were presented. As to whether or not retirement results in an older self-perceived age, the literature was found to be inconclusive. Marital and family variables were then analysed, where it emerged that widowhood is unlikely to be associated with self-perceived age, but the relationship between other marital statuses and self-perceived age is less clear; not least because of inconsistencies in the way many researchers have classified different statuses. A small number of investigations suggest that the ages of children and the presence of grandchildren is related to self-perceived age, although the paucity of findings in this area points to the need for further research. The literature regarding the final demographic variable, socio-economic status, was found to be consistent, in that persons of higher SES tend to have younger self-perceived ages.

The chapter then focused on wider social issues and how these relate to self-perceived age. Types of activities comprised the first area of consideration, where the literature was found, on the whole, to be consistent in that there appears to be a significant and negative relationship between high levels of energetic activities and self-perceived age. An analysis of social relations then

demonstrated a great deal of inconsistency between self-perceived age studies. It was argued that this inconsistency might be due to the way social relations have been measured empirically, in that the quantity, rather than the quality, of interactions has been the focus of many self-perceived age studies. On this basis, the need for improved social relations indicators in future research was noted. The discussion then turned to social comparison theory, and noted that it may be valuable in advancing knowledge in this field, although it has to date not been measured in this way before.

The chapter then moved to a review of physiological ageing, and noted that an older self-perceived age is usually found to be associated with ill health. This is unsurprising, given that society appears to equate ill health with old age. A brief overview of some age-related physical changes that are not always a result of disease was then presented. It was argued that, with the exception of the look-age dimension of self-perceived age measures, research into the implications of physical age-related changes is sparse. Due to the potential importance of such physical changes, the look-age dimension of self-perceived age measures was then defended on the basis that the age a person looks incorporates a host of physical changes in appearance. Finally, the paucity of research into the link between exercise and self-perceived age was observed, despite the importance of exercise in the maintenance of physical health and fitness.

Consideration of psychological issues began with a discussion of age-related change in cognitive abilities, before considering the self-perceived age implications. It was noted that research has neglected the possible links between self-perceived age and a person's perception of their cognitive ability. The importance of subjective well being, to both gerontology and self-perceived age, was then discussed, before it was noted that self-perceived age is best viewed as a dimension of the self, and the literature reviewed suggested that a young self-perceived age is usually associated with higher self-esteem and self-confidence.

The final section of the literature review had two main aims. First, it identified and analysed those consumer behaviours that have been measured in relation to self-perceived age. These were minute in number in comparison to the range of

variables that have been considered in this context within the wider social sciences. Then, it analysed the literature regarding older consumers, noted its many unsupported assertions, and identified ambiguities and unanswered questions for which self-perceived age may hold the key. The aim, of course, is to fill these gaps with this research.

Consideration of those consumer traits classified along a cautiousness-venturesomeness continuum revealed that neither the self-perceived age literature nor the general literature pertaining to older consumers is consistent in portraying older adults as either one of these extremes, and results from self-perceived age studies reveal similar contradictory findings. This ambiguity therefore calls for more research. A second major gap to be identified was opinion leadership. However, due to the fact that opinion leadership is category-specific, and the fact that no research has yet considered self-perceived age in relation to market mavenism, this construct was identified as worthy of research.

The literature devoted to older consumers also suggested that older peoples' general values are different to their younger counterparts, as is the levels of materialism. Given the paucity of self-perceived age research into overall values, and the complete omission regarding materialism, these further areas were identified as clear gaps. Attitudes, too, is another area of neglect. The general literature reviewed suggested that older consumers are often portrayed as more difficult than younger adults, although no research into this area that also considers self-perceived age has ever before been conducted in the UK. Other specific attitudes that have been neglected by self-perceived age researchers but were identified from the consumer behaviour literature as being pertinent to older adults include attitudes toward senior promotions, nostalgia, credit and price, and healthy foods.

The literature review is now complete. A number of propositions have grown from the review, and these propositions now dictate the design of the primary research. It is therefore to consideration of the methodology and research methods that this thesis now turns.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter is concerned with research design. It begins with a discussion and critique of the main methodological stances, and while it concentrates mainly on positivism and interpretive approaches, included in the discussion is critical social theory, feminism, and a brief overview of postmodernism. An evaluation of the various research methods available is then presented, and throughout the discussion the predominantly quantitative approach taken to the research is justified. The chapter then turns to matters relating to the development and design of the research instrument, and the scales and questions included are discussed and justified in relation to each of the propositions in this thesis, before format and layout issues are discussed. The procedures followed for pilot testing the instrument, methods of data collection, and the incentives to promote response, are also explained, together with a review of the ethical principles and considerations that underpinned the research design. The chapter finishes with an in-depth discussion of the sampling methods used to obtain the data.

3.2 RESEARCH PHILOSOPHIES

3.2.1 Positivism

Epistemology, the branch of philosophy that deals with the theory of knowledge (Phillips, 1987), relates to questions regarding the appropriate foundations for the study of society (Bryman, 2002). At the heart of the philosophers' debate are different approaches to the observation, measurement, and understanding of

reality (Neuman, 2002). Positivism, the stance of the natural sciences, is the oldest philosophical approach and was founded by the 18th Century Scottish Enlightenment author David Hume (1711-1776), but it is generally the Frenchman August Comte (1798-1857) who is credited as its most influential disciple. Other significant contributors include the Briton John Stuart Mill (1806-1873) and the German Ernst Mach (1838-1916).

A central characteristic of the original positivist approach was that it adopted the empirical as supreme value, thus epistemologically it was based on inductive, rather than deductive knowledge. It is here that the original positivism deviates from a later form – neo-positivism – that favoured deductive logic or the application of theory to the concrete case (Delanty and Strydom, 2003). Nevertheless, neo-positivism (or logical positivism) still stressed the need to verify empirically (Phillips, 1987). Modern positivists now view social science as “a method for combining deductive logic with precise empirical observations of individual behaviour” (Neuman, 2000, p. 66). Clearly, with its emphasis on testable propositions that have been deduced from theory and other empirical evidence, the research philosophy taken here fits neatly into the positivist paradigm. Likewise, one of the major positivist beliefs of particular significance to this research is the concept of replication. From a positivist perspective, scientific knowledge accumulates over time because different researchers conduct independent tests to confirm causal laws (Neuman, 2000).

There are several further basic tenets of positivism outlined by a variety of authors (Delanty and Strydom, 2003; Easterby-Smith, Thorpe and Lowe, 1999; Neuman, 2000) to which this research conforms. The first of these is the notion of a unified science, or the nature of social reality, which is based on the assumption that there is a basic unity to human experience from which knowledge can be gained. While the central aim of this thesis leaves open the possibility that the UK will differ from the US with regard to cognitive age, the supposition that cognitive age does not apply in this country was never contemplated, despite this conviction lacking any empirical support at the project’s inception. Second is the concept of objectivism, where there is

separation of the subject and object of knowledge. Practically, this translates into the independence of the observer. The use of a self-completion questionnaire clearly distances the researcher from respondents, again conforming to the positivist stance.

Linked to the concept of objectivism are the notions of instrumentalism and value freedom. Positivism defines research as instrumental to the prediction of events for the purpose of manipulation and control, and believes that science is determined by objective criteria that are free from personal, ethical, moral, social, or cultural values. The major reason for adopting the chosen research methods stemmed simply from the central aims of the thesis. Indeed, as Byrman (2002) notes, problems determine methods. The vast majority of empirical studies contained in Appendix A use large scale surveys. However, in comparison to America, gerontological research in the UK is akin to a 'craft status' (Fennell, 1990, p. 74), and rarely is the large-scale survey found. As it was always the researchers' intention to make a serious contribution to knowledge with this project, a large-scale survey was the chosen method of data capture. In this sense, although manipulation and control were never under consideration, personal values have affected the chosen research methods, and thus there is a slight deviation from a true positivist ideal.

The twentieth century saw several major epistemic shifts that led to the demise of positivism and the introduction of new and alternative approaches (Delanty and Strydom, 2003). Just as positivism and its variants go under a variety of names (for example, logical empiricism, naturalism, behaviourism, objectivist), these alternative approaches are variously labelled interpretive, radical, subjectivist and humanistic. The term used to denote the major alternative research paradigm to positivism, however, is phenomenology.

3.2.2 Phenomenology

Ontology, the nature of existence or reality, is the starting point for the differences between positivism and phenomenology. While the former views the world and reality as objectively determined, the latter believes that reality is socially constructed and given meaning by people (Easterby-Smith, Thorpe and Lowe, 1999). From a social phenomenology perspective, human beings

“are conscious, or, more pointedly, ... their consciousness constitutes their world. This is not an immediate denial of realism since there may well be real objects out there. The point is that we can never finally separate out what really is real ... and what is merely real for us...consciousness in general constitutes the real world, the social world and our ordinary notions of ourselves” (Harris, 2003, p. 96).

The central belief and point to this thesis is that it is a person’s self-perceived age that is more pertinent than their actual age. Or, alternatively, it is a person’s *subjective* (cognitive) age that is more pertinent than their *objective* (chronological) age. Paradoxically, then, the phenomenological paradigm is applicable to this research, at least from an ontological perspective. Rather than this being incompatible, however, it has been noted many times (Easterby-Smith, Thorpe and Lowe, 1999; Morgan and Smircich, 1980) that even extremists do not hold consistently to one position or the other, and it is not possible to identify any one philosopher who subscribes to all aspects of one standpoint.

In many other ways, this research is inconsistent with the phenomenological perspective. Phenomenology, for example, criticises positivism for its perspective on the nature of human beings, as it believes that humans are social beings who create meaning. Thus, for the phenomenologist good evidence is based on the context of fluid social interactions and not the precise observations favoured by positivism (Neuman, 2000). Phenomenology is used to provide enlightening interpretations of behaviour (Goulding, 1999), rather than observations of patterns of behaviour.

3.2.3 Alternative Paradigms

While there are a great many sub-perspectives and alternatives to the major philosophies of positivism and phenomenology, there are only three that are of any direct relevance to this thesis. The first is Critical Social Science (CSS). In many ways, this perspective falls between the two extremes of positivism and phenomenology. For example, while it criticises positivism for its anithumanistic stance regarding its failure to deal with real people and their ability to feel and think, it also criticises phenomenology for being too subjective and relativist, and focuses on micro-level issues while ignoring the broader and long term. However, one important difference is that CSS is transformational: that is, it attempts to confront injustice and help people to change conditions for the better (Neuman, 2000). In this sense, CSS is close to Burrell and Morgan's (1979) dimension of radical change, which is addressed later. While this research does not claim to be truly transformational, it nevertheless does not defend the status quo, as publication and discussion has already gone beyond marketing forums.

Feminism is a further methodology which, as Neuman (2000) notes, is based on the premise that a woman's subjective experience differs from that of her male counterparts. Feminist writers have often criticised positivism as being consistent with a male point of view, for example Peace (2002) directly contrasts positivism with the bureaucratic organisation that is top-down, power concentrated, defensive, conservative, and input-oriented. The philosophy of feminism is worthy of note here because some feminist writings and theories have been utilised in this thesis (for example, the double standard addressed in gender issues). However, feminist researchers tend to interact and engage with their subjects (Haraway, 2003), and do 'not make use of conceptual devices for eliminating the active presence of subjects' (Smith, 2003, p.105) and thus methodologically this paradigm is not applicable to this research.

Finally, a brief comment goes to postmodernism, purely because one of the few published criticisms levied at the very meaning of cognitive age comes from Catterall and Maclaran's (2001) clearly post-modern perspective. While many

of the criticisms they make may seem to have some validity at first glance, closer inspection allows for disagreement with aspects of their argument. The first basic tenet to their argument is that cognitive age simply reflects the socially constructed nature of old age, and as these change cognitive age may cease to give insight into buying behaviours. It is argued here that the age identity scale is the one that better reflects the social construction of age. More importantly, a recent study (Alreck, 2000) revealed *no* significant change in age role norms and adherence to these since 1980, contradicting suggestions that cognitive age may no longer give useful insights into age-role self-concepts and associated behaviour. While it is possible that the social construction of old age in Anglophone society may eventually change, it is clear from Alrecks's (2000) work that this is unlikely in the foreseeable future. Of course, as postmodernists tend to doubt knowledge that is empirical and accumulated over time (Neuman, 2000), it is unsurprising to find such criticisms in their discourse. Their second major criticism against cognitive age is that it ignores the importance of the body in understanding self-concept, and notes that in the last two decades there have been significant developments in the emphasis on the body as part of self-concept. As the scale clearly considers the body when it asks a person to define the age they look, it can be argued that rather than ignoring the importance of the body, the cognitive age scale was ahead of its time in its recognition of the body as being an important facet of self-concept.

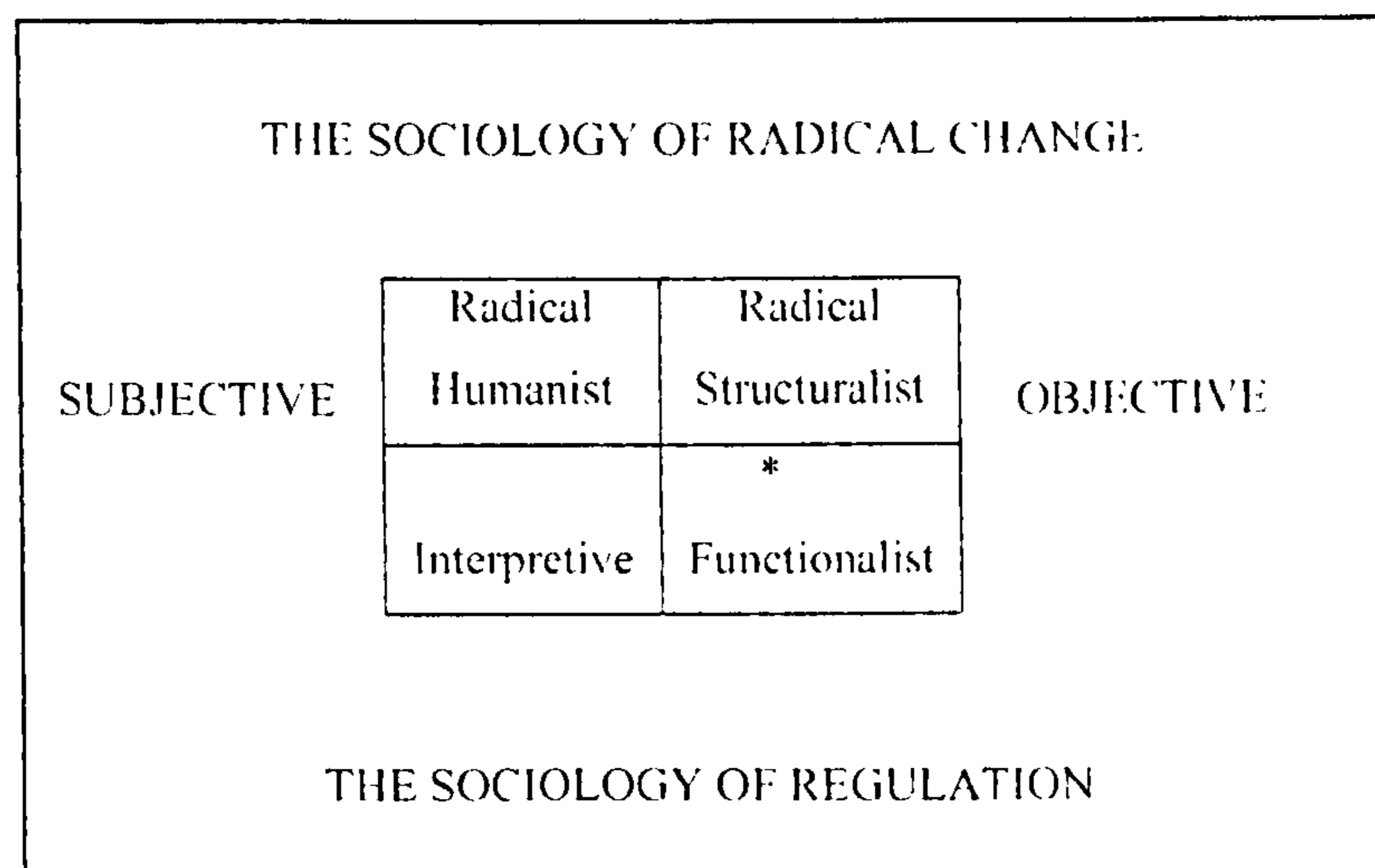
3.2.4 Mapping Against Paradigms

Burrell and Morgan (1979) developed a framework for the analysis of social theory within which, they suggest, all social theorists can be located. As such, it provides a useful tool for mapping the current study. The framework, shown in figure 3.1, has two dimensions and four paradigms. The star represents the mapping of the current study. The vertical axis represents the dimension of radical change – regulation, while the horizontal axis represents a continuum between the subjective and objective. The subsequent cells represent four very different paradigms in terms of meta-theoretical assumptions, and while each

shares some common features with its neighbours on a particular axis, Burrell and Morgan insist each is mutually exclusive.

The functionalist paradigm equates to positivism, while the interpretive could read phenomenologist. Both of the radical paradigms are concerned with social change, but while the humanist emphasises the importance of ‘overthrowing or transcending the limitations of existing social arrangements’ (p. 32), the radical structuralist is committed to emancipation and potentiality, and ‘seek to provide explanations of the basic interrelationships within the context of total social formations’ (p. 34). While the present study clearly fits into the functionalist/positivist paradigm, it is placed close to the radical structuralist given the discussions in the previous section of this thesis.

Figure 3.1: Mapping Against The Burrell and Morgan Framework



Source: Burrell and Morgan (1979, p. 22)

3.3 QUANTITATIVE AND QUALITATIVE METHODS

Bryman (2002) discusses the fact that much of the methodological literature equates particular research methods (i.e., techniques to gather data) to a

particular methodology (i.e., an epistemological position). However, he summarises writings that suggest that research problems determine the methods used, and thus the choice of research methods should be described as a technical rather than epistemological issue. Therefore, while the survey method has been equated with a positivist epistemology, the dichotomy of qualitative/quantitative research methods resulting from a particular epistemology is out of date (de Vaus, 2002).

Given the preceding discussion, and the fact that gerontology is studied using a wide variety of methods (Fairhurst, 1990; Jamieson, 2002) including documentary materials (Blaikie, 2002) and cultural products to make sense of the images of ageing (Hepworth, 2002), the researcher had a wide choice of techniques from which to choose. Kellaheer, Peace and Willcocks (1990) conceptualise these along a continuum ranging from experimental at one extreme to the natural setting at the other, as depicted in figure 3.2. Again the star denotes the placement of the current research.

Figure 3.2 A Continuum of Research Methods

Experimental Contrived Setting	Quantitative Survey *	Qualitative Survey	Natural Setting
Indicators = words expressing attitudes		Indicators = observed actions	

Source: Adapted from Kellaheer, Peace and Willcocks (1990)

There are a great number of qualitative techniques that are both interesting and enlightening and are hence particularly useful for studying ageing. Life history research, for example, yields information about a generation and cohort from an individual's perspective that can be rich in detail and forgotten aspects (Bornat, 2002); diary-based methods focus on everyday life and relates to questions of what happens in reality (Bytheway and Johnson, 2002); while observation and ethnographic studies, which could have been conducted in senior citizen's clubs

and day centres, is useful to explore issues related to social relations (Jamieson, 2002). Other mainstream qualitative techniques that could have been used include focus groups, which can be very useful in applied market research studies or as an exploratory tool in other types of qualitative research (Easterby-Smith, Thorpe and Lowe, 1991); and in-depth interviews that can give a deep understanding of the subject through immediate clarification of issues and instant feedback (Churchill, 1995). What these qualitative techniques have in common is their ability to ascertain and understand the reasoning behind a consumer's behaviour. However, while the data produced is rich in quality, it is primarily concerned with understanding and not measurement, and it is often impossible to generalise to the wider society because it is not typically large enough to be representative of the population (Chisnall, 2001).

In contrast, quantitative techniques involve a search for the significance of relative proportions, in order to identify what is more or less important, and to attempt to understand the ways these various constructs are interrelated and structured (Jankowicz, 1999). This explanation can be fully applied to the central aims and objectives of this thesis. The search for the significance of relative proportions relates to the need to ascertain the extent to which cognitive age differs from actual age within the population, both in terms of the numbers of people who feel different, and the extent of this age difference. The second part of Jankowicz's (1999) explanation, the identification of what is important and how these important factors are related, can be translated as the testing of the relationship of cognitive age to the various biological, social, psychological, and marketing variables that are under consideration in this thesis. Finally, the aim of segmenting the market demanded the use of a large representative sample. Clearly, then, the nature of the problem dictated the research method chosen.

Finally, consideration was given to triangulation, the definition of which has recently been extended to incorporate the use of multiple-methods. It has been suggested that researchers can place more confidence in their findings as a result of employing triangulation (Bryman, 1995; Milliken, 2002). However, this technique was not employed here for two major reasons. First, there was no

reason to use qualitative techniques as exploratory research to develop the instrument because the majority of the scales used are already in existence. Second, given that the literature review goes beyond the marketing arena, there is simply no room for qualitative data given the stringent word limit placed on PhD theses. However, the more unusual technique of using qualitative techniques to probe and better understand results from a large-scale quantitative study such as this has not been ruled out for post-doctoral research.

3.4 INSTRUMENT DEVELOPMENT

It was never the intention of this thesis to develop new measurement scales or tools. Rather, in order to address the research problem, choices from validated and well-established scales were made. Some of these tools have been previously used in self-perceived age research, but never utilised with British citizens. Other scales have never been used in a self-perceived age study, thus originality comes from the unique application of the two concepts. In some instances, the original measure has been included in its entirety. In others, the original items and/or the response (and therefore scoring) method has been modified. No suitable research instrument was identified for a relatively small number of propositions, thus questions were devised. For all cases, an explanation and justification is now provided for the ways in which questions and scales relating to the various propositions were selected. Table 3.1 provides a reminder of the propositions, and details the corresponding questions included in the instrument. Appendix B provides two copies of the instrument: the first was administered to respondents; the second shows question numbers (in red) for ease of cross-referencing, and indicates (blue asterisks) those items that were reverse scored.

Table 3.1: Propositions and Corresponding Questions

PROPOSITION	Question(s)	
P1	<i>The majority of people aged 50-75 will reject the status old.</i>	27
P2	<i>The majority of consumers aged 50-75 will have a self-perceived age that is several years younger than their actual age, and this discrepancy will increase with advancing chronological age.</i>	57-60 159
P3	<i>The older a person's chronological age, the older their self-perceived age is likely to be.</i>	As above
P4	<i>Gender is unlikely to be related to self-perceived age.</i>	158
P5	<i>Retirement per se is unlikely to be related to self-perceived age.</i>	162, 164-165
P6	<i>Persons with different marital status will have different self-perceived ages.</i>	160-161, 151
P7	<i>The ages of children and the presence and ages of grandchildren are related to self-perceived age.</i>	145-150
P8	<i>Persons with higher income are likely to have younger self-perceived ages than those with lower income.</i>	166
P9	<i>Persons with relatively younger self-perceived ages will participate in relatively energetic activities, while persons with older self-perceived ages will participate in more relatively sedentary activities.</i>	65-75
P10	<i>Self-perceived age is unrelated to measures of social relations.</i>	76, 155-157 152-154, 105-109
P11	<i>Self-perceived age will be associated with a measure of social comparison</i>	110-121
P12	<i>Respondent's who rate their health as good will have younger self-perceived ages than those who rate their health as poor.</i>	85-87
P13	<i>Physical manifestations of ageing are as salient as social and psychological variables for self-perceived age.</i>	Open (after 61)
P14	<i>Of all dimensions of self-perceived age, look-age will correspond most closely with chronological age.</i>	58, 159
P15	<i>People who partake in vigorous exercise on a regular basis will have younger feel, look, do, and interest ages than those who do not.</i>	75
P16	<i>Self-ratings of cognitive abilities will correlate with self-perceived age.</i>	82-84
P17	<i>Subjective well-being and self-perceived age are inversely related.</i>	88-97
P18	<i>Self-perceived age and self-esteem are inversely related.</i>	122-131
P19	<i>Self-perceived age and self-confidence are inversely related.</i>	132-135
P20	<i>Self-perceived age and public self-consciousness are inversely related</i>	98-104
P21	<i>Self-perceived age will correlate with a venturesome trait.</i>	1-3
P22	<i>Self-perceived age will correlate with market mavenism.</i>	4-9
P23	<i>The central value basis of older consumers will be related to their self-perceived age.</i>	136-144
P24	<i>Materialism will correlate negatively with self-perceived age.</i>	39-56
P25	<i>Consumers with older self-perceived ages will have different attitudes toward marketing and consumerism than their younger-feeling counterparts.</i>	26-38
P26	<i>Consumers with younger self-perceived ages will have different usage intentions toward age-based sales promotions than those who feel closer to their chronological age.</i>	62-64, & open
P27	<i>Attitudes toward the past will correlate with self-perceived age.</i>	18-25
P28	<i>Media usage will correlate with self-perceived age.</i>	65-72
P29	<i>Price consciousness will correlate with self-perceived age.</i>	10-13
P30	<i>Attitudes toward credit will correlate with self-perceived age.</i>	14-17
P31	<i>Self-perceived age will correlate with attitudes toward healthy eating.</i>	77-81
P32	<i>The older consumer market in the UK can be segmented using a variety of variables, including cognitive age</i>	

3.4.1 Self-Perceived Age Variables

Rejection of an old age status (P1) required inclusion of one of the methods of self-age categorisation, thus a choice of standard age identity question, the feeling old question, or the semantic age identification were available. On the basis that at least one measure of self-perceived age that has never been studied in Britain would be utilised, the feeling old question (studied by Thompson *et al.*, 1990), was dropped as an option. The semantic age identification measures were also rejected, on the basis that “the semantic differential requires complex analysis, is more difficult to administer and interpret ... [and crucially] may not be well suited for use in advertising applications” (Stephens, 1991, p. 44). Moreover, the standard age identity question has demonstrable construct validity, given that it is linked to the “theoretical perspectives of self-concept, requiring the respondent to reflexively examine the self as an object and involving comparisons of counter age-identities” (George, Mutran and Pennybacker, 1980, p. 297).

Although the original age identity scale provided a choice of five age categories, and several studies have maintained this number (for example, Shanas, 1950; Busse, Jeffers and Obrist, 1957) slight variations in the categories offered to respondents can be found. For example, the scale has been used with the original categories of young, middle aged, elderly, old (Bengston, Cuellar and Ragan, 1977; Ward, 1977); middle aged, old, elderly, aged (Carp, 1967; Carp and Carp, 1981); or middle aged, old, elderly (Blau, 1956, 1973; Bultena and Powers, 1978; Hansen and Yoshioka, 1962; Jyrkila, 1960, Keith, 1977; Kutner *et al.* 1956; Phillips, 1961, Taietz, 1976; Taves and Hansen, 1962).

In 1962, Jeffers, Eisdorfer and Busse suspected that for their subjects “there might be idiosyncratic differences in the use of terminology relating to advanced age” (p. 437). One hour after asking respondents to place themselves into an age category using the original age identity scale, their subjects were asked to arrange the categories in the order they felt depicted the stages of ageing. As only 26 per cent of respondents agreed fully with the order young, middle aged, elderly, old, aged, these authors concluded that this result

questioned the validity of the original scale, given the apparent idiosyncratic and perhaps regional differences attached to the meanings of the category labels.

However, it is noteworthy that 8 per cent of respondents in the Jeffers, Eisdorfer and Busse (1962) study disagreed with the placement of young as the first category, and middle aged as the next category. Consequently, for the vast majority of respondents, there was agreement that the terms old, aged, and elderly depict an older age category than that of middle age. Given that the majority of studies either use only three of the original categories, 'young, middle aged, old' (Breytspraak, 1984; Bloom, 1961; George, Mutran and Pennybacker, 1980; Matthews, 1979; Minnigerode, 1976; Puglisi and Jackson, 1978; Stephens, 1991; Tuckman and Lorge 1954) or collapse the responses old, aged, and elderly into the single category old (for example, Bengston, Cuellar and Ragan, 1977; Blau, 1956; Jyrkila, 1960; Kutner *et al.* 1956; Taietz, 1976; Taves and Hansen, 1962). Jeffers, Eisdorfer and Busse's advice regarding the need for 'a scaling device lacking in specific reference to such terms as elderly, old, aged' (p. 439) may be a moot point. However, it was decided that old/elderly comprise one category, at least for piloting. Thus, the standard age identity measure, with the three response categories young, middle-aged, old/elderly (question 61, coded 1,2,3) was included.

Chronological and Self-Perceived Age Differences (P2 and P3) required the inclusion of chronological age (measured in years, question 159), and a self-perceived age measure that elicits a numerical response. Thus, the choice was feel age, personal age, or cognitive age. As the cognitive age scale incorporates feel age, and was devised from the personal age measure, cognitive age was the preferred option (questions 57-60). Cognitive age is now the mainstream measure of self-perceived age in the marketing literature. As Stephens (1991) notes, it produces a more accurate estimate of self-perceived age than a single item measure, and has the important advantage in its ease of understanding and answering by older people, as well as ease of analysis and interpretation by the researcher.

The results of studies into the reliability and internal validity of the cognitive age measure provide evidence of convergent and discriminant validity (Van Auken, Barry and Anderson, 1993; Van Auken and Barry, 1995) while reliability measures conducted on American samples have demonstrated good internal stability (Barak and Rahtz, 1990; Barak and Schiffman, 1981). Wilkes' (1992) concerns over the lower reliability scores of the look component of cognitive age are noted and addressed in section 2.6.2 of this thesis, and, rather than eliminating the component, led to proposition 14.

Szmigin and Carrigan's (2000) UK study also reports reasonably high reliability of the cognitive age measure. However, the data in their study did not perform in a predictable way. Churchill (1979) asserts that in order to establish the construct validity of a measure, the researcher needs to determine whether the measure behaves as expected. American studies consistently find:

- The magnitude of the discrepancy between chronological and cognitive age increases with advancing age (see section 2.3.6).
- No gender differences in cognitive age (see section 2.4.2).

While Szmigin and Carrigan (*ibid*) report a correlation between cognitive and chronological age, the discrepancy between actual and cognitive age for people aged 61-65, 66-70, and 71-75, was 12.6, 6.3 and 21.5 years respectively. Clearly this is not the pattern found by an overwhelming number of American researchers. Likewise, it is not only surprising that Szmigin and Carrigan (*ibid*) found "the cognitive age differences between men and women were markedly different with men being cognitively older than women" (p. 519), but also that these authors go on to state that this difference "may be explained very simply" (p. 519). Even a cursory glance at the literature review pertaining to gender in this thesis reveals a complex paradigm.

These anomalies may be due to a number of factors. One possibility that cannot be ignored, however, is that the cognitive age measure is low in external validity: in other words, it does not apply to people in the UK. A body of

writing asserts that validity is a dynamic process that results from the accumulation of evidence over time (Wells, 1975; Neuman, 2000), and the aggregation of results (Peter, 1981). Indeed, Epstein (1980) argues that “there is no more fundamental requirement in science than that the replicability of findings be established” (p. 796). Clearly, the concept of cognitive age has been accepted into the mainstream consumer behaviour literature in America. However, before the concept can be used in this country with the same ease, it needs further investigation.

3.4.2 Socio-Demographic Variables

Gender (P4) merely required a straightforward question (question 158, coded male=1, female=2).

Retirement status (P5) offered three categories (question 162, working =1, housewife=2, retired=3). In addition, due to the questions raised by the literature regarding the inadequacy of many previous studies concerned with self-perceived age and retirement, questions relating to the length of retirement (question 164) and whether or not the retirement was voluntary (question 165) were included, the former order to ascertain whether or not the person retired earlier than the state retirement age (earlier=1, at retirement age=2, later=3) and the latter to establish whether or not the retirement was voluntary (yes=1, no=2). Hopefully, the inclusion of these questions will provide a richer understanding of the relationship between retirement and self-perceived age than is currently available.

Marital status (P6) included 4 response categories (question 160, married=1, single [never married]=2, divorced/separated=3, widowed=4). A question (no. 161) asked those who are not married whether or not they have a partner (yes=1, no=2). As in the case of retirement, these categories and the extra question should hopefully shed some light on the conflicting results available to date.

Progeny (P7) variables were measured using straightforward questions pertaining to the number and ages of children and grandchildren (nos. 145-150), together with a question on whether or not any offspring live in the same house as the respondent (no. 151, full nest =1, empty nest=2).

Socio-economic status (P8) was measured using income bands (question 166, coded 1-6), which is preferable to asking for a specific response (McDaniel and Gates, 1991). Income was used as the preferred measure of SES because analysis of the literature found it to be the best predictor of self-perceived age. Piloting, however, demonstrated the reluctance of some to reveal their income, so a further question on respondent's job was included in the final version (question 163).

3.4.3 Activities And Social Variables

Activities (P9) were measured in a number of ways. Questions relating to media usage (P28) were easily combined with questions on holidays and an open question on hobbies and interests. Thus, while questions 65-75 relate to proposition 9, some of these questions also relate to other propositions. Watching TV and reading are clearly sedentary activities. Activities were classified as energetic if they appeared in the list of 'active leisure pursuits' identified by Bernard (1985, p.55) in her monograph on the variety of national and local developments in the field of physical exercise, sport and active leisure for older people, or if it clearly causes a participant to 'work up a sweat or become winded' (p. 240) in line with Clark, Long and Schiffman's (1999) study of physical activities.

Social Relations (P10) were also measured in a number of ways. As discussed in section 6.3, social relations include organisational membership, loneliness, and interactions with family and friends. The need for improved social relations

indicators that are both subjective and objective was discussed. On this basis, questions 76 and 155-157 are objective measures of social interaction. Questions 152-154 are clearly subjective measures of satisfaction with the frequency of these meetings.

The 'Loneliness' measure (questions 105-107) is from Coleman (1987), a 3-item scale designed and validated as part of the multidisciplinary, longitudinal Southampton Ageing Study.

Finally, 2 AIO items (Cooper, 1984; Cooper and Marshall, 1984) were selected on the basis that these were: a) designed specifically for segmentation of the older consumer market, and b) have a sound theoretical basis, in that the first (question 108, 'I enjoy having people around') is based on activity theory, and reflects someone who enjoys being socially active, while the second (question 109, 'I would really rather watch a good TV programme than go out with others') is based on disengagement theory, and reflects the sentiments of someone who is content with non-social activities.

Social Comparison (P11) was measured using the ATSCI (Attention To Social Comparison Information) Scale (Lennox and Wolfe, 1984). Lennox and Wolfe explain the construct as the extent to which one is aware of the reactions of others to one's behaviour and is concerned about or sensitive to the nature of those reactions. These individuals care what other people think about them and look for clues as to the nature of others' reactions toward them.

This 13-item scale, included in its entirety for piloting, (questions 110-121), is usually scored from 0 (*always false*) to 5 (*always true*). Here, it was scored from 5 (*strongly agree*) to 1 (*strongly disagree*), so as to maintain (whenever possible) the same style throughout the questionnaire, in order to reduce confusion for respondents. However, no wording was altered. As 40 % of participants in the piloting process complained that a question was duplicated (items 4 and 11 of the original scale), item 11 was dropped in the final questionnaire.

Besides being used in psychology, the scale has been validated in a consumer behaviour context, when Bearden and Rose (1990) conducted a series of four studies that provide evidence of the measure's internal consistency, validity, and capability of mediating the relative effects of interpersonal considerations. This is the first known time that the scale has been used in a self-perceived age study.

3.4.4 Physical Variables

Health (P12) was measured using 3 questions (nos. 85-87), all of which are consistent with health measures used by the Office of Population Censuses and Surveys.

Several researchers have found a persistent, positive congruence between self-ratings of health and those made by a physician (La Rue *et al.*, 1979; Maddox and Douglas, 1973; Heyman and Jeffers, 1970; Suchman, Phillips and Streib, 1958). Moreover, there are indications that subjective health assessments consider family longevity and health history (Van Doorn, 1999). Likewise, self-assessed objective measures of health have been shown to correlate significantly with subjective measures (Ferraro, 1980; Fillenbaum, 1979; Markides and Martin, 1979; Rosencrantz and Pihlblad, 1970). Thus, there is a body of support for the contention that self-assessments of health are a valid and economical way of ascertaining the health status of individuals in social science research when medical examinations or long inventories containing a battery of objective health questions are not viable.

Physical ageing (P13) was measured by 2 open-ended questions (following q. 61). The proposition states that physical reminders will be at least as salient as social and psychological variables.

Exercise Levels (P15) were included in question 75, and a response was classified as vigorous if it met the criteria for energetic activities, as laid down in P9 above.

3.4.5 Psychological Variables

Self-Rated Cognitive Abilities (P16) were measured with 3-items (nos. 82-84) scored 1 (*strongly agree*) to 5 (*strongly disagree*). These items are additional to the open-ended questions (28 and 29), which may also elicit responses relating to cognitive abilities. Because of the relative neglect of this area in self-perceived age research (as discussed in section 8.2.3), no suitable scale was available, so, using The Cognitive Failures Questionnaire (Broadbent *et al.*, 1982) and Maylor's (1990, 1993, 1996) work on subjective memory performance as a starting point, these items were designed for this study.

Subjective Well-Being (P17) used Bradburn's (1969) Affect Balance Scale. Bradburn conceptualizes psychological well-being as avowed happiness, and views this as a function of two independent dimensions: positive and negative affect. An individual is high in subjective well-being in the degree to which he or she has an excess of positive over negative effect, and vice versa.

The construct is measured with 10 items, 5 measuring positive feelings (questions 88-92) and 5 measuring negative feelings (questions 93-97). Respondents are given a score of 1 for each 'yes' response, and the sum of these scores comprises the Positive and Negative Affect Scales (i.e., 0 to 5 for each scale). Each individual's score on the Negative affect Scale is then subtracted from their score on the Positive Affect Scale, leaving scores from - 5 to + 5. A constant of + 5 is then added to each score, giving an Affect Balance Scale with values of 0 to 10.

Unlike many other propositions, the choice of scales with which to measure subjective well-being was overwhelming. A number of reasons led to the selection of the Affect Balance Scale. First, it is time bounded, which is important given the empirical and methodological problems associated with other measures that dwell to varying extents on an individual's past life (Gubrium and Lynott, 1983). Second, it was one of only three recommended for use by Sauer and Warland (1982) after their comprehensive evaluation of 14 such instruments. What was most important, however, was George's (1981) in-depth analysis of the conceptual and methodological issues surrounding eight measures of subjective well-being commonly used in gerontological research. George evaluated each measure against eight psychometric criteria: Normative data, both population and subgroup norms; applicability to heterogeneous samples; quantification and discriminability; reliability; validity; scalability; sensitivity to change; and ease of administration. The Affect Balance Scale was the only measure to adequately meet all of the criteria.

Self-Esteem (P18) was measured with the Self-Esteem Scale (Rosenberg, 1965), which conceptualises self-esteem as self-worth, a feeling of self-acceptance (questions 122-131).

The scale comprises 10 items, and originally had 4 categories scored dichotomously (*strongly/agree, strongly/disagree*). A complex scoring system then yielded six scales and eventually a Guttman scale. However, gerontologists have used a variety of scoring systems with the scale, including a summed response that provides a self-esteem score between 4 and 40 (Ward, 1977). Here, 5 points were used, and a score between 10 and 50 provided an overall self-esteem score. In addition to maintaining a consistent scoring system throughout the questionnaire (where possible), the scoring system was modified in order to provide an 'uncertain' response category, which, according to Diamantopoulos and Schlegelmilch (1997) can reduce random error.

Here, again, the choice of scales was enormous. However, after a thorough review of twenty such instruments used in gerontological research, Breyspraak

and George (1979, 1982) concluded that, while no single instrument was superior to others, two “stand out as having profited from a substantial amount of attention to scale development and psychometric evaluation” (1979, p. 145). One of these comprised 100 items, and was therefore rejected: the other was Rosenberg’s Self-Esteem Scale.

Self-Confidence (P19) was measured using the Self-Confident scale (Wells and Tigert, 1971). This is a 4-item AIO (Activities, Interests and Opinions) scale. originally scored on a 6-point level of agreement. Again in order to maintain consistency throughout much of the questionnaire, a 5-point scoring system was utilised (*strongly agree*=5, *strongly disagree*=1), and summed to give an overall self-confident score between 4 and 20 (questions 132-135).

The scale is easy to administer and clearly has face validity. It has been used previously in self-perceived age research with older American respondents (Barak, 1998; Barak and Gould, 1985; Wilkes, 1992) with scoring systems that were modified from the original. These have ranged from 5-points (Barak, 1998) to 7-points (Wilkes, 1992) with no problems reported. This is the first known time the construct has been measured in a self-perceived age study in this country.

Public Self-Consciousness (P20) was measured using Fenigstein, Scheier and Buss’s (1975) self-consciousness scale, who defined the construct as “a general awareness of the self as a social object” (p. 523).

The original scale¹ comprises 7 items (questions 98-104), with a 4-point rating scale (extremely uncharacteristic to extremely characteristic). In this instance, two modifications were made. First, the scoring system was changed to 5-points (*strongly disagree* to *strongly agree*), for the same reasons as those provided for the modifications made to the scoring method of the self-esteem scale. This is

¹ These authors designed an overall self-consciousness scale, with 3 identified subscales. Public self-consciousness is one of the subscales, and is frequently used in research without the others.

consistent with the ways the scale has been used in the past in self-perceived age studies (e.g., Barak, 1998; Gould and Barak, 1988).

The original research provides evidence of the scales validity and reliability (Fenigstein, Scheier and Buss, 1975). Since then, the scale has been widely used, and further evidence can be found in a number of studies (for example, Bearden and Rose, 1990; Burnkrant and Page, 1982; Gould and Barak, 1988).

3.4.6 Consumer Behaviour Variables

Venturesomeness (P21) was measured using ‘New Brand Tryer’ a further AIO scale from Wells and Tigert (1971). It was chosen on the basis that it epitomises the essence of ‘venturesomeness’ defined as a measure of a consumer’s willingness to accept the risk of purchasing innovative products, (Schiffman and Kanuk, 1999). In three items, the construct measures curiosity with new brands, innovation, and a liking for novelty (questions 1-3). The changes made to the scoring system of the Self-Confident scale (P19), i.e. a change to a 5-point scale, were made for the same reasons as those previously outlined.

Market Maven (P22) was measured in its entirety, using the classic ‘Market Maven: Propensity To Provide Marketplace And Shopping Information’ scale designed by Feick and Price (1987). These authors define mavens as “individuals who have information about many kinds of products, places to shop, and other facets of markets, and initiate discussions with consumers and respond to requests from consumers for market information” (p. 85). The scale comprises questions 4-9.

The only change made to the original scoring system was the use of a 5-point (as opposed to 7) scale, again for reasons of consistency. Responses are coded (*strongly disagree*=1, *strongly agree* = 5; *not very well at all* = 1, *very well* =5) and summed to give an overall score ranging from 6 to 30 (the original ranged

from 6 to 42), with a higher score indicating a greater propensity to provide marketplace information.

Feick and Price (1987) originally provided substantial evidence for the reliability and validity of the scale, and a body of literature provides further evidence (for example, Elliott and Warfield, 1993; Price, Feick and Guskey-Federouch, 1988).

Values (P23) were measured using Kahle's (1983) List Of Values (LOV), defined as enduring beliefs that individuals hold about specific modes of conduct or end states (Batra, Homer and Kahle, 2001), and developed from a theoretical base most closely tied to social adaptation theory. The values relate to the major roles in life, such as marriage, parenting, work, leisure, consumption (Kahle, Beatty and Homer, 1986).

LOV began as a list of 9 values, but few respondents selected *excitement* so this value became incorporated into *fun and enjoyment of life* (Kahle, Poulos and Sukhdial, 1988), leaving a list of 8 values (questions 136-144). The scoring system used here requires respondents to rate the values on a 9-point scale of importance. Respondents are then asked to circle the one value that is most important to them (question 144). The scoring system selected is one of a number of alternatives that exist, including asking subjects to identify their two most important values, or to rank the values, or evaluate them through paired comparison (Kahle and Kennedy, 1988; Kennedy, Best and Kahle, 1988).

While the majority of research using LOV has been conducted in the United States, 122 respondents in one sample were from other countries (Kahle, Beatty and Homer, 1986), providing support for the utility of LOV across cultures (Beatty, Homer and Kahle, 1988). Furthermore, a body of research provides evidence of the nomological (Kahle and Kennedy, 1988) and predictive (Kennedy, Best and Kahle, 1988) validity of LOV.

Materialism (P24) was measured using Richins and Dawson's (1992) Materialism scale. The authors conceptualise materialism as "a value that guides people's choices and conduct in a variety of situations, including, but not limited to, consumption arenas" (p. 307).

The scale contains 18 items and three factors:

- *Success*, possessions as an indicator of success in life (questions 39-44)
- *Centrality*, the importance of acquisition and possession (questions 45-51)
- *Happiness*, the perception that possessions are needed for happiness (questions 52-56).

The scale uses a 5-point Likert-type response format, thus no modifications to the original scale were needed.

Richins and Dawson (1992) report evidence of reliability and numerous tests of validity, including correlations with a social desirability measure, which indicated that social desirability bias is not a problem. The scale is now widely used in consumer behaviour research (Burroughs and Rindfleisch, 2002; Micken and Roberts, 1999) and a great deal of evidence lends support to the scale's reliability, validity (for example, Richins, 1994; Rindfleisch, Burroughs and Denton, 1997), and superiority to Belk's (1984) materialism scales (Ellis, 1992; Micken, 1995), which was the obvious alternative.

Attitudes Toward Marketing And Consumerism (P25) was measured using 3 of the 7 subscales contained in Barksdale and Darden's (1972) instrument to measure 'Consumer Attitudes Toward Marketing And Consumerism'. The first subscale (questions 26-30) is concerned with the philosophy of business; the second (questions 31-34) with advertising; and the third (questions 35-38) comprise a battery of items relating to other marketing activities including distribution, repair and maintenance, guarantees, and sales promotions. The latter subscale originally comprised 5 questions, but the question "The American Marketing system operates more efficiently than those of other countries" was obviously dropped for use in the UK.

The original scale was operationalised using a 5-point response from *strongly agree* to *strongly disagree*, thus this format remained unchanged. Some studies using this instrument report descriptive statistics based on the percentage agreement/disagreement levels for each item (e.g., Barksdale *et al.*, 1982; LaBarbera and Lazer, 1980). Here, the scoring system used by Darley and Johnson (1993) was used, thus items were scored from 5 (*strongly agree*) to 1 (*strongly disagree*). Items were then summed to produce an overall score for each category, with a higher score reflecting a more positive attitude toward marketing.

The scale has been used in a number of countries, including England (Barksdale, *et al.*, 1982), and Varadarajan, Bharadwaj and Thirunarayana (1994) provide evidence of the survey's reliability and validity. Moreover, the scale was attractive because the original study (Barksdale and Darden, 1972) found that while most of the attitudes expressed were independent of socio-demographic characteristics, the exception was age, where a number of differences were found.

Usage Intentions Toward Age-Based Sales Promotions (P26) was measured by questions on actual usage (question 62), interest in owning an age-based discount card (question 63), and usage likelihood (question 64). To better understand the underlying reasons for responses, an open-ended question asking respondents to explain their answers was included. As no existing scale was available, it was necessary to construct these questions. They are, however, similar to those asked by Tepper (1994) in her study of 'senior discount usage intention' (p. 513). As Samli (1987) notes, sometimes marketers must depend on behavioural intentions, after all, the marketing professional deals with the individual's perception of reality rather than some measure of objective reality. This observation is particularly true for this thesis.

5-point scales were used to measure actual usage (*as much as possible*=5, *never*=1), interest (*extremely interested*=5, *not at all interested*=1), and usage intention (*definitely yes*=5, *definitely not*=1).

Attitudes Toward The Past (P27) were measured using Holbrook's (1993) Nostalgia Scale. The construct "refers to a longing for the past, a yearning for yesterday, or a fondness for possessions and activities associated with days of yore" (p. 245).

The only change made to the original 8-item nostalgia scale was from a 9-point to a 5-point Likert-type scale that ranged from *strongly agree* (5) to *strongly disagree* (1). Consistent with the original scale, scores were summed to provide an overall nostalgia score. The scale comprises questions 18-25.

The scale was chosen on the basis that it is the most widely used measure of how consumers react to nostalgia (Rindfleisch and Sprott, 2000), while evidence suggests that an individual's propensity toward nostalgia is independent of age (Holbrook, 1993). Moreover, the original study reports satisfactory reliability (Holbrook, 1993), while indications of strong convergent (Schindler and Holbrook, 2000) and discriminant (Rindfleisch, Freeman and Burroughs, 2000) validity are available.

Media Usage (P28) was measured with a series of questions (65-72) to determine television, newspaper, radio, magazine, and book usage. The questions are consistent with those asked by Stephens (1981) and Burnett (1991) in their studies of media use by older people. A question on internet usage (question 72) is consistent with Cleaver's (1999) contention that older people have discovered the internet.

Price Consciousness (P29) was measured with the 'Price Conscious' scale (Wells and Tigert, 1971). This is a 4-item AIO scale, and the same scoring modifications made to the previous AIO scales were made (see P19 and P21 above). Questions 10-13 comprise the price consciousness scale.

Attitudes Toward Credit (P30) were also measured with a Wells and Tigert (1971) AIO scale entitled ‘Credit User’(questions 14-17).

Attitudes Toward Healthy Eating (P31) were measured with 5-items (questions 77-81) taken from Whetton’s (1990) definition of a ‘Healthy Foodie’ (*sic*). The only item wording that was altered slightly was item 5 (question 81) which in its original form measured agreement with ‘taking good care of family with e.g. plenty of fresh fruit and vegetables’. In order to include all respondents (empty nesters, etc.) the item was reworded to read ‘I eat plenty of fresh fruit and vegetables’. Items were scored from *strongly agree* (5) to *strongly disagree* (1) and summed to give an overall measure of ‘healthy foodie’ ranging from 5 to 25.

3.5 QUESTIONNAIRE FORMAT

The multi-item measures utilised here all comprise Likert scales. This response format was chosen because it is quick and easy to administer, and respondents tend to find it easy to use (McDaniel and Gates, 1991), which of course is paramount in a self-administered questionnaire (Webb, 2002). Some items within the scales are reverse scored as this can avoid the problem of the response set, a potential danger when using Likert scales (Neuman, 2000).

Five response categories were chosen (with the exception of LOV and the Affect Balance Scale, which were left in their original format) because, as Nunnally (1978) states, reliability is increased when the number of steps increases from two, “but levels off at about 7” (p. 521). Seven response categories would have almost certainly resulted in the need to collapse categories so as to avoid minimum cell counts in data analysis, thus 5 categories were preferred. Moreover, 5-point scales are in most common use (Wolfe, 2002). An odd number was also chosen because without a neutral point

respondents who really do not have a strong opinion are forced to give either a negative or positive opinion, which can create ill will from a respondent, or result in inaccurate data (McDaniel and Gates, 1991). Additionally, Sudman and Bradburn (1986) suggest the inclusion of a middle alternative does not affect the ratio of 'pro' to 'con' responses. In order to avoid ambiguity as to what the middle choice means to respondents (Black, 1999) the middle choice was labelled 'uncertain'. While numbers have been assigned to each response category, these are of course ordinal. However, scoring the responses and summing scores gains a more precise measure of a person's opinion than do single item responses alone (Neuman, 2000).

Whilst the majority of questions are closed, a number of open-ended questions have been incorporated. The advantages of open-ended format are considerable, for example they allow and encourage respondents to give their opinions fully and with as much nuance as they are capable of (Dillman, 1991).

The sequencing and layout of the questionnaire follows well-known guidelines outlined by many authors (for example, Fowler, 1995; McDaniel and Gates, 1991; Webb, 2002; Wolfe, 2002) in that it begins with questions that (hopefully) engage interest but are not intricate or complex. Those questions that are more difficult and have the potential to induce anxiety (for example, Self-Esteem Scale, Self-Confidence Scale) are left until the main body, while potentially intrusive questions (such as income) are left until the end. A grouping technique has been used throughout, in order to minimise confusion. Thus, for example 'shopping questions' (new brand tryer, health foodie, credit user, market maven) appear together, as do those relating to age, and those relating to the self (self-esteem, self-confidence, self-consciousness).

Jenkins and Dillman (2002) point out that in comparison to the large body of research pertaining to a 'don't know' category with use in Likert scales, there is a dearth of information for the multitude of decisions that face self-administered questionnaire designers and note that understanding of self-administered questionnaire design is still in its infancy. Questionnaire length has been found to be a contributor to participant burden in some studies (Sharp and Frankel,

2002) but Bogen's (2002) major review of the literature pertaining to questionnaire length concluded that results have been so mixed 'that it is not clear where the length limits are' (p. 246). While the instrument contains a relatively large number of questions, efforts were made to ensure it was user friendly. No print is smaller than 12 font, and gridlines guide respondents to the response boxes. The lengthy agree/disagree scales are interspersed with questions of other types, so as to eliminate fatigue and add interest.

3.6 PILOT TESTING

The questionnaire was first pilot tested among the supervisory team, and then, as recommended by Diamantopoulos, Reynolds and Schlegelmilch (1994) to colleagues not involved directly with the design of the instrument. After several iterations, the questionnaire was piloted to 10 members of the population, which is considered a sufficient number for pilot testing such an instrument (Fink, 1995b) using the debriefing method (Webb, 2002). This entailed the researcher delivering the questionnaire to respondents, and explaining that this was a pre-testing exercise, and therefore in addition to completing the questionnaire they were to be critical and note any ambiguities, layout or order issues, or any other improvements they wished to suggest (Fowler, 1993). They were also asked to note the length of time taken to complete the questionnaire. Personal interviews then took place to debrief respondents, as recommended by several authors (Boyd, Westfell and Stasch, 1989; De Maio, Rothgeb and Hess, 2002; Peterson, 1988). The 10 members of the pre-test sample were representative of the final sample, and included extreme respondents (Hunt, Sparkman and Wilcox, 1982; Webb, 2002) in terms of age boundaries.

As a result of the exercise, several amendments were made: Appendix C contains the first draft and a copy of the instrument that was tested on respondents. It can be seen that several amendments in terms of structure and layout were made. Additionally, 40% of those who participated in the pilot exercise noted that items 4 and 11 of the Attention to Social Comparison

Information scale (Lennox and Wolfe, 1984) were duplicated, and one was removed. Feedback also resulted in the incorporation of a question pertaining to a respondent's job. This allows for calculation of SES, and while the income question remains, the addition of the new question will help overcome any problems with measurement of income. As Moore, Stinson and Welniak (2002) note, these include lack of knowledge, misunderstanding and other definitional issues, recall problems and confusion, and sensitivity.

3.7 INCENTIVES TO PROMOTE RESPONSE

While a major advantage of a self-administered survey over other methods is that the influences of the interviewer on the actions of the sample persons are not present (Churchill, 1991; Groves, Cialdini and Couper, 2002), there are several reasons that suggest the relative disadvantage of such a survey is the difficulty of achieving a high response rate. First, response rates to surveys in Britain are in decline. Smith (1995) reports that while the response rates for the General Household Survey have remained constant between 1971 and 1992, the National Readership Surveys 1983-1993 and the British Social Attitude Surveys 1960-1990 have been declining. Both non-response and refusals have increased. Second, age may be a factor. Non-response for older people will include reasons of disengagement, impaired energy levels and particular impairments (Peace, 2002), and Goyder (2002) suggests that age often correlates negatively with the probability of response, at least in face-to-face and telephone interviews, although evidence with regard to mail questionnaires is ambiguous.

Nevertheless, this evidence suggests that the age of the target sample will not automatically guarantee a high response rate. Third, mail or telephone interviews result in a lower response than comparable face-to-face surveys (Hox and Leeuw, 2002). Thus, as Heberlein and Baumgartner (2002) note, unlike the interview, which has the power of a face-to-face personal contact to stimulate response, the mailed questionnaire must rely on other techniques to assure

response. Groves, Singer and Corning (2000) propose a Leverage-Saliency Theory of Survey Participation, which posits that different survey design attributes will have different leverages on the cooperation decision for different persons. Thus, for example, while some people may be swayed by incentives, others will be affected by interest in the topic, or some by academic as opposed to commercial surveys.

Because increasing response rate is important to reduce non-response bias (Braverman and Slater, 1996; Dillman, 1991; Fink and Kosecoff, 1998; Groves, 2002), and because pre-paid envelopes and other incentives have substantial positive effects on mail survey return rates (Church, 2002; Clark and Kaminski, 1990; Hansen, 1980), several techniques were used. Packs, each comprising a questionnaire, a covering letter, a pre-paid envelope, and a chocolate biscuit were made up using brown A4 envelopes. In addition to the chocolate biscuit, a prize draw for £200 Marks and Spencer's vouchers was offered. In order to use as many different leverages as possible, the covering letter (see Appendix D) explained that this was an academic, as opposed to a commercial, survey and gave assurance of confidentiality and anonymity. The latter is important as it can increase response rates (Futrell and Hise, 1982) and encourage truthfulness (Jobber, 1985), in addition to fulfilling ethical responsibilities.

3.8 ETHICAL CONSIDERATIONS

Table 3.2 summarises the basic ethical principles and their corresponding applications that were considered in the design of this research. They are based on several codes of practice and guidelines (Liverpool John Moores Research and Graduate School Code of Practice; British Psychological Society Code of Practice; British Sociological Association Ethics Guidelines; British Social Research Association; The Belmont Report).

Table 3.2: Ethical Principles and Applications

Ethical Principle	Underlying Meaning	Application
Respect For Persons	Voluntary Participation	Conditions free of coercion and undue influence
	Informed Consent	Adequate information provision
	Protection of Privacy	Confidentiality and anonymity
	Protection Of Vulnerable	Careful selection of subjects
Beneficence	Do No Harm	Consider intrusion Risk/benefits assessment
	Maximise Possible Benefits	Use of research findings
Justice	Individual justice	Fair treatment between subjects
	Social justice	Consider burden of participation

Sources: Liverpool John Moores Research and Graduate School Code of Practice, British Psychological Society Code of Practice; British Sociological Association Ethics Guidelines; British Social Research Association; The Belmont Report

3.8.1 Respect for Persons

The principle of respect for persons translates into several specific meanings and corresponding applications. First, voluntary participation was ensured because the self-complete nature of the survey meant prospective respondents were not coerced or unduly influenced in any way. A chocolate biscuit was given to everyone who accepted a questionnaire, and as such the reward was not dependent upon participation, and the prize draw was purely optional.

Second, while adequate information provision is important to ensure informed consent, a problem that can arise from this particular ethical guideline is if the provision of information about some aspect of the research is likely to impair its validity (Belmont Report, 1979). The covering letter did not stress the importance of the age dimensions to participants, in a deliberate attempt to avoid undue emphasis on this aspect. However, it is not felt that this breaks any ethical code, because, as Butler (1990) explains, informed consent does not mean respondents have to be swamped with minute details. Likewise, comprehension is important to ensure informed consent, and care was taken to avoid jargon and make the covering letter as participant friendly as possible

The nature of self-complete questionnaires overcame the potential problem of too little time for comprehension of information in order to make an informed choice regarding the decision to participate in the research or not.

The third point – protection of privacy – was given in assurance of confidentiality and anonymity in the covering letter. As Gilhooly (2002) stresses, a questionnaire that is numbered, where the number is attached to a name, is not anonymous. However, the only possible breach of anonymity is the fact that some respondents chose to leave their telephone number in order to enter the prize draw. However, all these telephone numbers have been removed from the questionnaires, and there is no way of linking the telephone numbers to the completed questionnaires. A small number of respondents wrote their names, addresses and/or telephone numbers on the questionnaires, and these were removed when they were received.

Finally, researchers have a duty to protect those with diminished autonomy – for example children or the incapacitated. For this reason, nursing and residential homes for the elderly were avoided.

3.8.2 Beneficence

The ethical principle of beneficence translates into the obligation to do no harm, and do some good. Intrusive research is not limited to the physical, but includes consideration of the provocation of anxiety, embarrassment or some other form of anguish (Butler, 1990). For this reason, as explained in the previous chapter, careful consideration was given to the selection of scales that were designed for use with older subjects and/or have been extensively validated. The completed questionnaire also went before the University's Ethics Committee for careful scrutiny. As Homan (1991) notes, the publication and impact of the research also needs to be considered. Indeed, while it is often argued that older subjects should be treated the same way as other adults (Gilhooly, 2002) and to give special ethical consideration to older people as research subjects is ageist

(Butler, 1990), others argue that the results of research into older people should be used to bring about social change (Nolan and Cooke, 2002), and thus dissemination of results for contribution to policy processes must be a serious consideration (Osborne and Willcocks, 1990). Already, the results of the foundation study of this thesis have been published in a gerontological journal aimed at policy makers and practitioners (see appendix E), while the researcher has also been interviewed by the national press and BBC radio. Dissemination of information has therefore already gone beyond business and academic journals.

3.8.3 Justice

As the Belmont Report specifies, the principle of justice incorporates individual justice and social justice. The former refers to fair treatment between subjects, in that the same benefits were offered to all participants. Social justice requires that consideration be given to the 'burden of participation' that often falls on certain groups of people in society, such as ethnic minorities, the poor, or persons confined to institutions. Again, the omission of the institutionalised from the sampling method ensured that this principle was complied with.

3.9 SAMPLING

As Fink (1995a) notes, the best sample is representative, and achievement of this in terms of age distribution was the ultimate aim. However, no practical sampling frame which details all people over 50 in the UK is readily available. Fennell (1990), for example, bemoans the fact that lists that might be ideal for use as a sampling frame, such as people receiving state pensions, doctor's patient lists, electoral rolls that identify older people as eligible for jury service, are closed to researchers. Thus, as Saunders, Lewis and Thornhill (2000) note, quota sampling may be the only viable technique when a usable sampling frame

is not available. Consequently, several non-probability sampling techniques, including cluster and snowballing, were utilised. The researcher used her judgment in all cases, so as to include people of different ages, gender, and socio-economic backgrounds. Initially, 2000 questionnaires were distributed in the following ways:

- Students were asked to take questionnaire packs to any family or friends aged 50 or over.
- The researcher approached her own family, friends, and colleagues to distribute them to anyone they knew over 50.
- The researcher and a member of the supervisory team targeted Llandudno on a sunny autumn day, and distributed them to people who looked over 50 on the proms and in cafes.
- Several different clubs and groups were targeted, with the researcher again using judgment to ensure a different type of person in each club. These comprised 50 questionnaires to each of the following groups: a Union of Catholic Mother's group, a pensioner's club, an over 50's club, a social club, a workingmen's club, a retired professional's group, and a rambling club.
- Several questionnaires were distributed at the Active Life Centre, a drop-in establishment run by Age Concern.
- In order to balance the above (likely active) respondents, 250 questionnaires were distributed among 5 different sheltered retirement blocks.
- 250 were posted through the letterboxes of bungalows.

This led to the return of 754 questionnaires, a response rate of 37.7%. Once 600 usable questionnaires had been received, age quotas were employed. This meant that questionnaires received from people in the appropriate age bands, which were usable, were not included in the sample once the quotas for the individual 5-year age bands had been reached. Eventually, a sample that is representative in terms of the age distribution of the UK population aged 50-79 was achieved.

Thus, while the use of probability sampling methods were impossible, by using a statistically representative sample on the basis of the all-important variable of age, selection bias was minimised (Fink, 1995a). Nevertheless, as Fowler (1993) notes, there is no statistical basis for claiming the sample is representative of the population because the sampling process was based on non-probability techniques. That said, even in random probability samples 'representativeness' is questionable because of non-response (van der Zouwen and de Leeuw, 2002). Non-response in a survey of this kind was to be expected, given the trend toward increased non-response outlined earlier, and the lower response rates experienced with such surveys. Moreover, while Smith (2002) acknowledges that non-response can seriously bias survey estimates and distort inferences, after examining the various methods used to estimate non-response bias he concluded that 'there is no simple, general, accurate, way of measuring non-response bias' (p.122).

While quota sampling has been regarded as unacceptable for most purposes in the US since the 1950s, it is quite acceptable and widely used in the UK and most of Europe (Taylor, Harris and Associates, 1995). Corlett (1996) cites evidence to suggest that a quota sample is about equally likely to give more accurate or less accurate estimates as a random sample of the same size. Moreover, Marsh and Scarbrough (2002) identified nine differences between quota and random samples often cited in the literature to see if they were substantiated in a contemporary British survey. They found that while a quota sample may ignore the very extremes of income, criticisms against quota samples on the basis of bias toward the accessible, and against small households, employed persons, low status individuals, manufacturing workers and the less educated were uncorroborated. Indeed, they confirmed that random samples are more biased against men than quota samples, and found that their quota sample was not biased against people of low status, the less educated or in favour of the better informed. In other words, the quota sample did not consist unduly of people with the social characteristics of groups who are traditionally more cooperative or better informed. Further, practical experience demonstrates that quota samples often produce similar results to probability samples (Rothman and Mitchell, 2002). In Britain, both the NOP and Harris (from 1969)

used probability samples for most of their opinion surveys until the mid 1970s. However, because on average their results were slightly less accurate in predicting elections than the quota samples, and the fieldwork costs were much higher, both went back to quota sampling (Taylor, Harris and Associates, 1995).

3.10 CHAPTER SUMMARY

This chapter began by discussing the major research philosophies of positivism and phenomenology. It noted that the research stance taken here is applicable to many of the basic tenets of positivism, although the notion of value freedom may deviate from a truly positivist perspective. Paradoxically, however, it was noted that the very core of the thesis – the belief in the importance of cognitive age – is perhaps more appropriate to phenomenology from an ontological perspective, given its emphasis on the subjective rather than objective.

Nevertheless, the use of observation to test deduced propositions empirically, places this research firmly into the positivist paradigm.

The chapter then moved to a brief overview of critical social theory, because of the importance it places on change. This was contrasted with positivism, which tends to defend the status quo. Feminism was also noted, as although it is not applicable methodologically, some feminist writings have been useful in discussing gender issues in this thesis. Finally, post-modernism was mentioned briefly purely on the basis that one of the few criticisms against the concept of cognitive age comes from a post-modern perspective. After consideration of these different philosophical paradigms, the current study was mapped using a framework developed for the analysis of social theory. The current study was placed into the positivist/functional paradigm, with its emphasis on objective measurement, but close to the radical structuralist given the author's unwillingness to defend the status quo.

The chapter then noted that a particular methodology does not necessarily equate to a particular set of techniques to gather data, and proceeded with a discussion of the various methods from which a choice could be made, particularly when studying ageing. It was argued that because of the central aims and objectives of the thesis, a quantitative method, that of a large-scale survey, was chosen. An in-depth explanation of the development of the research instrument then followed, which began by taking each proposition in turn and explaining and justifying the scale(s) and questions used to investigate these propositions. Thus, constructs were defined, and evidence of the scales' reliability and validity was presented.

The chapter then explained and justified the remaining research methods used in the data collecting process, including pilot testing and the debriefing of volunteers. Noting that survey response rates are declining in the UK, and citing evidence to suggest that a high response rate may be difficult when using older subjects and a mail questionnaire, a description of the incentives that were used to promote response followed. Then, based on several different ethical codes of practice, discussion turned to the ethical considerations that were made when designing the research. The chapter finished with an explanation of the sampling techniques used to collect the data, and cited both anecdotal and empirical evidence to suggest that quota sampling is as effective as random sampling. Thus, the methodology and research methods issues are complete, and the thesis now moves to the next major chapter: data analysis.

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter presents the analyses of the primary data, and once the characteristics of the sample are reviewed, subsequent results are structured around the research propositions, with multivariate analyses corresponding to specific elements of the research questions. The purpose of the chapter is simply to present the results, and as such it does not discuss the findings in any depth, either in relation to existing literature or in terms of any implications of the findings, as these are addressed fully in chapter 5 of this thesis.

All the analyses were conducted using SPSS for Windows, version 11. As suggested by Coolican (1990, p. 174) the significance of test results, based on the p probability level, is presented at three levels of confidence:

1. Significant: $0.05 > p > 0.01$
2. Highly significant: $0.01 > p > 0.001$
3. Very highly significant: $0.001 > p$

Unless stated otherwise, all probabilities are based on two-tailed tests.

4.2 PROFILE OF RESPONDENTS

4.2.1 Age

The techniques used to gather the data (explained in the previous section of this thesis) resulted in a usable sample size of 650, whose ages ranged from 50 to 79 years (mean age 62.40, s.d. 8.4). The quota sampling technique resulted in the sample being representative of the UK population in terms of 5-year age bands, as shown in table 4.1 below.

Table 4.1 Breakdown of Ages of Sample Compared to Census

Age	Sample		UK Census	
	n	Percent	n (000s)	Percent
50-54	144	22.2	3847.2	22.2
55-59	137	21.1	3653.7	21.1
60-64	109	16.8	2888.5	16.7
65-69	99	15.2	2621.4	15.2
70-74	88	13.5	2343.1	13.5
75-79	73	11.2	1941.3	11.2
Total	650	100.0	17295.2	99.9

Table 4.2 below details the mean ages of the sample by age decade. Every age from 50 to 79 years is included in the sample.

Table 4.2 Sample Characteristics by Age Decade

Age	n	Mean Age (years)	Minimum	Maximum	S.D.
50-59	281	54.30	50	59	2.82
60-69	208	64.42	60	69	2.82
70-79	161	73.95	70	79	2.61
Total	650	62.40	50	79	8.396

4.2.2 Gender

The sample comprises 228 (35.1%) males and 422 (64.9%) females. As table 4.3 illustrates, the mean ages are very similar, and an unrelated *t*-test confirmed that the mean chronological age does not differ between gender.

Table 4.3 Sample Characteristics by Gender

Gender	n	Percent	Mean Age	Std. Deviation
Male	228	35.1	62.81	8.34
Female	422	64.9	62.18	8.43
Total	650	100.0	62.40	8.40

4.2.3 Marital Status

As can be seen from table 4.4 below, the majority (69%) of respondents are married, while a substantial number (16.5%) are widowed. Only 1 in 10 are separated/divorced and even less (4.5%) have never married. Unsurprisingly, the percentage of persons still married decreased with age, while there is an increase in those who are widowed: almost 1 in 4 of respondents age 70-79 are widowed, compared to only 5% of those in their 50s.

Table 4.4 Sample Characteristics by Marital Status & Age Decade

Marital Status	Age Decades (percent)			Total
	50-59	60-69	70-79	
Married	78	72	49	69
Single	3	4	7	4.5
Divorced/Separated	14	9	4	10
Widowed	5	15	40	16.5

4.2.4 Work Status

As shown in table 4.5, half (52%) of all respondents are retired. While the retired group comprises mainly 60-79 year olds, a substantial number (11.4%) of those in their 50s have retired early. Four in ten of all respondents (41%) still works, while less than 7% are housewives.

Table 4.5 Sample Characteristics by Work Status & Age Decade

Work Status	Age Decades (percent)			Total
	50-59	60-69	70-79	
Working	78.2	20.1	2.0	41.0
Housewife	10.3	4.0	4.6	6.9
Retired	11.4	75.9	24.4	52.1

4.2.5 Socio-Economic Status

As depicted in table 4.6, all income bands are represented. The lowest income band of less than £100 per week comprises the fewest (5.4%) respondents, while the next (£100-£199) contains the greatest with 23.7%. This figure falls to 17.4% with incomes of £200-£299, and falls again for the next two bands (£300-£399 and £400-£499) which are fairly equal, containing 10.3% and 10.9% of respondents respectively. The number of respondents in the final band (£500+) then doubles to contain 22.2% of the total sample.

Table 4.6 Income Bands By Work Status

Income Bands	Work Status (percent)			Total
	working	housewife	retired	
Less than £100	11.4	0	88.6	5.4
£100-£199	17.7	8.2	74.1	23.7
£200-£299	38.3	8.4	53.3	17.4
£300-£399	46.9	3.1	50.0	10.3
£400-£499	48.6	1.4	50.0	10.9
£500+	73.6	10.0	16.4	22.2

Perhaps contrary to expectations, the lowest income bands do not solely comprise respondents dependent on state pensions, nor is the highest made up solely of workers. Rather, as further analysis (table 13.4) highlights, one quarter of those whose incomes fall between £100 and £199 are either working or are housewives, while more than one quarter of those on the highest income do not work.

Finally, as table 4.7 highlights, the sample comprises almost equal numbers of AB (managerial, administrative and professional statuses) and C1's (supervisory or clerical, junior managerial) with 32.9% and 31.6% respectively. Skilled manual workers (C2) comprise 13.2% of the total sample, while the remaining 22.2% is made up of people whose jobs are, or were, manual or low grade (DE).

Table 4.7 Sample Characteristics by Socio-Economic Group

Socio-Economic Group	Percent
AB	32.9
C1	31.6
C2	13.2
DE	22.2

4.2.6 Summary Of Profile

In sum, the sample is exactly representative of the UK population in terms of 5-year age bands. Additionally, both genders are well represented in each age decade, as is every marital status and every work and socio-economic status. Finally, analyses of income bands reveals that poor working people and well-off retirees can all be found among the sample, all of which reduce bias in the results that follow.

4.3 SOCIO-DEMOGRAPHICS

4.3.1 P1: The majority of people aged 50-79 will reject the status old

Clearly (table 4.8), and as expected, the majority of people rejected the status old. Almost 70% of the sample felt middle-aged (69.7%), a further 17.1% felt young, and only one in ten (10.2%) admitted to feeling old or elderly, providing overwhelming support for P1.

Table 4.8 Age Identity (percent)

Age Identity		
Young	Middle-Aged	Old/Elderly
17.1	69.7	10.2

4.3.2 P2: The majority of consumers aged 50-79 will have a self-perceived age that is several years younger than their actual age, and this discrepancy will increase with advancing age

Before overall cognitive age was computed, the internal consistency of the scale was measured. Cronbach's alpha, the most widely used internal consistency reliability coefficient (Peter, 1979), has a number of advantages over the other methods (Churchill, 1979; Cronbach, 1951). Nevertheless, because different techniques could produce different results (Parameswaran *et al.*, 1979), reliability of the scale was tested using a range of methods, the results of which were all found to be acceptable (Bearden and Netemeyer, 1999; Peter, 1979) as shown in table 4.9.

Table 4.9 Reliability Of Cognitive Age Scale

Reliability Analysis	Results
Alpha	.8871
Guttman Split-half	.8703
Parallel	.8875
Strict Parallel	.8659

Table 4.10 below details the mean cognitive age for the sample as a whole, where it can be seen that the cognitive ages of respondents ranged from 30 to 85, with a mean cognitive age of 52.7 years.

Table 4.10 Cognitive Age

Cognitive Age	n	Minimum	Maximum	Mean	Std. Deviation
	650	30	85	52.74	9.57

When the mean cognitive age for the sample as a whole is compared to the mean chronological age (table 4.11) it can be seen that a clear youth bias of almost 10 years (9.6 years) exists. A paired *t*-test confirmed the difference between chronological age and cognitive age to be very highly significant ($t = 38.235$, $df = 649$, $p < 0.001$).

Table 14.11 Youth Bias

	n	Mean	Std. Deviation
Cognitive Age	650	52.7423	9.57
Chronological Age	650	62.4031	8.40
Youth Bias	650	9.6608	6.44

A simple frequency analysis revealed that only 37 respondents (5.7%) had a cognitive age older than their actual age, while only 8 (1.2%) had a cognitive age that was the same as their chronological age. All others, a total of 605 respondents (93.1%), had a cognitive age that was less than their chronological age, providing overwhelming support for the first part of P2.

Turning to the second part of P2, whether or not this discrepancy increases with advancing chronological age, table 4.12 below illustrates the degree of youth bias broken down by chronological age decade, where it can be

seen that the discrepancy does indeed increase with advancing chronological age. Those in their 50s have a mean cognitive age that is 8.6 years younger than their actual age, and this discrepancy increases to 10.2 and 10.9 years for those in their 60s and 70s respectively.

Table 4.12 Youth Bias By Chronological Age Decade

Age Decades	Mean Youth Bias (years)	Std. Deviation	n
50s	8.5658	5.02690	281
60s	10.1635	6.62485	208
70s	10.9224	7.95526	161
Total	9.6608	6.44186	650

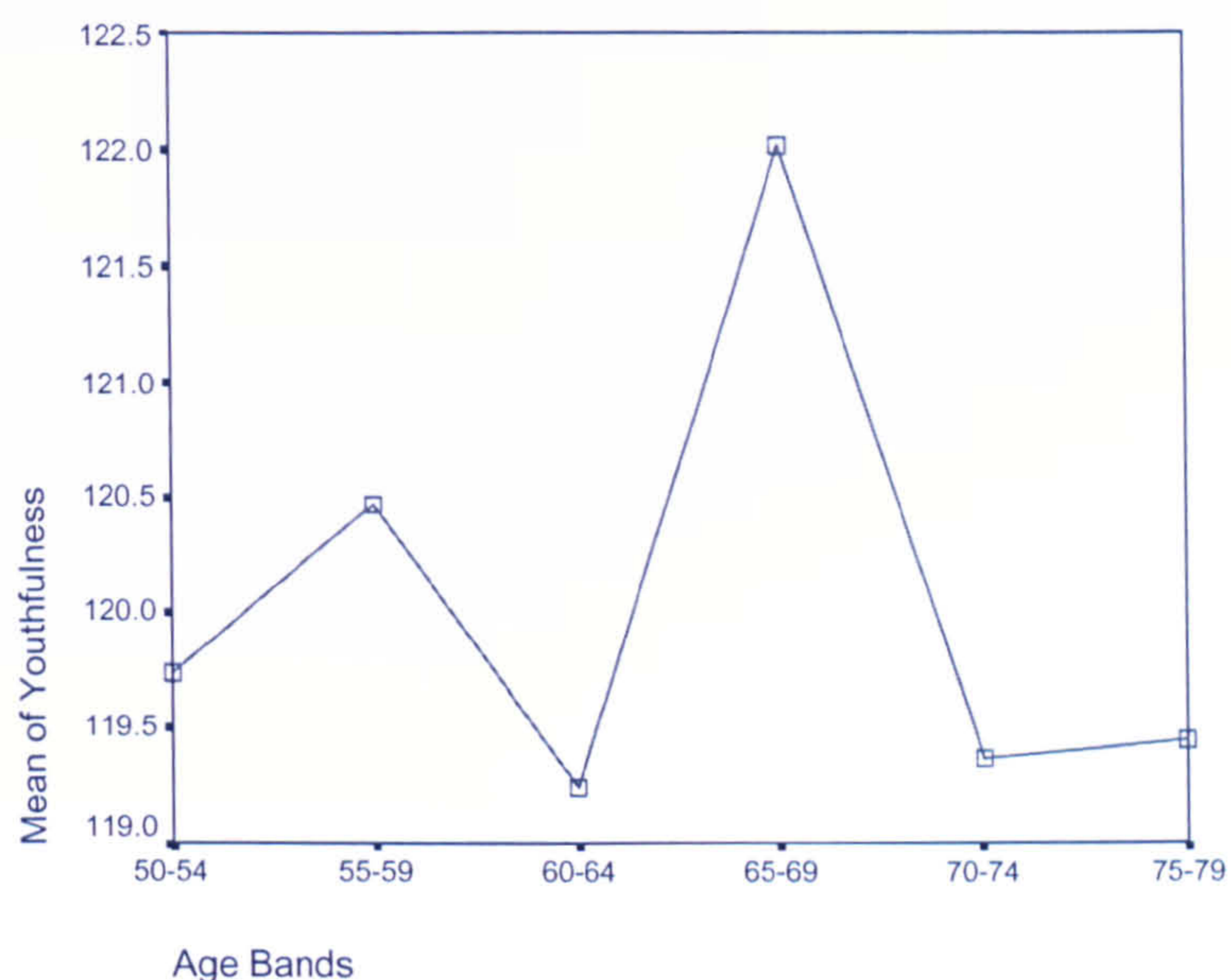
Between-Subjects One-Way ANOVA revealed a very highly significant effect of age ($F(2,647) = 7.946, p < 0.001$). However, a planned comparison revealed that while the difference in youth bias between those in their 50s (8.6 years) and 60s (10.2 years) was highly significant ($t = -2.740, df = 647, p < 0.01$), the small differences in the youth bias between those in their 60s (10.2 years) and those in their 70s (10.9 years) is not significant. In other words, youth bias increases with advancing chronological age up to a point, but eventually this increase ceases to be significant, thus failing to provide full support for the latter part of P2.

This point is driven home when youthfulness (the discrepancy between actual and cognitive age expressed as a ratio) is considered, where it is clear (table 4.13) that youthfulness, too, does not increase in a linear fashion, but peaks (figure 4.1) during the late 60s.

Table 4.13 Youthfulness by Chronological Decades

Chronological Age Decade	n	Mean Youthfulness	Std. Deviation
50s	281	120.0995	13.09156
60s	208	120.5610	16.12889
70s	161	119.4031	17.31851
Total	650	120.0747	15.20021

Figure 4.1 Mean Youthfulness By Chronological Half Decades



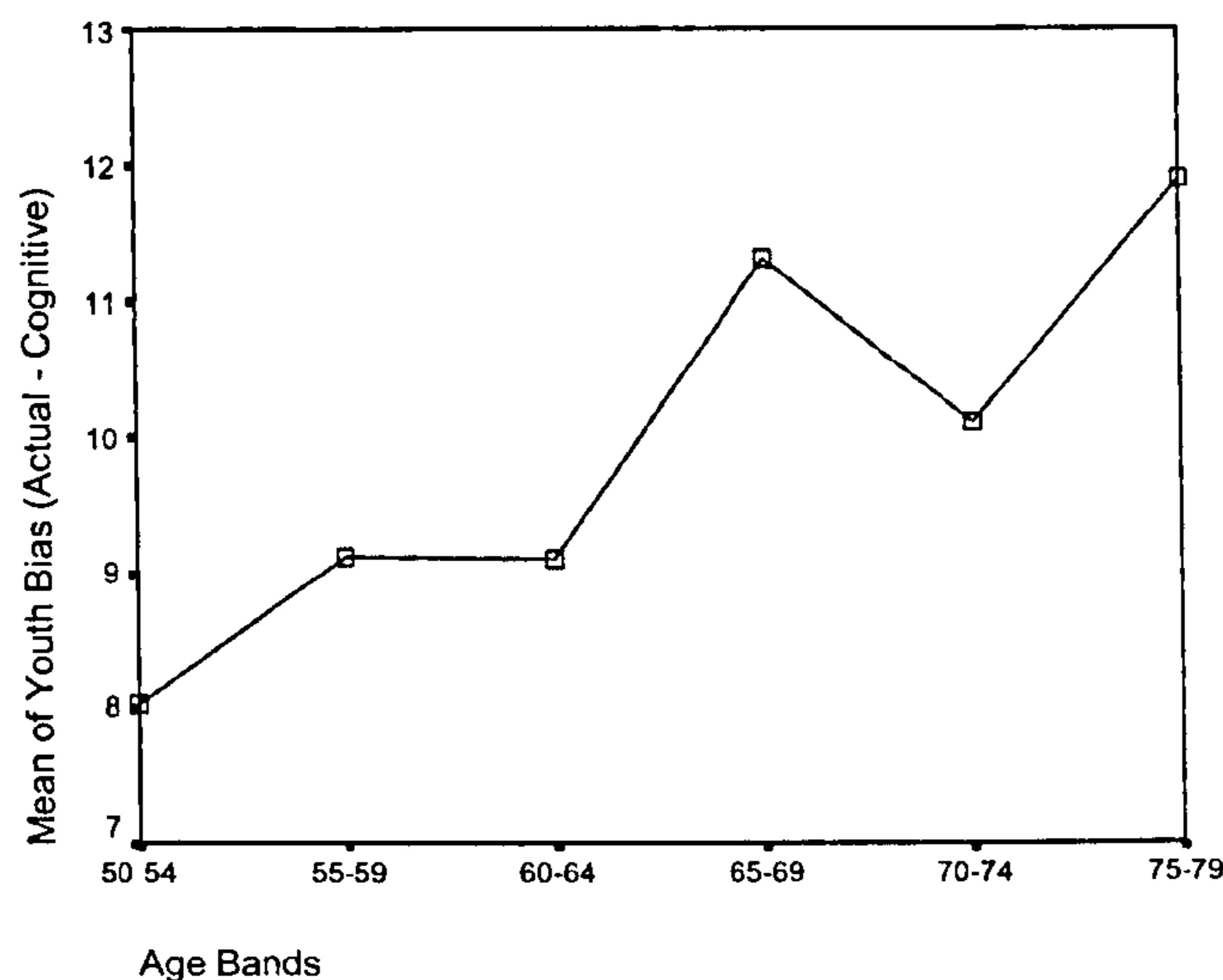
Breaking the sample down into 5-year age bands reveals a different pattern. As can be seen from table 4.14 below, youth bias does not automatically increase with each age band. Rather, in the first half of each decade, the bias is actually less than in the latter half of the previous decade. Thus, the bias reduces from 9.13 (late 50s) to 9.11 (early 60s) and from 11.32 (late 60s) to 10.11 (early 70s).

Table 4.14 Youth Bias By Chronological Age Half-Decade

Chronological Age Band	n	Mean Youth Bias (years)	Std. Deviation
50-54	144	8.03	5.01
55-59	137	9.13	5.00
60-64	109	9.11	6.91
65-69	99	11.32	6.13
70-74	88	10.11	9.21
75-79	73	11.90	6.04
Total	650	9.66	6.44

This pattern can be seen even more clearly in figure 4.2, where it is apparent that the steepest increases are found within age decades, rather than between decades.

Figure 4.2 Youth Bias By Chronological Age Half-Decade



One-way between-subjects ANOVA revealed a very highly significant effect of age ($F(5,644) = 5.531, p < 0.001$), and a planned comparison between the first and second half of the decades confirmed the contrast to be highly significant ($t = 3.131, df = 389.882, p < 0.01$). In other words, the age bias of people whose chronological age falls in the latter half of a decade is significantly greater than those whose ages fall into the first half of a decade.

In sum, there is clear support for the majority of P2, in that most respondents feel about 10 years younger than their actual age, and that youth bias does indeed increase with advancing chronological age. However, it was also found that youth bias appears to peak around the mid to late 60s, after which the bias levels off somewhat, which was illustrated by using the youthfulness measure. Finally, it was noted that the youth bias tends to be greater for people in the latter half of a decade than in the first 5 years of a decade.

4.3.3 P3: The Older A Person's Chronological Age, The Older Their Self-Perceived Age Is Likely To Be

It is already apparent from the above discussion pertaining to youth bias that the older a person's chronological age, the older their cognitive age is likely to be. This fact is further corroborated in table 4.15 where it is clear that the mean cognitive age increases by about 8.5 years each decade. However, as is apparent from the striking differences in the standard deviation figures between the two ages, the two are not the same. Indeed, while there is a significant positive correlation between chronological and cognitive ages ($r = .750$, $n = 650$, $p < 0.001$), the relationship is best described as moderate rather than strong (Diamantopoulos and Schlegelmilch, 1997).

Table 4.15 Cognitive Age By Chronological Age Decade

Chronological Age Decade	n	Mean Chronological Age	Std. Deviation	Mean Cognitive Age	Std. Deviation
50s	281	54.2954	2.81988	45.7295	5.39939
60s	208	64.4183	2.81697	54.2548	6.71072
70s	161	73.9503	2.61199	63.0280	8.14617
Total	650	62.4031	8.39550	52.7423	9.56935

In terms of age identity, table 4.16 shows that 27.5% of those in their 50s consider themselves young, while the rest (72.5%) consider themselves middle-aged. Nobody between 50 and 59 felt old. Only 12.7% of those in their 60s felt young, but even fewer (5.4%) felt old, with the vast majority (81.9%) once again considering themselves middle-aged. The numbers of people with an old/elderly age identity increases to 35.9% once the 70s are reached, but even then the vast majority (57.5%) still feel middle-aged, and some (6.5%) even feel young.

Table 4.16 Age Identity By Chronological Age Decade

Chronological Age Decade	n	Age Identity (percent)		
		Young	Middle-Aged	Old
50s	281	27.5	72.5	0
60s	208	12.7	81.9	5.4
70s	161	6.5	57.5	35.9

The correlation between age identity and chronological age was also significant ($\rho = .447$, $n = 650$, $p < 0.001$), but the strength of the relationship was even weaker than that found between cognitive age and chronological age. Indeed, that the two types of self-perceived age are only moderately related was confirmed with the significant positive correlation between them ($\rho = .556$, $n = 650$, $p < 0.001$).

In sum, there is clearly support for P3, in that there is a positive correlation between chronological age and both types of self-perceived age. However, while the 3 different types of age (chronological, cognitive, and identity) are related, the relationships are moderate at best.

4.3.4 P4: Gender Is Unlikely To Be Related To Self-Perceived Age

As illustrated in table 4.17, the cognitive ages of men and women were strikingly similar, with less than 0.2 years difference in terms of youth bias between them. Indeed, *t*-tests confirmed the absence of any gender differences for cognitive age as a whole, youth bias, and every element of cognitive age. Categorically, then, there are no gender differences with respect to cognitive age.

Table 4.17 Cognitive & Chronological Ages By Gender

Gender	n	Mean Chronological Age	Mean Cognitive Age	Mean Youth Bias
Male	228	62.8114	53.2566	9.5548
Female	422	62.1825	52.4645	9.7180

In term of age identity, however, a different picture emerges, as a highly significant gender difference was found ($U = 39560.500$, $N_1 = 223$, $N_2 = 407$, $p = 0.001$). Clearly (table 4.18), females have younger age identities than their male counterparts. While only slightly more men than women accepted an old age identity (12.1% compared to 9.6%), 1 in 5 (21.9%) women felt young, compared to only 1 in 10 (9.9%) men.

Table 4.18 Age Identity By Gender

Gender	Age identity			Total
	Young	Middle-Aged	Old/Elderly	
Male	9.9%	78.0%	12.1%	100.0%
Female	21.9%	68.6%	9.6%	100.0%

In sum, while there are no gender differences with respect to cognitive age, females have significantly younger age identities than their male counterparts, thus there is not full support for P4.

4.3.5 P5: Retirement *Per Se* Is Unlikely To Be Related To Self-Perceived Age

As table 4.19 illustrates, the difference between cognitive and chronological age was actually *greater* for retired persons than it was for workers or housewives. One-Way ANOVA indicated significant group differences ($F = 3.462$ (2,619), $p < 0.05$), and further analysis revealed that the

difference in youth bias between workers and retirees was not significant – thus lending support for P5. The significant effect of work status that was found was due to retired people having a significantly larger youth bias than housewives ($t = 1.996$, $df = 365$, $p < 0.05$).

Table 4.19 Youth Bias By Work Status

Work Status	n	Mean Youth Bias	Std. Deviation
working	255	9.3647	5.29618
housewife	43	8.0814	5.41485
retired	324	10.3843	7.29804
Total	622	9.8071	6.45127

Results were very different, however, when the self-perceived age variable under consideration was age identity. A very highly significant effect of work status emerged ($\chi^2 = 62.332$, $df = 2$, $p < 0.001$), and subsequent analysis confirmed that retired people have older age identities than both workers ($U = 26950.000$, $N_1 = 249$, $N_2 = 312$, $p = < 0.001$) and housewives ($U = 5420.500$, $N_1 = 42$, $N_2 = 312$, $p < 0.05$). As there were no significant differences in age identity between workers and housewives, the data were recoded into retired and not retired for illustrative purposes. As is clear from table 4.20, retired persons have older age identities than non-retired persons ($U = 32370.500$, $N_1 = 291$, $N_2 = 312$, $p < 0.001$).

Table 4.20 Age Identity By Retirement Status

Retirement Status	n	Mean Chronological Age	Young (%)	Middle Aged (%)	Old/Elderly (%)
Not retired	291	56	26.8	71.5	1.7
Retired	312	68	9.9	71.8	18.3

Overall, then, when the self-perceived measure under consideration is age identity rather than cognitive age, at the zero-order level self-perceived age does seem to differ between work statuses. However, this is likely to be

due to differences in chronological age, because while the youth bias measure takes into account chronological age, the age identity measure does not.

The absence of any retirement effects on cognitive age was confirmed with hierarchical multiple regression analysis, where retirement status was not a significant predictor of cognitive age when chronological age was included in the model. A hierarchical method was chosen because, as Write (1997) notes, temptation to utilise a stepwise method in which the computer selects the 'best' set of predictor variables should be avoided due to the many potential problems associated with stepwise techniques. These problems include an inability to find the best combination of variables due to collinearity thus resulting in a local minimum¹, difficulty in interpreting the resulting *p* values, and slightly higher partial correlations overriding important methodological considerations. Field (2000) too, stresses that stepwise methods should be avoided unless the research situation is an exploratory one where little is known about the variables, and when (as here) there is a sound theoretical literature available it is best to base the model on what past research suggests. Further, he advises the inclusion of any meaningful variables in the model in the first instance, and after this initial analysis to repeat the regression excluding any statistically redundant variables. Thus, a final model based on potentially useful variables will be built once the demographic variables have been considered individually.

Finally, while not explicitly stated in P5, two areas of neglect noted in the literature review were voluntary versus enforced retirement and length of retirement. There were no significant differences between voluntary and enforced retirees for chronological age, cognitive age, or age identity.

¹ The term 'local minimum' refers to a situation where the computer algorithm sticks because of high levels of collinearity, resulting in the inability to find a single variable to add or remove that will help the model.

On the other hand, very highly significant positive correlations were found between length of retirement and both cognitive age ($r = .452, n = 319, p < 0.001$) and age identity ($\rho = .335, n = 306, p < 0.001$). However, once chronological age was held constant a barely significant association with cognitive age remained ($r = .1437, n = 316, p = 0.01$), and hierarchical regression analysis later confirmed that the length of retirement is not a contributor to a person's cognitive age. In contrast, even holding chronological age constant, a significant positive correlation with length of retirement and age identity remained ($r = .1221, n = 303, p = 0.05$).

In sum, there is some support for P5 in that none of the retirement variables analysed were related to cognitive age. However, analysis found that retired persons have older age identities than workers, and that length of retirement also appears to affect a person's age identity, in that the longer a person has retired, the older his or her age identity tends to be. Finally, results suggest that those who choose to retire are no different to those who are forced to retire in terms of either measure of self-perceived age.

4.3.6 P6: Persons With Different Marital Status Will Have Different Self-Perceived Ages

Because there were such large differences between the mean chronological ages of different marital statuses (e.g., 12 years between those who are widowed and those who are divorced/separated), chronological age was included as a covariate in this analysis. Results of the ANCOVA revealed that after adjusting for chronological age, there was still a significant effect of marital status ($F(3, 632) = 2.946, p < 0.05$). However, while the tiny effect size (partial eta squared = .014) for marital status may not be seen as practically significant (Urduan, 2001), what is important here is the adjusted mean scores. Table 4.21 first presents the mean chronological and cognitive ages with youth bias for each marital status, at the zero order

level. The final two columns of the table present the adjusted means and resulting youth bias once the effect of chronological age has been statistically removed.

Table 4.21 Mean Ages By Marital Status

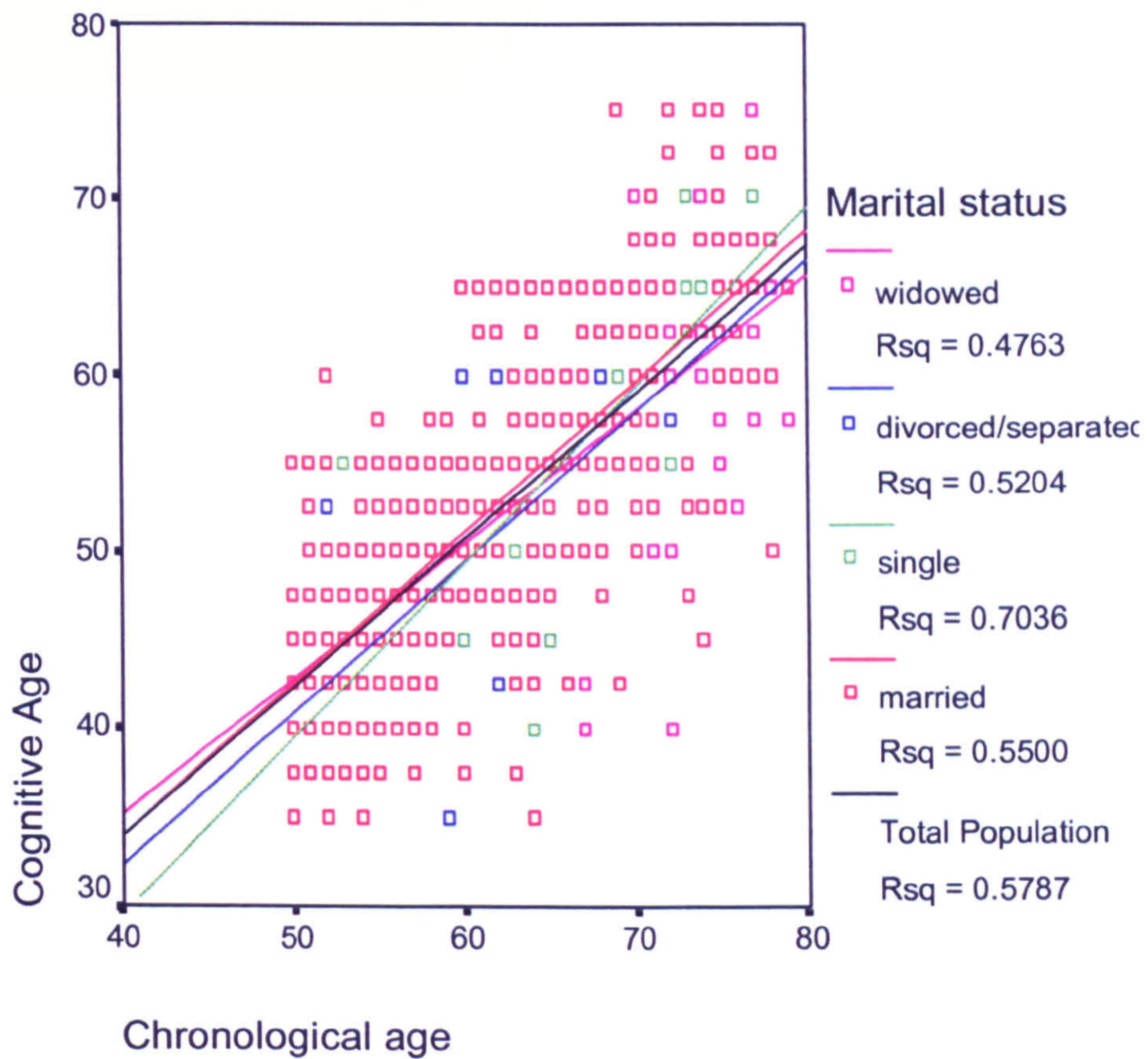
Marital Status	n	Mean Chronological Age	Mean Cognitive Age	Mean Youth Bias	Adjusted Mean Cognitive Age	Adjusted Mean Youth Bias
Married	440	60.93	51.85	9.08	52.91	8.02
Single	30	65.07	54.50	10.57	52.06	13.01
Widowed	105	69.30	57.40	11.90	51.38	17.92
Divorced/ Separated	62	57.61	47.30	10.31	51.17	6.44

As can be seen from the table, zero level cognitive ages ranged from 47.3 to 57.4 years, a difference of over 10 years. However, once the effects of chronological age were removed, mean cognitive ages are very similar between each marital status, and the largest difference reduced to less than 2 years. Moreover, widows are no longer the cognitively oldest. Instead, widows have the greatest degree of youth bias (almost 18 years) and married people have the oldest cognitive age. These findings were confirmed with independent *t*-tests, which demonstrated that although there was no significant difference between singles and any other marital status, or between divorced and widowed people, married people demonstrated significantly less youthfulness ($t = -2.249$, $df = 506$, $p > 0.05$) than their divorced counterparts, and significantly less youth bias ($t = -4.772$, $df = 551$, $p > 0.001$) and youthfulness ($t = -2.817$, $df = 551$, $p > 0.01$) than widows.

One further point of interest to emerge from the analysis was the difference in the percentages of variance explained by the regression model (figure 4.3). Typically, around 50% of the variance is explained (48% for widows, 52% for divorced/separated and 55% for married

persons). In contrast, a much stronger relationship exists between chronological and cognitive age for single people, accounting for over 70% of the variance.

Figure 4.3 Scatterplot For Chronological And Cognitive Age With Regression Lines By Marital Status



A highly significant effect of marital status ($\chi^2 = 13.948$, $df = 3$, $p < 0.01$) also emerged when the self-perceived age measure under consideration was age identity. While this result may well be due to chronological age differences, it is perhaps noteworthy that almost 1 in 4 (23.3%) of single people (whose mean chronological age was 65 years) considered themselves to be old, in comparison to only 18.4% of widowed people,

whose mean chronological age is over four years older (69.3 years) than their single counterparts.

Finally, very highly significant differences emerged between unmarried people who have partners and those who do not in terms of both cognitive age ($t = 5.414$, $df = 77.997$, $p < 0.001$) and age identity ($U = 1678.5$, $N_1 = 38$, $N_2 = 124$, $p = 0.001$). These differences are likely due to chronological age effects, however, as there were no significant differences between those unmarried people who have a partner and those who do not in terms of youth bias or youthfulness.

A regression analysis utilising chronological age and all the marital status (recoded as dummy variables) variables later excluded having a partner, being single, or being divorced as predictors of a person's cognitive age. However, being married ($\beta = .096$, $p < 0.001$) or widowed ($\beta = -.085$, $p < 0.01$) emerged as small but nevertheless significant predictors.

In sum, there is complete support for P6: self-perceived age does differ across marital statuses. Results suggest that being married is associated with an older cognitive age, while being widowed is associated with feeling younger. Moreover, different statuses are affected by chronological age to different degrees, with cognitive age apparently being more reliant on chronological age for single people than for those of other marital statuses.

4.3.7 P7: The Ages Of Children And The Presence And Ages Of Grandchildren Are Related To Self-Perceived Age

As table 4.22 highlights, parents' cognitive age was 52.3 years, a difference of almost 10 years younger than their actual age. This compares to a youth bias of almost 8 years for those who do not have children. These

highly significant differences in cognitive age ($t = -2.657$, $df = 621$, $p < 0.01$) and significant differences in youth bias ($t = 1.975$, $df = 621$, $p < 0.05$), show that the growing-up of children does not necessarily add years to a persons' cognitive age.

Table 4.22 Mean Ages By Parental Status

Parental Status	n	Chronological Age	Cognitive Age	Youth Bias
childless	42	64.2	56.3	7.8
parent	581	62.1	52.3	9.8

Similarly, grandparenthood does not equate to feeling cognitively older than those without grandchildren. Despite those respondents who are grandparents (table 4.23) being 8 years older than those who are not, their cognitive age was over 10 years younger, which emerged as significantly different ($t = 2.017$, $df = 481.7$, $p < 0.05$) to only 9 years for those who have no grandchildren. That grandparenthood does not necessarily add years to ones' cognitive age was confirmed with a partial correlation analysis, where the highly significant positive association with grandparenthood found at the zero order level disappeared once chronological age was held constant.

Table 4.23 Mean Ages By Grandparent Status

Grandparent Status	n	Chronological Age	Cognitive Age	Youth Bias
no grandchildren	190	57.9	48.6	9.3
grandparent	350	65.8	55.5	10.3

Youthfulness did not correlate with any of the progeny variables. In contrast, weak but significant positive correlations were found at the zero level with youth bias and age of oldest child ($r = .164$, $n = 575$, $p < 0.001$), age of youngest child ($r = .156$, $n = 514$, $p < 0.001$), number of grandchildren ($r = .087$, $n = 545$, $p < 0.05$), and age of oldest grandchild ($r = .179$, $n = 353$, p

= 0.001), although it did not correlate with the number of children or age of youngest grandchild. However, all these relationships disappeared once chronological age was held constant.

Individual hierarchical regression analyses confirmed most of the progeny variables to be non-significant predictors of cognitive age, with the exceptions of parenthood ($\beta = -.061, p < 0.05$) and age of oldest grandchild ($\beta = -.171, p < 0.001$).

That the ageing of children does not necessarily add years to a person's age self-perception is reinforced by the results of the analysis pertaining to age identity, where a highly significant difference emerged ($U = 9116.5, N1 = 41, N2 = 559, p < 0.01$). As table 4.24 illustrates, those without children felt older than those who are parents.

Table 4.24 Age Identity By Parental Status (per cent)

Status	n	Young	Middle-Aged	Old/Elderly
Childless	41	11.9	59.5	28.6
Parent	559	18.2	72.7	9.1
Total	600	17.7	71.8	10.4

Age identity also differed significantly between those who do not have grandchildren and grandparents ($U = 27363.0, N1 = 183, N2 = 338, p < 0.01$), but in this case (Table 4.25) fewer grandparents felt young and more felt old than those without grandchildren. However, this result is likely to be due to chronological age differences between the two groups. What is perhaps more important is the fact that over 86% of all grandparents still do not feel old.

Table 4.25 Age Identity By Grandparent Status (per cent)

Status	n	Young	Middle-Aged	Old/Elderly
No grandchildren	190	20.1	73.4	6.5
Grandparent	350	14.0	72.2	13.7

In sum, the presence and ages of children and grandchildren do not necessarily add to a person's self-perceived age, and only parenthood and age of oldest grandchild are potential important demographic variables in predicting cognitive age.

4.3.8 P8: Persons With Higher Income Are Likely To Have Younger Self-Perceived Ages Than Those With Lower Income

As expected, negative correlations between income and chronological age ($r = -.435, p < 0.001$) and income and cognitive age ($r = -.353, p < 0.001$) were found. Nevertheless, the strength of these associations is moderate at best, and, unexpectedly, income did not correlate with either youth bias or youthfulness. Indeed, partial correlation analysis, holding chronological age constant, resulted in no association between income and cognitive age. Moreover, results of an independent *t*-test on a recoded income variable (high £300+ and low less than £299) revealed no significant differences in youth bias or youthfulness. Thus, contrary to P8, when chronological age is taken into consideration, income ceases to be an important factor.

Once again, a different pattern emerged when age identity was considered. In this instance, there was a relationship between age identity and income ($\chi^2 = 13.632, df = 2, p = 0.001$). Table 4.26 shows that while those who consider themselves to be middle aged are drawn almost equally from the two income groups, the poorer group is more likely to feel old and the better off group more likely to feel young. Again, however, these results

may be due to the effects of chronological age, as the correlation between income and age identity disappeared once chronological age was held constant.

Table 4.26 Age Identity By Income

Income Group	Age Identity (per cent)		
	Young	Middle-Aged	Old/Elderly
Low (under £299)	13.7	73.0	13.3
High (£300+)	22.0	72.2	5.9

The second SES measure included in the research was UK socio-economic groupings, was based on a respondent's job (or previous job if the person was retired). Here, too, the associations with both types of self-perceived age disappeared once chronological age was held constant.

Regression analysis later confirmed the unimportance of SES in relation to cognitive age, in that neither income nor socio-economic grouping (using dummy variables) was a significant predictor of cognitive age when chronological age was taken into account. Thus, contrary to expectations, there is no support for P8.

4.3.9 Assessing The Relative Importance Of Individual Demographic Variables In Predicting Cognitive Age

The variables that were found to be potentially important in the individual analyses were considered in relation to each other. Based on the advice of Brace, Kemp and Snelgar (2003) the regression model was built using the simultaneous method because, other than the importance of chronological age, there was no theoretical reason for any variable to be more important than any of the other variables that have been found to relate to cognitive

age. The variables under consideration were chronological age, married, widowed, parenthood, and age of oldest grandchild.

The inclusion of both dummy variables married and widowed, however, proved to be problematic. Hardy (1993) states that when using dummy variables in multiple regression analysis, the reference group should:

- a) Contain a sufficient number of cases to allow a reasonably precise estimate of the subgroup mean. If one or more categories contain only a small number of observations, the reference category should be one of the more heavily populated categories.
- b) The reference group should be well defined. A residual category 'other' may not be a good choice (p. 78).

Thus, it was impossible to use both the dummy variables married and widowed, as this would leave either single or divorced/separated as a reference group, which would clearly be in breach of (a), given that the former category comprises only 30 respondents, and the latter only 62. Moreover, as was demonstrated in section 4.3.6, there are large differences in each type of age measure between marital statuses. An alternative strategy would be to utilise only the dummy variable married (married = 1, not married = 0). However, this strategy is clearly in breach of guideline (b) above. On this basis, it was decided that 2 multiple regression models would be built: one using married as the reference group, and the other using widows.

Field's (2000) advice regarding extreme cases was adhered to. Thus, the SPSS default criterion pertaining to residual outliers was changed to 2, because, as in any ordinary sample, 95% of cases would be expected to have standardised residuals within ± 2 standard deviations, and 99% of cases within ± 3 standard deviations. While the initial output showed the number of outlying residuals to be within these boundaries (24 lying outside ± 2 and 4 lying outside ± 3 standard deviations), inspection of the

histograms of residuals showed a moderate negative skewness (Tabachnick and Fidell, 1983), which was corrected by filtering those residuals that did fall outside ± 3 standard deviations.

When widowhood was used as a reference group, a very highly significant model emerged ($F_{6, 340} = 90.237, p < 0.001$) which accounted for 61.4% of the variance ($R^2 = .614$). No marital status variables was a significant predictor in the model. Those variables that did emerge as significant predictors are shown in table 4.27, which also details the unstandardized and standardized beta coefficients and significance levels.

Table 4.27 Significant Demographic Predictors of Cognitive Age Using Widowhood As Reference Category

Variable	β	Standardized β	p
Chronological Age	.972	.858	$p < 0.001$
Age of Oldest Grandchild	-.149	-.131	$p < 0.01$
Parenthood	-4.215	-.112	$p < 0.05$

When married was used as a reference group, another very highly significant model emerged ($F_{6, 340} = 92.644, p < 0.001$) which accounted for 62% of the variance ($R^2 = .620$). Here, the marital status variables divorced and widowed were not significant. Those variables that did emerge as significant predictors of cognitive age are shown in table 4.28 below.

Table 4.28 Significant Demographic Predictors of Cognitive Age Using Married As Reference Category

Variable	β	Standardized β	p
Chronological Age	1.015	.895	$p < 0.001$
Age of Oldest Grandchild	-.195	-.172	$p < 0.001$
Single	-5.689	-.126	$p < 0.01$
Parenthood	-4.327	-.114	$p < 0.01$

Both models are sound in terms of meeting the assumptions of multiple regression analysis, namely:

- the linearity of the phenomenon measured
- the constant variance of the error terms (homoscedasticity)
- the independence of the error terms
- the normality of the error term distribution
- absence of multicollinearity (Field, 2000; Hair et al., 1995; Lewis-Beck, 1993).

Examination of the residuals (using scatterplots of the standardised and studentised residuals against predicted residuals, and partial regression plots) revealed that the assumptions of linearity and homoscedasticity were met, in that the plots show a random array of residuals that are evenly dispersed around zero (Field, 2000). Examination of the normal probability plots revealed the assumption of normally distributed errors to be met (Hair *et al.*, 1995), while the Durbin-Watson test revealed statistics very close to 2 (1.979 and 1.986), indicating that the assumption of independent errors is also met. The printouts of the multiple regression analyses were also scrutinised for multicollinearity, and the conservative guidelines suggested by Field (2000) adhered to. Thus, the largest VIF is no greater than 10, the average VIF is not substantially greater than 1, the tolerance levels are well within the boundaries of safety (none below 0.2), and there are no large variance proportions present on the same eigenvalue. Finally, Cook's Distance, a measure of the influence of individual cases on the model, show maximum and average values which are well within the prescribed limit of 1 (Wright, 1998).

Clearly, both models are very similar in terms of the amount of variance explained, and the Beta coefficient and significance values of the predictor variables. In both models, chronological age accounts for the greatest amount of the variance, and the remaining predictor variables are small by comparison. Nevertheless, in both models, the age of the oldest grandchild

is the next most important predictor variable, and parenthood emerges as significant in both models.

In both models, the positive values of the beta coefficients for chronological age indicate that as chronological age increases, cognitive age increases. However, all of the remaining predictor variables have negative values, which indicate an associated decrease in cognitive age is to be expected if the person is a parent, is single as opposed to married, or as the age of their oldest grandchild increases. The direction of these relationships are as expected, given the results of the individual analyses conducted earlier.

Thus, the multiple regression model that uses widowhood as the reference group is defined as the following equation:

$$\begin{aligned} \text{Cognitive Age} = & -2.091 + (0.972 \text{ Chronological Age}) \\ & - (4.215 \text{ parenthood}) - (0.149 \text{ Age of Oldest Grandchild}) \end{aligned}$$

Similarly, when using married as the reference group:

$$\begin{aligned} \text{Cognitive Age} = & -2.810 + (1.015 \text{ Chronological Age}) - (4.327 \text{ parenthood}) \\ & - (0.195 \text{ Age of Oldest Grandchild}) - (5.689 \text{ single}) \end{aligned}$$

4.3.10 Summary of Analysis of Socio-Demographic Variables

This section was concerned with the question: which demographic variables are important in relation to self-perceived age? The analyses presented here clearly show, as expected, that chronological age is the most important variable in relation to this question. When the self-perceived age variable under consideration is cognitive age, next in importance is the age of oldest grandchild and then parenthood. These progeny variables emerged as more important predictors of cognitive age

than gender, a number of retirement variables, and even income and social class. Finally, it was found that being married appears to add years to a person's cognitive age. A number of different variables were related to age identity. However, because this method of self-perceived age comprised data that is non-metric, analysis of this variable is somewhat limited, especially in comparison to the more powerful parametric statistical techniques that can be performed on cognitive age. Consequently, it is not always clear if the results pertaining to age identity are due to chronological age, the effects of which cannot be removed when analysis is limited to non-parametric techniques.

4.4 ACTIVITIES AND SOCIAL RELATIONS

4.4.1 P9: Persons With Younger Self-Perceived Ages Will Participate In Relatively Energetic Activities, While Persons With Older Self-Perceived Ages Will Participate In Relatively Sedentary Activities

As a group, respondents are fairly active, with less than 15% participating only in sedentary activities (such as watching television, reading, and knitting) while almost 35% are moderately active, usually citing gardening and walking (often with a dog) as pastimes. Meanwhile almost half of all respondents (48.5%) regularly participate in activities classified as energetic, including swimming, aerobics and/or going to the gym, and various sports including tennis and badminton. Table 4.29 below shows that it is not until the 70s that activities become less energetic, and even then more than one third of those in their 70s and over half of those in their 60s still partake of regular energetic exercise.

Table 4.29 Level of Activities By Age Decade

Activity Type	Chronological Age		
	50-59	60-69	70-79
Sedentary	35.1	38.4	48.9
Moderate	28.9	31.7	34.3
Energetic	36.1	29.9	16.8

An inverse relationship was found between activity levels and both chronological ($\rho = -.174$, $n = 636$, $p < 0.001$) and cognitive age ($\rho = -.229$, $n = 636$, $p < 0.001$). However, very highly significant positive correlations were also found between activity levels and both youth bias ($\rho = .122$, $n = 636$, $p < 0.001$) and youthfulness ($\rho = .174$, $n = 636$, $p < 0.001$), indicating that these relationships, although weak, are not solely due to chronological age. Indeed, a one-way ANOVA revealed a very highly significant effect of youthfulness ($F(2,633) = 8.900$, $p < 0.001$) and a highly significant effect of youth bias ($F(2,633) = 6.539$, $p < 0.01$). Table 4.30 shows the mean youthfulness and youth bias of each group by level of activity, and post-hoc comparisons found significant differences between the energetic activity group and the sedentary activity group on both youth bias ($p < 0.01$) and youthfulness ($p < 0.001$). Additionally, mean youthfulness differed significantly between the moderate and energetic groups ($p < 0.05$).

Table 4.30 Mean Youthfulness & Youth Bias By Activity Level

Level of Activity	n	Mean Youthfulness	Mean Youth Bias
Sedentary	97	116	7.9
Moderate	224	118	9.2
Energetic	315	122	10.4
Total	636	120	9.6

MANOVA (holding chronological age constant) also revealed a highly significant effect of activity level ($F(2,632) = 10.487$, $p < 0.001$) on cognitive age. The results of a pairwise comparison confirmed there to be significant differences between those who participate in energetic activities and those who participate in either sedentary ($p < 0.001$) or moderate ($p < 0.01$)

activities. There were no significant differences, however, between the sedentary and moderately active groups.

Clearly, then, there is a good deal of support for P9 when the self-perceived age measure under consideration is cognitive age. Table 4.31 shows that the same is true when age identity is considered ($\chi^2 = 28.086$, $df = 4$, $p < 0.001$), in that those who consider themselves to be young are more likely to participate in relatively energetic activities while those who feel old are evenly spread across sedentary (33.3%), moderate (35%), and energetic (30.3%) groups. Nevertheless, as table 4.31 highlights, an old age identity does not necessarily mean that a person does not participate in moderate or even energetic activities.

Table 4.31 Level of Activities By Age Identity (Percent)

Activity Level	n	Young	Middle-Aged	Old/Elderly
Sedentary	94	12.1	13.3	33.3
Moderate	216	25.2	37.2	36.4
Energetic	307	62.6	49.5	30.3

In sum, and as expected, there is full support for P9, as those with younger self-perceived ages differ significantly from their older feeling counterparts in terms of their participation in more energetic activities.

4.4.2 P10: Self-Perceived Age Will Not Correlate With Social Relations Indicators

Club Membership

The first social relations indicator used in this research was club membership, and the majority of respondents (59%) belonged to a club. As table 4.32 shows, there is very little difference between members and non-members on every age measure, and *t*-tests confirmed that none of these differences were significant, thus lending full support for P10.

Table 4.32 Age By Club Membership

Club Membership	n	Age Measure (Mean)			
		Chronological Age	Cognitive Age	Youth Bias	Youthfulness
Not Member	242	62.0	52.6	9.4	119.7
Member	348	62.2	52.4	9.7	120.2

Empty Nest

As expected, the empty nest variable revealed significant age differences on chronological ($t = 13.032$, $df = 345.445$, $p < 0.001$) and cognitive age ($t = 9.196$, $df = 335.515$, $p < 0.001$), with empty nesters being chronologically and cognitively older than those with children still at home. Table 4.33 also shows that the youth bias measure revealed a difference, with the bias being significantly greater for those with an empty nest ($t = 2.556$, $df = 353.742$, $p < 0.001$). However, the more stringent youthfulness measure revealed no significant differences between the two groups.

Table 4.33 Age By Empty Nest

Nest Status	n	Age Measure (Mean)			
		Chronological Age	Cognitive Age	Youth Bias	Youthfulness
Full	156	56.4	47.5	8.9	120.2
Empty	419	64.7	54.5	10.3	120.7

The data were then examined by chronological age decade, which revealed that the vast majority (77%) of full nesters are in their 50s. Less than 15% of people in their 60s and only 6.4% of those in their 70s still have children at home. When t -tests were conducted on the age measures using only those respondents in their 50s, the significant differences in both cognitive age and youth bias did not emerge. Thus, it would seem safe to say that having children still living at home does not affect cognitive age.

This lends further support both to P10, and to the earlier finding (P7) that having children does not necessarily add to cognitive age.

Frequency & Satisfaction of Meeting Children, Grandchildren & Friends

The next group of social relations indicators comprised frequency and satisfaction level with the frequency of meeting children, grandchildren and friends. Youth bias and youthfulness did not correlate with any of these variables.

Weak positive relationships were found with cognitive age and the frequency of seeing children ($\rho = -.179$, $n = 565$, $p < 0.001$) and grandchildren ($\rho = -.171$, $n = 353$, $p < 0.01$), although no relationship with satisfaction levels emerged. Weak negative relationships between cognitive age and both the frequency ($\rho = .137$, $n = 629$, $p < 0.001$) and satisfaction ($\rho = .125$, $n = 616$, $p < 0.01$) with seeing friends also emerged.

Analysis of the association of these social indicators with age identity lends full support to P10. The only significant correlation was weak and negative between age identity and the frequency of seeing grandchildren ($\rho = -0.157$, $n = 340$, $p < 0.01$). Given that a similar relationship exists between chronological age and frequency of seeing grandchildren ($\rho = -.248$, $n = 353$, $p < 0.001$), it is likely that this result is due to the effects of chronological age. That said, it is noteworthy that once again grandchildren, rather than children or friends, stand out from other variables.

Loneliness & AIO Items

The reliability of loneliness was acceptable ($\alpha = .69$) but no correlations (or partial correlations) were found between the overall measure and any of the age and self-perceived age measures. Indeed, the

only correlation to emerge was a positive one between the individual item 'the only time I really feel alive is when I am with others' and age identity ($\rho = 0.112$, $n = 612$, $p < 0.01$), but this result is likely to be due to chronological age, as a similar association was found between this item and chronological age ($r = 0.111$, $n = 630$, $p < 0.01$).

The final social relations indicators were the AIO items 'I enjoy having people around' and 'I would really rather watch a good TV programme than go out with others'. The first did not correlate with chronological age or age identity, but highly significant and positive (although weak) associations were found with both youth bias ($r = 0.116$, $n = 634$, $p < 0.01$) and youthfulness ($r = 0.125$, $n = 634$, $p < 0.01$), and a highly significant partial correlation (holding chronological age constant) was found with cognitive age ($r = -0.106$, $n = 627$, $p < 0.01$) indicating that the greater the degree of feeling younger, the greater the enjoyment at having people around.

No correlations were found between the second AIO item and chronological age, but significant negative (but weak) associations were found with both age identity ($\rho = -0.122$, $n = 621$, $p < 0.01$) and cognitive age ($r = -0.098$, $n = 639$, $p < 0.05$). Thus, the younger a person feels, both cognitively and in terms of age identity, the more likely they are to prefer going out with others to watching TV.

In sum, there is a mixed support for P10. A battery of social relations indicators were used, and many were not related to self-perceived age. Others, particularly the family variables, showed a weak but nevertheless significant relationship, while it appears that the cognitively young are significantly more likely to enjoy having people around and show a preference for going out with others to watching TV. Thus, in terms of these social indicators, which are perhaps more to do with a social life than social relations, the cognitively young do differ from their older feeling counterparts.

4.4.3 P11: Self-Perceived Age Will Be Associated With A Measure Of Social Comparison

Contrary to expectations, attention to social comparison failed to correlate with chronological age or any of the self-perceived age measures. Youth bias even failed to correlate with a single ATSCI construct. Indeed, what was striking about these results was the similarity between the mean score on the ATSCI index and every age and self-perceived age group.

Categorically, then, there was no support for P11: attention to social comparison information is not associated with age or self-perceived age.

4.4.4 Assessing The Relative Importance Of Individual Social Variables In Predicting Cognitive Age

Those sociological variables that were found to be potentially important in the individual analyses were then considered in relation to each other, using the same procedure as that employed for the important demographic variables discussed in section 4.3.10. Thus, the variables under consideration (in addition to chronological age) were activity levels (dummy coded), the social relations indicators excluding club membership and empty nest, and the AIO social indicators. Because the data pertaining to frequency of meeting children, grandchildren and friends were not metric, these variables were also dummy coded (this procedure entailed using the mean as an approximate split point, thus for each variable, less than weekly = 0, at least weekly = 1). One further problem to overcome was the nature of the satisfaction with seeing children, grandchildren and friends data, which were all negatively skewed. Whilst square root data transformations were one option, to maintain consistency with the frequency variables these too were dummy coded (not fully satisfied = 0, fully satisfied = 1).

In the first instance, although a highly significant model emerged, close inspection revealed the presence of multicollinearity in that two variables showed high variance proportions on the same dimension. These variables, understandably, were satisfaction of meeting children and satisfaction of meeting grandchildren. Only the latter was significant in the model. Consequently, four further regression analyses were conducted. Two simple regression analyses were conducted for each of the variables. Then, each was excluded from a multiple regression analyses using the remainder of the sociological variables under consideration. In all four cases, satisfaction with meeting children was not a significant predictor of cognitive age. Thus, the multiple regression analysis was again performed, this time excluding satisfaction with meeting children. This procedure resulted in a model that met all the assumptions required for multiple regression analysis, as discussed in the previous section.

The model to emerge was very highly significant ($F_{10, 307} = 56.406, p < 0.001$) and accounted for 63.6% of the variance (Adjusted $R^2 = .636$). In addition to chronological age, the only variables to emerge as significant predictors of cognitive age were satisfaction with seeing grandchildren and having energetic pastimes, which together accounted for only an additional 3% of the variance (R^2 change = .031). The unstandardized and standardized beta coefficients and significance levels of these predictor variables are shown in table 4.34 below.

Table 4.34 Significant Social Predictors of Cognitive Age

Variable	β	Standardized β	p
Chronological Age	.851	.767	$p < 0.001$
Satisfaction with seeing Grandchildren	3.029	.157	$p < 0.01$
Having Energetic Pastimes	-1.714	-.094	$p < 0.05$

The positive values of the beta coefficients for chronological age indicate that as chronological age increases, cognitive age increases. Likewise, as satisfaction with seeing grandchildren increases, so too does cognitive age. Finally, as expected, having energetic pastimes is associated with a decrease in cognitive age.

4.4.5 Summary of Analysis of Social Variables

This section considered the relationship of a host of sociological variables to self-perceived age. As expected, proposition 9, which related to activity levels, was supported. A battery of social relations indicators revealed mixed results pertaining to proposition 10, with most supporting the expectation that they would be unrelated to self-perceived age. However, a number of variables relating to the frequency and satisfaction levels of meeting with progeny and friends suggested that these may be important predictors of cognitive age. Unexpectedly, it was also shown that attention to social comparison information bears no relationship to cognitive age. When those potentially important variables were considered in multiple regression analysis, levels of satisfaction of seeing grandchildren was the most important sociological variable, and having energetic activities was the only other variable to emerge as significant.

4.5 BIOLOGICAL FACTORS

4.5.1 P12: Respondents Who Rate Their Health As Good Will Have Younger Self-Perceived Ages Than Those Who Rate Their Health As Poor

Overall, as figure 4.35 highlights, respondents generally consider themselves to be healthy. Only 37 (5.7%) people rated their health as poor, while one in 4 (40.6%) rated their health as fairly good and over half (53.7%) consider themselves to be in good health.

Table 4.35 Self-Rated Health Status

	Self-Rated Health		
	Not Good	Fairly Good	Good
n	37	260	344
Percent	5.7	40.6	53.7

As expected, self-ratings of health are negatively associated with chronological age, cognitive age, and age identity. These health self-ratings also correlated positively with youth bias and youthfulness. Table 4.36 provides the correlation coefficients for each age measure. Although the relationship was weak in each case, all were very highly significant ($p < 0.001$).

Table 4.36 Correlation Coefficients For Self-Rated Health And Age (n = 641)

Age Measure	Correlation Coefficient (rho)
Chronological Age	-.207
Cognitive Age	-.275
Age Identity	-.246
Youth Bias	.160
Youthfulness	.209

Despite the vast majority of respondents rating their health as good or fairly good, 296 (46.2%) believed they had a long-standing health problem. Those with a problem are significantly older both chronologically ($t = 7.618$, $df = 639$, $p < 0.001$) and cognitively ($t = 7.849$, $df =$

582.5, $p < 0.001$) than those who are healthy (table 4.37), although these differences were not great enough to be manifested into significant differences in youth bias or youthfulness.

Table 4.37 Long-Standing Health Problem By Age

Health problem	n	Mean Chronological Age	Mean Cognitive Age
No	345	60.09	50.04
Yes	296	64.96	55.82

Table 4.38 shows that of those who perceive they do suffer a long-standing health problem, only one fifth find that it limits their activities a lot. In comparison, over one half (53%) stated that it limits their activities ‘a little’ while the rest (27%) are not limited by their health problem. ANCOVA (holding chronological age constant) revealed a significant effect of limitations caused by health problems ($F(2,289) = 3.768, p < 0.05$). Pairwise comparisons revealed that the group who felt that their health problem does not limit their activities at all were cognitively younger than those who are limited a lot ($p < 0.05$). In contrast, those whose health problem limits their activities a little do not differ from the other groups. Thus, it is the extent to which a person is limited, rather than a limitation *per se*, that effects cognitive age.

Table 4.38 Extent To Which Health Problem Limits Activities By Age

Extent Health Problem Limits Activities	n	Mean Chronological Age	Mean Cognitive Age	Mean Youth Bias
Not at all	79	64.68	54.05	10.6
A little	154	64.82	55.80	9.0
A lot	60	65.97	58.38	7.6
Total	293	65.02	55.85	9.2

There was also a highly significant difference between those who have a long-standing health problem and those that do not in terms of age identity ($U = 40068$, $N_1 = 285$, $N_2 = 336$, $p < 0.001$). In comparison to those who feel young, those with an old age identity are more likely to suffer from a long-standing health problem ($\chi^2 = 27.471$, $df = 2$, $p < 0.001$) that limits their activities a lot ($\chi^2 = 10.963$, $df = 4$, $p < 0.05$).

In sum, there is overwhelming support for P12: those who feel younger are more likely to rate their health as good, and are less likely to be currently suffering a long-standing health problem, especially one that limits their activities.

4.5.2 P13: Physical Manifestations Of Ageing Are As Salient As Social And Psychological Variables For Self-Perceived Age

The qualitative data attained in response to the questions “What, if anything, reminds you that you are getting older?” and “What, if anything, do you do to ‘stay young’?” provided a rich understanding of ageing reminders and responses to those reminders undertaken by respondents. Overwhelming support for proposition 13 was found, in that a wider range of physical manifestations of ageing was mentioned, and mentioned more frequently, than most psychological or social reminders. Likewise, a greater number of counteractions to stay young were physical rather than psychological, social, or consumer behaviour related. Tables 4.39 and 4.40 itemise those physical issues mentioned most frequently, and show the number of people who mentioned each reminder at least once. Of course, many of these variables could be classified differently, because there is a great deal of overlap. For example, using face cream and cosmetics is clearly a consumer behaviour, with the motive for this behaviour being the need to look younger (physical). At the same time, using cosmetics has social and psychological significance.

Table 4.39 Physical Reminders Of Ageing

Ageing Reminder	n
General aches & pains	144
Mobility & dexterity problems	124
Wrinkles & the mirror	112
Tiredness & general slowing down	103
Grey hair/balding	91
Specific health problems	89
Failing eyesight	30
Weight gain	24
Hearing problems	9
Dentures & teeth problems	7
Menopause	5

Table 4.40 Physical Actions Taken To Feel Young

Action to Stay Young	n
Keep physically active	312
Sports	83
Healthy eating/health supplements	82

In contrast, as table 4.41 shows, social reminders of ageing were mentioned less frequently. Nevertheless, around 10% of respondents mentioned ‘other people’ as reminders of their own ageing, which included the attitudes of others and the often noted adage ‘*policemen are getting younger!*’ A slightly larger number mentioned children and grandchildren as reminders of ageing, especially life events such as a child getting married, or a grandchild starting school. Paradoxically, as table 4.42 illustrates, almost as many respondents mentioned grandchildren as something that keeps them young. However, mixing with younger people, and general socialising appeared more frequently as ways of staying young.

Table 4.41 Social Reminders Of Ageing

Ageing Reminder	n
Progeny	64
Other people	61
Popular culture	25
Symbols of age (bus pass, pension)	24

Table 4.42 Social Actions Taken To Feel Young

Action to Stay Young	n
Mix with younger people	86
Socialise	79
Mix with grandchildren	57
Work	41
Listen to music/dance	46
Keep up appearances	23
Hobbies & interests	16

Psychological issues were also mentioned, both as ageing reminders (table 4.43) and as ways of feeling younger (table 4.44). As these tables show, forgetting things was the most often mentioned psychological reminder, but respondents also referred to the passing of time and a realisation that they are the oldest in the family or in a particular situation. An overwhelming number of respondents referred to having an active mind and thinking young with a cheerful outlook as methods of combating the ageing process. To a lesser extent, keeping abreast of issues was also important, and both current affairs and popular culture were mentioned in this context.

Table 4.43 Psychological Reminders Of Ageing

Ageing Reminder	n
Forgetting things	35
Passing of time	20
Obituaries & becoming 'the oldest'	14
Reminiscing	12
Fear of new technology	6

Table 4.44 Psychological Actions Taken To Feel Young

Action to Stay Young	n
Keep active mind/think young & happy	144
Keep abreast of issues	36
Learning & using new technology	29
Change in values/outlook	10
Romance	7

Finally, marketing-related reminders (table 4.45) included information from SAGA and other age-related discounts, and a feeling of alienation from some fashions. Beauty treatments such as face creams, cosmetics, visiting professional hair salons and travel were all cited as behaviours that helped to counter the feeling of being old (table 4.46).

Table 4.45 Consumer Behaviour Related Reminders Of Ageing

Ageing Reminder	n
SAGA/Senior Discounts	7
Feeling too old for some fashions	2

Table 4.46 Consumer Behaviours Taken To Feel Young

Action to Stay Young	n
Use face cream & cosmetics	46
Have hair done	31
Take holidays	29

In sum, there is full support for proposition 13, because, as table 4.47 illustrates, physical manifestations of ageing, and actions taken to feel young, were mentioned more often than any social, psychological or consumer behaviour reminder or action. Indeed, almost three quarters of all reminders, and more than 1 in 4 actions, were physical or biological.

Table 4.47 Summary of Ageing Reminders and
Actions to Feel Young

Classification	Ageing Reminder		Action to Feel Young	
	n	%	n	%
Physical	738	73	477	41
Social	174	17	348	30
Psychological	87	9	226	20
Consumer Behaviour	9	1	106	9
Total	1008	100	1157	100

4.5.3 P14: Of All Dimensions Of Cognitive Age, Look-Age Will Correspond Most Closely With Chronological Age

As can be seen from table 4.48, there is full support for P14 in that look age does indeed correspond to chronological age more closely than any of the other cognitive age dimensions. The youth bias between chronological and feel, do, and interests age is 11.54, 11, and 10.65 years respectively. In comparison, there is only 5.45 years difference between overall chronological age and look age.

Table 4.48 Mean Age By Cognitive Age Dimensions (n = 650)

Cognitive Age Dimension	Mean	Std. Deviation	Youth Bias
Feel	50.86	12.46	11.54
Look	56.95	9.76	5.45
Do	51.40	11.24	11.00
Interests	51.75	10.65	10.65
Chronological age	62.40	8.40	

This contrast is reflected in the strength of the correlations between chronological age and each cognitive age dimension, where (table 4.49) it can be seen that the association with look age ($r = .783$) is stronger than with any other cognitive age dimension.

Table 4.49 Correlation Matrix:
Chronological Age By Cognitive Age Dimensions

	Cognitive age: Feel	Cognitive age: Look	Cognitive age: Do	Cognitive age: Interests	Chronological age
Cognitive age: Feel	1				
Cognitive age: Look	.633	1			
Cognitive age: Do	.688	.657	1		
Cognitive age: Interests	.640	.629	.766	1	
Chronological age	.635	.783	.618	.584	1

* All correlations are significant at the 0.001 level.

4.5.4 P15: People Who Participate In Vigorous Exercise On A Regular Basis Will Have Younger Feel, Look, Do, And Interest Ages Than Those Who Do Not

Section 4.4.1 clearly demonstrated that those who participate in relatively energetic activities have younger overall cognitive ages than those whose activities were classified as either sedentary or moderate. Here, the focus is whether or not these differences are manifested in every dimension of cognitive age. The variable was recoded into vigorous exercisers and not vigorous exercisers. *T*-tests revealed the age bias between the two groups to be highly significant on the dimensions of feel ($t = -3.002$, $df = 634$, $p < 0.001$), do ($t = -2.799$, $df = 618.758$, $p < 0.001$), and interests ($t = -2.826$, $df = 634$, $p < 0.001$) age. However, as table 4.50 illustrates, the two groups do not differ significantly on the dimension of look age.

Table 4.50 Mean Youth Bias
By Exercise Levels And Cognitive Age Dimensions

Exercise Level	n	Cognitive Age Dimension			
		Feel	Look	Do	Interests
Not Vigorous	321	10.3	5.3	10.0	9.5
Vigorous	315	12.6	5.5	11.9	11.5

Thus, while there is support for proposition 15 in terms of three of the four cognitive age dimensions, the look age dimension fails to support the proposition.

4.5.5 Assessing The Relative Importance Of Individual Biological Variables In Predicting Cognitive Age

The same procedure as that used in the multivariate analyses conducted for demographic and social variables was again utilised here. Thus, those variables entered into the regression model were self-ratings of health (dummy coded), having a long-standing health problem, a health problem that limits activities (dummy coded), and finally participation in vigorous exercise.

The model to emerge was very highly significant ($F_{6, 380} = 117.883, p < 0.001$) and accounted for 64.5% of the variance (Adjusted $R^2 = .645$). In addition to chronological age, those variables to emerge as significant predictors of cognitive age were being in good health and regularly participating in vigorous exercise, which together accounted for an additional 2.6% of the variance (R^2 change = .026). The unstandardized and standardized beta coefficients and significance levels of these predictor variables are shown in table 4.51 below.

Table 4.51 Significant Biological Predictors of Cognitive Age

Variable	β	Standardized β	p
Chronological Age	.807	.746	$p < 0.001$
Being in Good Health	-1.643	- .091	$p < 0.05$
Partaking in Vigorous Exercise	-1.314	-.073	$p < 0.05$

The positive values of the beta coefficients for chronological age indicate that as chronological age increases, cognitive age increases. However, being in good health and partaking in vigorous exercise are associated with a decrease in cognitive age.

4.5.6 Summary of Analysis of Physical Variables

This section analysed those variables relating to biological, or physical ageing. First, a battery of health related variables were analysed, and as expected full support was found for proposition 12, as self-ratings of health clearly correlated with cognitive age. Moreover, it was found that people who have a long-standing health problem are cognitively older than those who do not, as are those who are limited a lot by their health problem.

The analysis then turned to those things that reminded respondents of the ageing process, together with those actions taken to feel younger. It was clearly shown that physical manifestations of ageing are as salient as social and psychological reminders, thus lending full support for proposition 13. The individual dimensions of cognitive age were then considered, where it was confirmed that look age is the dimension that is most closely related to chronological age, although this finding does not hold true for those who partake in vigorous exercise on a regular basis. Finally, the important biological variables were considered in relation to each other using multivariate regression analysis, where it emerged that, after chronological age, both being in good health and regularly participating in vigorous exercise are important predictors of cognitive age.

4.6 PSYCHOLOGICAL FACTORS

4.6.1 P16: Self-Ratings Of Cognitive Abilities Will Correlate With Self-Perceived Age

Tip Of The Tongue Experiences

Although a significant inverse relationship was found between tip of the tongue experiences and cognitive age ($r = -.095$, $n = 626$, $p < 0.05$), this relationship disappeared when chronological age was held constant. Moreover, tip of the tongue experiences did not correlate with age identity, youth bias, or youthfulness, thus lending only very limited support for P16.

Memory Performance

Contrary to expectations, subjective perceptions of memory performance did not correlate with either chronological or self-perceived age. Again, then, there was no support for P16.

Mental Shape

In stark contrast to the findings for tip-of-the-tongue experiences and memory performance, responses to the statement ‘mentally, I’m in as good a shape as I’ve ever been’ did not correlate with chronological age, but, as table 4.52 illustrates, significant correlations were found with every self-perceived age measure. Thus, it appears that a persons’ self-assessment of their mental shape is more closely related to their self-perceptions of their age than their actual age.

Table 4.52 Correlation Coefficients:
Assessment Of Mental Shape By Self-Perceived Age

Age Measure	n	Correlation Coefficient	p
Cognitive Age	636	$r = -.086$	$p < 0.05$
Youth Bias	636	$r = .148$	$p < 0.001$
Youthfulness	636	$r = .127$	$p = 0.01$
Age Identity	617	$\rho = -.112$	$p < 0.01$

In sum, while the two measures of cognitive abilities that relate specifically to memory fail to fully support P16, the more general measure of overall cognitive abilities, as in an assessment of mental shape, is clearly related to self-perceived age.

4.6.2 P17: Subjective Well-Being And Self-Perceived Age Are Inversely Related

In line with the Affect Balance Scale, positive affect and negative affect were computed.

Positive Affect

Analysis revealed positive affect to be inversely related to chronological age, cognitive age, and age identity; and positively related to youth bias and youthfulness. Thus, as table 4.53 highlights, as age (both chronological and self-perceived) increases, positive affect (happiness) decreases. Conversely, high degrees of youth bias and youthfulness are associated with high degrees of happiness. Thus, while the correlations are weak, these findings nevertheless lend full support for P17.

Table 4.53 Correlation Coefficients Of Positive Affect By Age

Age Measure	n	Correlation Coefficient	P
Chronological Age	617	r = -.162	p < 0.001
Cognitive Age	617	r = -.222	p < 0.001
Youth Bias	617	r = .120	p < 0.01
Youthfulness	617	r = .143	p < 0.001
Age Identity	600	rho = -.216	p < 0.001

Negative Affect

In terms of negative affect, inverse relationships were found with both chronological ($r = -.162$, $n = 617$, $p < 0.001$) and cognitive age ($r = -.222$, $n = 617$, $p < 0.001$), indicating that as age and cognitive age increases, negative affect decreases. However, the relationship with cognitive age disappeared once chronological age was held constant, and negative affect was not found to be associated with age identity, youth bias, or youthfulness.

Subjective Well Being

A correlation analysis was then performed using the overall measure of subjective well being and all the age measures. The only significant relationship to emerge was between age identity and subjective well-being. This weak but highly significant negative correlation ($\tau_b = -.117$, $n = 574$, $p = 0.001$) suggests that irrespective of chronological age, the older a persons' age identity, the lower their overall subjective well being (and vice versa). However, there was no support for P17 when the self-perceived age measure was cognitive age.

Overall, therefore, there is considerable (but not full) support for P17, in that inverse relationships do exist between positive affect and both forms of self-perceived age, and between overall subjective well being and age identity.

4.6.3 P18: Self-Perceived Age And Self-Esteem Are Inversely Related

The scale was shown to be reliable ($\alpha = .8322$), and analysis revealed full support for P18. Although there was no association between self-esteem and chronological age, as can be seen in table 4.54 self-esteem was significantly and negatively associated with cognitive age, and age

identity, and positively associated with youthfulness. Thus, relatively high levels of self-esteem are associated with being cognitively younger, having a young age identity, and having a relatively large degree of youthfulness.

Table 4.54 Correlation Coefficients Of Self-Esteem By Self-Perceived Age

Age Measure	n	Correlation Coefficient	p
Cognitive Age	591	r = -.085	p < 0.05
Youthfulness	594	r = .086	p < 0.05
Age Identity	577	rho = -.151	p < 0.001

Once again, the correlation coefficients reveal only very weak associations. However, the mean self-esteem scores were strikingly similar when chronological age decades were compared (table 4.55) while clear differences were found to exist when age identities were compared (table 4.56).

Table 4.55 Mean Self-Esteem Score By Chronological Age Decade

Chronological Age Decade	n	Mean Self-Esteem Score
50s	266	39.60
60s	193	39.88
70s	135	39.37

Table 4.56 Mean Self-Esteem Score By Age Identity

Age Identity	n	Mean Self-Esteem Score
Young	102	40.88
Middle-Aged	425	39.52
Old	50	37.86

In sum, there is full support for P18: self-esteem decreases as self-perceived age increases.

4.6.4 P19: Self-Perceived Age And Self-Confidence Are Inversely Related

The self-confidence scale was found to be reliable ($\alpha = .7162$) and therefore an overall measure of self-confidence was computed. A familiar pattern emerged when self-confidence was correlated with the age variables, in that although weak, significant negative correlations were found between self-confidence and chronological age, cognitive age, and age identity, and significant positive correlations were found between self-confidence and youth bias and youthfulness. The correlation coefficients are shown in table 4.57.

Table 4.57 Correlation Coefficients Of Self Confidence By Self-Perceived Age

Age Measure	n	Correlation Coefficient	p
Chronological Age	619	-.151	$p < 0.001$
Cognitive Age	619	-.107	$p < 0.01$
Age Identity	602	-.189	$p < 0.001$
Youth Bias	619	.083	$p < 0.05$
Youthfulness	619	.132	$p = 0.001$

Therefore, the expected inverse relationships between self-perceived age and self-confidence lend full support for P19: an increase in age and self-perceived age is associated with lower self-confidence. This pattern is not solely due to chronological age, however, as the positive associations suggest that as the degree of youth bias and youthfulness increases, so too does self-confidence.

4.6.5 P20: Self-Perceived Age And Public Self-Consciousness Are Inversely Related

The public self-consciousness scale was found to be reliable ($\alpha = .7759$) and therefore an overall public self-confidence measure was computed. However, no significant association between public self-consciousness and any age measure emerged. Indeed, there was no association between cognitive age and any individual scale item. Clearly, then, there is no support for P20: self-perceived age is not related to public self-consciousness.

4.6.6 Assessing The Relative Importance Of Individual Psychological Variables In Predicting Cognitive Age

Those variables that were related to cognitive age at the univariate level were included into a multiple regression analysis. These were mental shape, positive affect, self-esteem, and self-confidence.

A highly significant model emerged ($F_{6, 561} = 130.041, p < 0.001$) that accounted for 57.7% of the variance (Adjusted $R^2 = .577$). In addition to chronological age, those variables to emerge as significant predictors of cognitive age were positive mental shape and positive affect, which together accounted for only an additional 1.9% of the variance (R^2 change = .019). The unstandardized and standardized beta coefficients and significance levels of these predictor variables are shown in table 4.58 below.

Table 4.58 Significant Psychological Predictors of Cognitive Age

Variable	β	Standardized β	p
Chronological Age	.734	.734	$p < 0.001$
Positive Affect	-.082	-.082	$p < 0.001$
Being in Mental Shape	.269	-.078	$p < 0.001$

Clearly, the negative values of the beta coefficients for positive affect and being in good mental shape suggest a decrease in cognitive age is to be expected if a person feels happy, and/or that they are in good mental shape.

4.6.7 Summary of Analysis of Psychological Variables

This section presented the analyses of self-perceived age in relation to psychological variables pertaining to propositions 16-20. Some support was found for P16, in that some cognitive abilities were related to self-perceived age. Additionally, while subjective well being overall was not related to cognitive age, positive affect emerged as an important predictor. In contrast, self-esteem and self-confidence, while associated with cognitive age at the univariate level, were not significant predictors in a multivariate analysis. Finally, public self-consciousness does not appear to be important to cognitive age at any level.

4.7 MARKETING & CONSUMER BEHAVIOUR VARIABLES

4.7.1 P21: Self-Perceived Age Will Correlate With A Venturesome Trait

An overall venturesomeness score was computed on the basis that the scale was reliable ($\alpha = .7981$). While venturesomeness was not associated with chronological age, a weak but significant inverse relationship was found with both cognitive age ($r = -.086$, $n = 617$, $p < 0.05$) and age identity ($\tau_b = -.067$, $n = 600$, $p < 0.05$). While this association was not found with youth bias or youthfulness, there was nevertheless full support for P21: high levels of consumer venturesomeness were found to be associated with

a lower cognitive age, and vice versa, and this relationship was not due to chronological age.

4.7.2 P22: Self-Perceived Age Will Correlate With Market Mavenism

The Market Maven scale demonstrated high levels of reliability ($\alpha = .8889$), and an overall score was computed for each individual. Age identity was the sole age variable to show a relationship with market mavenism ($\tau_b = -.090$, $n = 550$, $p = 0.01$), suggesting that respondents who have market maven tendencies also have younger age identities than those who do not. However, further analysis, using the upper and lower quartiles to split the sample into mavens and non-mavens allowed *t*-tests to confirm that market mavens do not differ from non-mavens in terms of cognitive age. Thus, there is limited support for P22.

4.7.3 P23: The Central Value Basis Of Older Consumers Will Be Related To Their Self-Perceived Age

Table 4.59 presents the mean score for each value for the sample overall, and the ranked position of the value (1 = most important, 8 = least important). Clearly, the most important value to these older consumers is self-respect, followed by security, warm relationships with others, and then a sense of accomplishment. Being well respected is the least important value.

Table 4.59 List Of Values By Score and Rank

Value	Mean Score	Rank
Self-respect	8.25	1
Security	8.11	2
Warm relationships with others	8.00	3
Sense of accomplishment	7.80	4
Fun and enjoyment of life	7.67	5
Self-fulfillment	7.64	6
Sense of belonging	7.59	7
Being well respected	7.55	8

In contrast, table 4.60 provides the rating scores of each value broken down by cognitive age decade.

Table 4.60 List Of Values Rating by Cognitive Age Decade

Value	Cognitive Age				
	30s	40s	50s	60s	70s
Self-respect	2	1	1	1	2
Security	3	3	2	2	1
Warm relationships with others	1	2	3	3	4
Sense of accomplishment	6	5	4	4	3
Fun and enjoyment of life	3	5	5	7	7
Self-fulfillment	5	4	7	8	8
Sense of belonging	6	8	6	5	5
Being well respected	7	7	8	5	6

As can be seen from table 4.60, there are differences between cognitive age groupings in the relative rankings of values. Clearly, self-respect is still of great importance to all respondents. However, it is not the most important value for those whose cognitive age is in the 30s or the 70s. Rather, those with the youngest cognitive ages place the greatest importance on warm relationships with others, while the cognitively oldest place greater emphasis on security. Indeed, the relative importance of warm relationships with others decreases over cognitive age decades, while the relative importance placed on security increases. Fun and enjoyment, too, shows a clear pattern, as its relative importance decreases as the cognitive age of the respondent increases. Finally, self-fulfillment has more importance to the cognitively young than to their cognitively older counterparts.

Similar results were found with the age identity measure, which correlated significantly and negatively with warm relationships with others ($r = -.088$, $p < 0.05$), self-fulfilment ($r = -.162$, $p < 0.05$), fun and enjoyment ($r = -.157$, $p < 0.01$), and self respect ($r = -.093$, $p < 0.05$).

Clearly, then, there is a great deal of support for proposition 23: the central value bases of older consumers is related to their self-perceived age.

4.7.4 P24: Materialism Will Correlate Negatively With Self-Perceived Age

Reliability analysis was first performed on each of the three constructs, and then for the scale overall. Coefficient alphas were acceptable in all cases (success = .80, centrality = .67, happiness = .75; overall material values scale = .82).

Construct 1: Possessions as Defining Success

Contrary to expectations (and P24), small but significant *positive* correlations were found with chronological age, cognitive age, and age identity. However, while the mean rating for this construct increases by chronological age decades, cognitive age decades, and age identity groups, no significant differences were found between any chronological or self-perceived age groups and the extent to which one uses possessions as indicators of success. In order to verify this result, quartile splits were performed, and the top (high in materialism as success) and bottom (low in materialism as success) quartiles were compared. *T*-tests revealed there to be no significant differences between the two groups in terms of chronological age, cognitive age, youth bias or youthfulness. Likewise, chi square tests revealed no significant differences between these groups and age identity.

Construct 2: Acquisition Centrality

Table 4.61 shows that, in line with expectations, small but very highly significant inverse correlations were found between this construct and chronological age, cognitive age and age identity, indicating that the higher a persons chronological age and/or self-perceived age, the lower the extent placed on possession acquisition as a central value. However, the relationship to cognitive age disappeared once chronological age was held constant. The relationship with age identity may also be due to chronological age effects, thus again there is little support for P24.

Table 4.61 Correlation Coefficients Of Acquisition Centrality and Age

Age Measure	n	Correlation Coefficient	P
Cognitive Age	592	r = -.191	p < 0.001
Chronological Age	592	r = -.217	p < 0.001
Age Identity	577	rho = -.166	p < 0.001

Construct 3: Pursuit of Happiness

This construct does not appear to be related to age or self-perceived age in any way. There was no correlation between any age measure and the belief that possessions are central to happiness. Nor were any significant differences found between any age groups and scores on this scale, or between top and bottom quartiles and any age measure.

Overall Material Values Scale

Given that age correlated positively with construct 1, negatively with construct 2, and not at all with construct 3, it was unsurprising that no correlation emerged between any age measure and the material values scale overall. Analysis conducted after quartile splits confirmed there to be no significant differences between the high materialism group and the low materialism group on chronological age or any self-perceived age measure. Thus, it appears that materialism has little to do with age.

Construct 2: Advertising

This construct failed to correlate with a single age measure. Indeed, only one of the four items was related to an age variable in that a significant, positive (but weak) correlation was found between agreement with the statement 'Generally, advertised products are more dependable than unadvertised ones' and chronological age ($r = .119, n = 637, p < 0.01$).

Construct 3: Other Marketing Activities

No item was found to correlate significantly with any age measure.

Overall Attitudes Toward Marketing And Consumerism

Because the individual correlations did not show a consistent pattern, a further analysis was conducted which entailed computing an overall score for overall attitudes toward marketing and consumerism, and then performing a top and bottom quartile split, resulting in one group that was low in agreement (indicating greater scepticism) and one high in agreement (indicating more tolerance/faith in businesses) with the statements overall. Although analysis revealed the two groups differ significantly on chronological age ($t = -2.743, df = 296.53, p < 0.01$) with the group with more positive attitudes toward business being chronologically older, these differences did not emerge for any self-perceived age measure. Thus, there is only limited support for P25, and attitudes toward marketing and consumerism appear to have more to do with chronological than self-perceived age.



4.7.5 P25: Attitudes Toward Marketing Consumerism Will Differ With Self-Perceived Age

An overall measure of scale reliability was computed and found acceptable (alpha = .72).

Construct 1: Philosophy of Business

Highly significant and positive relationships emerged between the construct overall and both chronological ($r = .125, n = 604, p < 0.01$) and cognitive ($r = .115, n = 604, p < 0.01$) age. Specifically, while no relationships were found between any age measure and the statements ‘let the buyer beware is the guiding philosophy of most manufacturers’ and ‘most manufacturers are more interested in making profits than in serving customers’, several weak but nevertheless significant correlations were found to exist between the remaining three statements and a number of age measures, as illustrated in table 4.62. Clearly, as both actual age and self-perceived age increases, attitudes toward marketing and business become more positive.

Table 4.62 Correlation Coefficients Of Philosophy of Business Statements and Age

Age Measure	Statement			
		Most operate philosophy customer is always right	Competition ensures fair prices	Manufacturers seldom shirk their responsibility
Chronological Age	r	.091*	.199***	.139***
	n	643	636	626
Cognitive Age	r	.098*	.144***	.170***
	n	643	636	629
Youthfulness	r			-.091*
	n			629
Age Identity	rho	.094*		.107**
	n	624		612

However, partial correlation analysis (controlling for chronological age) showed no relationship with cognitive age.

Construct 2: Advertising

This construct failed to correlate with a single age measure. Indeed, only one of the four items was related to an age variable in that a significant, positive (but weak) correlation was found between agreement with the statement 'Generally, advertised products are more dependable than unadvertised ones' and chronological age ($r = .119, n = 637, p < 0.01$).

Construct 3: Other Marketing Activities

No item was found to correlate significantly with any age measure.

Overall Attitudes Toward Marketing And Consumerism

Because the individual correlations did not show a consistent pattern, a further analysis was conducted which entailed computing an overall score for overall attitudes toward marketing and consumerism, and then performing a top and bottom quartile split, resulting in one group that was low in agreement (indicating greater scepticism) and one high in agreement (indicating more tolerance/faith in businesses) with the statements overall. Although analysis revealed the two groups differ significantly on chronological age ($t = -2.743, df = 296.53, p < 0.01$) with the group with more positive attitudes toward business being chronologically older, these differences did not emerge for any self-perceived age measure. Thus, there is only limited support for P25, and attitudes toward marketing and consumerism appear to have more to do with chronological than self-perceived age.

4.7.6 P26: Consumers With Younger Self-Perceived Ages Will Have Different Usage Intentions Toward Age-Based Sales Promotions Than Those Who Feel Closer To Their Chronological Age

Item 1: Taking Advantage of Senior Discounts

Overall, respondents were fairly evenly spread across responses to the question of senior discounts. As table 4.63 shows, almost 1 in 5 (18%) never use these discounts, while a further quarter (24.8%) use them rarely. In contrast, almost 1 in 3 (29.5%) use them most of the time/as much as possible.

Table 4.63 How Often Respondents Take Advantage of Senior Discounts

Response	n	Percent
Never	115	18.0
Rarely	158	24.8
Sometimes	177	27.7
Most of the time	67	10.5
As much as possible	121	19.0
Total	638	100.0

Analysis revealed a very highly significant and positive correlation between chronological age and taking advantage of senior discounts ($\tau\text{-}b = .285, n = 638, p < 0.001$), indicating that as age increases, so too is the likelihood of taking advantage of senior discounts. Further analysis confirmed very highly significant differences between chronological age decades, with those in their 50s taking advantage of senior discounts less than those in their 60s or 70s ($\chi^2 = 102.930, df = 2, p < 0.001$). Likewise, in terms of age identity significant differences exist ($\chi^2 = 15.205, df = 2, p < 0.001$), with those who consider themselves old being the highest users, and those who feel young the lowest. This association with chronological age remained even when income was held constant ($r = .3061, n = 571, p < 0.001$), indicating that age does play a part in the use of senior promotions. However, although very highly significant and positive correlations were also found between senior discount usage and cognitive age, when

chronological age was held constant these associations disappeared, and further analysis revealed no significant differences between cognitive age groups.

Item 2: Interest In Owning A Senior Card

As can be seen from table 4.64, respondents on the whole expressed interest in owning a senior discount card. Less than 1 in 3 were not interested (28.7%), and a further 14.4% were unsure, but the majority (56.9%) expressed interest in owning such a card.

Table 4.64 Interest In Owning Senior Discount Card

Response	n	Percent
Not at all interested	60	9.6
Not very interested	119	19.1
Not sure	90	14.4
Fairly interested	215	34.5
Extremely interested	140	22.4
Total	624	100.0

In comparison to the previous question, no linear relationship was found with age. Rather, while there were no significant differences between cognitive age groups, differences existed between chronological age decades, with those in their 60s expressing significantly more interest in owning a senior discount card than those in their 50s or 70s ($\chi^2 = 6.482$, $df = 2$, $p < 0.01$). Indeed, there was very little difference between the youngest and oldest age groups. Similarly, significant differences emerged between age identity groups ($\chi^2 = 8.440$, $df = 2$, $p < 0.05$), with those who feel middle aged expressing the greatest interest, and those who feel old the least.

Item 3: Usage Intention

As table 4.65 highlights, responses to the question pertaining to usage intentions of a senior discount card were mixed. One in five (20.5%)

would not use such a card, and almost the same number (19%) were unsure. However, the majority (60.5%) of respondents did express positive usage intentions toward such a card.

Table 4.65 Usage Intention Toward A Senior Discount Card

Response	n	Percent
Definitely not	33	5.2
Probably not	97	15.3
Not sure	120	19.0
Probably yes	215	34.0
Definitely yes	168	26.5
Total	633	100.0

Unsurprisingly, analysis revealed strikingly similar results to the previous item. Again, there was no correlation with any age measure, and again no significant differences were found between cognitive age groups (either youth groups nor cognitive age decade groups). Again, however, highly significant differences emerged between chronological age decades, with those in their 60s expressing the highest usage intention, and those in their 50s the least ($\chi^2 = 9.534$, $df = 2$, $p < 0.01$). Highly significant differences were also found between age identity groups, and again the middle aged were the most likely to use, while the old were significantly *less* likely to use than other groups ($\chi^2 = 9.5554$, $df = 2$, $p < 0.01$).

Overall Usage And Usage Intentions

On the basis of an acceptable reliability analysis ($\alpha = .8019$), an overall usage and usage intentions toward senior discounts was computed. Possible scores ranged from 3 to 15, with higher scores indicative of more positive usage and usage intentions. Very highly significant differences emerged between chronological age groups ($\chi^2 = 33.040$, $df = 2$, $p < 0.001$), with those in their 60s displaying the highest scores, and those in the 50s the lowest. Very highly significant differences were also found between

cognitive age decades ($\chi^2 = 18.641$, $df = 4$, $p < 0.01$), with those whose cognitive age was in the 50s or 60s displaying the highest scores.

Likewise, significant differences were found between age identity groups with those who consider themselves to be middle aged displaying significantly different usage and usage intentions than those who feel young or old ($\chi^2 = 6.869$, $df = 2$, $p < 0.05$).

Overall, therefore, there is full support for P26 in the sense that there are significant differences between self-perceived age groups. However, it is those middle groups, in terms of chronological, cognitive, and age identity, that display the greatest usage intentions than either the youngest or oldest groups (both in terms of cognitive and self-perceived age groupings). Indeed, strikingly similar results were found for these older and younger groups.

The qualitative data pertaining to these questions revealed interesting insights into the underlying reasons for this finding. For many, sound economic sense was the reason for expressing interest in owning and using a senior discount card, with many referring to such discounts as one of the few rewards either for growing old or as a result of a lifetime of hard work. However, for those who would not use such a card, two major reasons were cited. On the one hand, one group were highly sceptical of such a discount card. For them, it was viewed as a ploy to encourage debt, or they felt that there was no such thing as something for nothing, so *“There’s always a catch”* was not an uncommon remark. In contrast, the other group were adamant they would not use age-related discounts, summed up by expressions such as:

“It reminds you that you are old and gives the wrong impression to other people.”

“I feel young, so I can’t be bothered with them!”

“I take advantage of discounts via phone or post, e.g., car insurance as I can’t be seen to be old but would not like to carry a ‘senior card’ as this would make me feel like granny grunt with her bus pass.”

“A friend paid a years subscription to SAGA for me when I turned 50 and I hated it! It felt like the grim reaper coming through my letter-box every month!”

The group that expressed scepticism about senior discounts had a mean chronological age of 62.66 years, and a mean cognitive age of 53.3 years. In contrast, those who refused senior discounts on the basis of age were on average almost 7 years younger chronologically (mean age 56.1 years) and cognitively almost 10 years younger (mean cognitive age 43.75 years). Thus, for the sceptical group, the mean youth bias was 9.4 years, compared to a bias of 12.4 years for those who refused on the basis of age, which suggests that while some older and some younger respondents have no interest in senior discounts, the underlying reasons are different.

In sum, there is considerable support for P26, as there are significant self-perceived age differences between groups with different usage patterns and intentions toward senior discounts.

4.7.7 P27: Attitudes Toward The Past Will Correlate With Self-Perceived Age

Reliability of the nostalgia scale was satisfactory ($\alpha = .6889$). Contrary to expectations, there was virtually no correlation with any age measure: only cognitive age reached any significance ($r = .088$, $n = 603$, $p < 0.05$) and the correlation coefficient was so low as to be almost meaningless. For this reason, analysis was conducted to compare scores on the nostalgia scale across different age groups. There were no significant differences between chronological or cognitive age decades, age identity groups, or between youth bias groups. Quartile splits were then performed and the highest (greater longing for the past) and lowest quartiles were compared. T-tests revealed those in the highest groups to be significantly older chronologically ($t = 2.180$, $df = 322$, $p < 0.05$), and in terms of age identity (α

$F(2, 187) = 5.990, df = 2, p = 0.05$) although this difference barely reached significance. There were no significant differences between the two groups in terms of cognitive age, youth bias, or youthfulness.

Overall, therefore, there was very little support for P27. Slight differences in chronological age suggests that older respondents have a greater longing for the past, and this is probably accountable for the differences in age identity, but in terms of cognitive age no differences emerged.

4.7.8 P28: Media Usage Will Be Related To Self-Perceived Age

No correlation was found with any age variable and magazine and book reading. As table 4.66 shows, all remaining media variables correlated positively with chronological age, with the exception of internet usage, which showed an inverse relationship. Clearly, media usage increases with age, while internet usage decreases with age.

Table 4.66 Chronological Age And Media Usage

Media Usage	n	tau-b
How long watching TV on average weekday	646	.171**
How long watching TV in average weekend	641	.167**
How long listening to radio	634	.077*
How many days read newspaper	649	.117**
How long reading newspaper	628	.211**
How often use internet	643	-.379**

**Correlation is significant at the .01 level

*Correlation is significant at the .05 level

At the bivariate level, similar results were found when these variables were correlated with cognitive age. However, once chronological age was held constant the only significant association to emerge was between cognitive age and internet usage ($r = -.1770, n = 593, p < 0.001$). Once chronological age was held constant, no associations with age identity remained significant.

Overall, and contrary to expectations, there was little support for P28. With the exception of internet usage, once chronological age is accounted for neither self-perceived age measure appears to be related to media usage. On the other hand, internet usage decreases with increasing cognitive age, even when chronological age is held constant.

4.7.9 P29: Price Consciousness Will Be Related To Self-Perceived Age

Analysis showed the price consciousness scale to be reliable ($\alpha = .7713$). Significant correlations were found with both chronological and cognitive age. However, once income was held constant, these associations disappeared. Likewise, there was no correlation with age identity, and no significant differences in price consciousness were found across age identity groups. Thus, there was no support whatsoever for P29: price consciousness does not appear to be related to either chronological age nor to self-perceived age.

4.7.10 P30: Attitudes Toward Credit Will Be Related To Self-Perceived Age

The attitudes toward credit scale was found to be reliable ($\alpha = .8019$) and an overall score was computed. The very highly significant inverse correlation that emerged with chronological age ($r = -.212$, $n = 606$, $p < 0.001$), failed to appear with any self-perceived age measure once chronological age was held constant. Nevertheless, highly significant differences in attitudes toward credit were found between both chronological age decades ($F(2,603) = 12.536$, $p < 0.001$) and age identity groups ($F(2,588) = 7.624$, $p = 0.001$). Respondents in their 50s had significantly more positive attitudes toward credit than those in their 60s or

70s, while those with an old age identity demonstrated a less positive attitudes toward credit. While a similar pattern was found among cognitive age decades ($F(5,600) = 4.166, p = 0.001$), only those in their 40s differed significantly from other groups.

Overall, then, there is partial support for P30: attitudes toward credit do differ with chronological age, and this in turn affects self-perceived age groupings, which demonstrate some significant differences.

4.7.11 P31: Self-Perceived Age Will Be Related To Attitudes Toward Healthy Eating

In the first instance, a correlation analysis was conducted with each individual item and each age variable. Only two weak but nevertheless significant positive correlations emerged, both of which were with youth bias. In each case, the degree of youth bias increases with a corresponding increase in the strength of agreement with the statements ‘I try to eat healthier food these days’ ($r = .082, n = 643, p < 0.05$) and ‘I try to eat less fat’ ($r = .078, n = 640, p < 0.05$).

Because no previously validated scale with which to measure attitudes toward healthy eating was available, full reliability analysis was then conducted. As can be seen in table 4.67, fully acceptable reliability scores were attained. On this basis an overall attitude toward healthy eating score was computed for each respondent, with higher scores indicative of positive attitudes toward healthy eating.

Table 4.67 Reliability Analysis For
Attitudes Toward Healthy Eating Scale

Reliability Test	Score
alpha	.8040
Split-half	.7638
Guttman	.64 - .80
Parallel	.8040
Strict	.7635

Analysis then turned to examine whether or not there were differences between age groups in terms of attitudes toward healthy eating. There were no significant differences between chronological age decades or cognitive age decades. While scores decreased as age identity increased, differences did not reach significance levels. However, in terms of youth groups, significant differences emerged ($F(3,619) = 3.054, p < 0.05$), with those whose cognitive ages were closer to their chronological age displaying the lowest scores. Because these results emerged from a new scale, ANOVAs were conducted to ascertain differences across youth groups on each individual scale item. Three of the five items revealed significant differences across youth groups. These were:

‘I try to eat healthier foods these days’ ($F(3,639) = 4.559, p < 0.01$)

‘I include plenty of fibre in my diet’ ($F(3,637) = 3.182, p < 0.05$)

‘I try to eat less fat’ ($F(3,636) = 4.039, p < 0.01$).

In all three cases, those whose ages were closest to their chronological age scored lowest on these items. This pattern also emerged on the item ‘I eat plenty of fresh fruit and vegetables’ although these differences did not reach significance. Interestingly, however, there was no such pattern and no significant differences in the strength of agreement with the statement ‘I am prepared to pay more for foods that don’t contain artificial additives.’

In order to ensure that results were not due to the possible intervention of income, a correlation analysis and an ANOVA across income bands were performed. Neither was significant. Thus, in full support of P31, it appears

that attitudes toward healthy eating have more to do with a person's cognitive age than with their chronological age or indeed their income.

4.7.12 P32: Cognitive Age Is A Useful Segmentation Variable

The section has so far shown that while some consumer behaviour variables are related to cognitive age, the relationship with many others is less than clear. Moreover, this is true for a whole range of demographic, biological, sociological and psychological variables. Thus, it is not sufficient to merely divide the sample into cognitive age groupings in order to segment the older consumer market, as this would not result in segments that differ on a range of these important variables. Rather, cluster analysis was used in an attempt to identify distinct and meaningful groups that would be useful to marketing. Given this overall aim, those variables upon which the clustering was based were:

- Cognitive Age
- Chronological Age
- Venturesomeness
- Market Mavenism
- Materialism
- Nostalgia
- Attitudes toward marketing and consumerism
- Senior discount usage and intentions
- Price consciousness
- Attitudes toward credit
- Health foodie

The distance measure chosen was the Euclidean distance (the square root of the sum of the squared differences in values for each variable), which is the most commonly used measure (Malhotra, 1996). A non-hierarchical method was chosen on the basis that, as Hair *et al.* (1995) note, non-hierarchical methods are more amenable to use with a relatively large sample such as the one here, and results are less susceptible to outliers or the distance measure used. The age and marketing variables listed above

were then transformed into standardized z scores, as recommended by a variety of authors (e.g., Everitt, 1993; George and Mallery, 2003).

The non-hierarchical procedure included in SPSS is the parallel threshold method, which uses an algorithm to identify relatively homogeneous groups of cases. Two disadvantages of non-hierarchical procedures is that the number of clusters must be predetermined and the selection of cluster centres is arbitrary, therefore the results may be affected by the order of observations in the data (Malhotra, 1996). To reduce the latter problem, the technique advocated by SPSS to achieve maximum efficiency was used. This entailed a procedure whereby a random sample of 10% of all cases was used as input into the 'iterate and classify' method to determine the cluster centres. The entire data file was then restored and the initial cluster centres read from the file. In order to alleviate the former disadvantage, the procedure was repeated using various numbers of clusters and the most optimum, based on distance between clusters (Moschis, 1993) and ability to fully differentiate clusters on the most useful variables was selected.

The next step entailed profiling clusters, through the use of ANOVA, Kruskal-Wallis, and Chi-squared techniques, on the basis of variables not included in the initial analysis. These were: income, health, media usage, activity levels, and a range of socio-economic factors. The process of profiling clusters using variables not initially included adds predictive validity to the results. Additionally, the data set was split into two, the cluster analysis was then repeated on each set, and the results compared, which further validated the outcome. The result of these processes was the identification of 5 clusters – or segments - which differed significantly on a range of variables, as shown in tables 4.68 and 4.69. A profile of each cluster follows.

Table 4.68 Age, Demographic, And Health Profile of Clusters

Measure	Cluster					Statistical Test Result	p
	1	2	3	4	5		
n	32	245	40	197	136		
%	5	38	6	30	21		
Age Variables							
Cognitive Age	54	61	48	46	48	F= 150.369	.000
Chronological Age	66	70	59	56	58	F= 240.146	.000
Youth Bias	12	9	11	9	10	F= 2.416	.048
Youthfulness	122	115	123	122	121	F= 7.505	.000
Age Identity: % young	17	4	34	30	18	$\chi^2 = 131.005$	.000
Age Identity: % midage	75	70	66	70	79		
Age Identity: % old	6	26	0	0	3		
Demographics							
Income band	3.8	2.8	3.8	4.2	4.6	F= 32.304	.000
SES % AB	33	18	39	34	55	$\chi^2 = 64.038$	.000
SES % C1	19	34	31	34	27		
SES % C2	22	18	8	10	11		
SES % DE	26	30	22	23	8		
% working	33	8	51	65	63		
% retired	68	88	32	24	32	$\chi^2 = 217.913$	.000
% housewives	0	4	16	11	5		
% Married	66	58	68	79	74		
% single	0	6	5	3	6		
% divorced/separated	9	6	10	12	13		
% Widowed	25	30	18	6	7	$\chi^2 = 69.002$	.000
% Empty Nesters	83	91	65	56	63		
Age oldest child	40	44	33	29	31		
Age youngest child	34	38	28	24	26		
% Grandparents	71	83	62	52	46		
Number grandchildren	3.1	3.8	2.2	1.7	1.5	F=18.017	.000
Age oldest grandchild	18	18	11	9	10	F=27.231	.000
Age youngest g'child	9	9	4	4	5	F=14.399	.000
Health							
Health: % not good	10	7	10	5	3	$\chi^2 = 53.009$	.000
Health: % fairly good	52	54	20	41	20		
Health: % good	39	39	70	54	77		
% with health problem	70	63	48	35	27	$\chi^2 = 64.326$	.000
% health limits a little	52	43	19	33	39	$\chi^2 = 25.384$	.001
% health limits a lot	24	20	15	15	3		

Table 4.69 Consumer Behaviours, Psychographic & Psychosocial Profile of Clusters

Measure	Cluster					Statistical Test Result	p
	1	2	3	4	5		
Consumer Behaviours, Attitudes & Values							
Venturesomeness	9.1	8.8	6.9	10.5	6.5	F=69.820	.000
Market Mavenism	15.9	18.3	16.7	20.4	11.5	F=80.210	.000
Attitudes to marketing	30.4	38.1	30.9	39.2	36.3	F=36.130	.000
Senior discounts	10.3	10.7	7.8	9.5	9.4	F=9.214	.000
Price consciousness	11.5	15.5	15.6	14.3	11.5	F=44.348	.000
Attitudes toward credit	6.8	10.2	7.6	12.6	13.3	F=34.533	.000
Health foodie	20.9	20.2	21.9	19.5	20.0	F=5.634	.000
Materialism	52.8	43.6	35.6	47.9	40.2	F=34.699	.000
Nostalgia	29.5	23.9	26.9	23.0	22.1	F=24.046	.000
Media Usage (Rank)							
TV (daily)	322	375	286	322	245	$\chi^2=52.732$	.000
TV (weekend)	341	369	263	319	250	$\chi^2=45.713$	.000
Radio	312	340	367	286	309	$\chi^2=14.732$	.005
Newspaper (frequency)	377	347	273	320	295	$\chi^2=16.621$	.002
Newspaper (time)	382	359	235	266	307	$\chi^2=42.824$	.000
Magazines	371	329	251	333	308	$\chi^2=11.063$	.026
Internet	277	240	321	384	390	$\chi^2=12.383$	.000
Psychographics							
Holidays abroad	2.1	1.9	2.2	2.5	2.4	F=9.017	.000
Holidays UK	2.6	2.4	3.0	2.4	2.8	F=4.841	.001
Activities: % sedentary	17	21	18	14	7	$\chi^2=19.694$	.012
Activities: % moderate	40	38	26	34	35		
Activities: % energetic	43	42	56	53	58		
Enjoys company	4.0	4.0	4.2	4.0	3.8	F=3.319	.011
Prefers social to TV	4.0	3.59	4.02	3.69	3.73	F=2.565	.037
See children	246	265	280	320	270	$\chi^2=18.045$	.001
See grandchildren	144	168	169	204	186	$\chi^2=10.481$	.033
See friends	330	347	338	291	283	$\chi^2=18.199$	.011
Psychosocial							
Positive affect	3.0	3.2	3.6	3.5	3.7	F=4.398	.002
Negative affect	1.6	0.7	1.1	1.1	0.9	F=5.745	.000
Self esteem	38.8	39.7	42.6	39.2	39.6	F=3.618	.006
Feels lonely	5.3	4.3	3.7	4.5	3.9	F=5.672	.000
Social comparison	2.8	2.6	2.3	2.7	2.5	F=7.835	.000
Self consciousness	21.5	19.5	17.3	20.6	18.6	F=7.594	.000

Cluster 1 (Solitary Sceptics)

This is the smallest segment comprising only 5% of respondents. On average, this group feels 12 years younger than their 66 years, with a cognitive age of 54, making them highly youthful. Three quarters feel middle aged, while 17% still feel young. Only 6% have attained an old identity. They have average incomes for this market, probably as a result of being drawn from all socio-economic classes.

They are the only group to contain no housewives. Rather, while the majority are retired (68%), one third still work. Two thirds are married, one quarter is widowed and only 9% are divorced/separated. Only 17% still have children at home. Typically, their youngest child is low 30s, while their oldest is now reaching a landmark 40. The vast majority of this group (71%) are grandparents, with an average of 3 grandchildren ranging from 9 to 18 years old.

This is the least healthy group. Of the 39% who rate themselves as being in good health, some do have a health problem. Indeed, 70% have a problem, and while for most it tends to limit their activities only a little, health matters do severely restrict 24% of this cluster. Despite the rather bleak outlook concerning health, only 17% are limited to sedentary activities. Rather, they tend to be moderately active (40%) or have energetic pastimes (43%). They also manage still to take an average of 2 holidays abroad per year, which is normal for this market. They take slightly more UK breaks.

This is the most sceptical group in their attitudes toward marketing and consumerism, reflected in their lack of market maven tendencies, only moderate degrees of venturesomeness and, despite being on only average incomes, they display low levels of price consciousness and are averse to credit. That said, they are not averse to senior discounts. In terms of media usage, they are average users of TV and relatively low users of radio and the Internet. However, they are the highest readers of newspapers and magazines.

This group is the most materialistic, the most nostalgic, and after self-respect they value security and a sense of accomplishment. A sense of belonging is the least important value to them. Likewise, they place less emphasis on warm relationships with others than do any other group. At the same time, they have the least contact with their families and are the loneliest and the least happy (lowest levels of positive affect) of all the groups. They also demonstrate the lowest levels of self-esteem and the highest levels of social comparison and self-consciousness. Given this situation, it is no surprise that this group has the highest levels of negative affect (unhappiness).

Cluster 2 (Bargain Hunting Belongers)

This is the largest of all the groups, comprising 38% of respondents. They are also the oldest cluster, with a chronological age of 70, and a cognitive age of 61. Their youth bias is therefore only 9 years, and their degree of youthfulness (115) is therefore the least of all the groups. This is reflected in their age identities, where only 4% feel young, and, while 70% still feel middle aged, this cluster contains by far the highest number of people who feel old (26%).

Perhaps reflecting their older age, this is the poorest segment, and contains far less managerial and professional people than any other. It is drawn mainly from people whose jobs were clerical or manual, the majority of whom are now retired (88%). Indeed, only 8% of this group are still working. This cluster contains the least married people (58%) as almost one third (30%) are widowed, 6% are divorced/separated and 6% have never married. This group therefore contains the highest number of people living alone, as 91% are empty nesters. This is unsurprising, given that their children are typically aged 38-44. This group has the largest number of grandchildren (average of 4 each), whose ages range from about 9 to 18.

The number rating their health as good is identical to cluster 1 (39%), but slightly more rate their health as fairly good (54%) and less are in poor

health (7%). Indeed, while 63% of this group do have a health problem, only 20% of these feel it limits them a lot, and the remaining 43% suggest that their limitations are relatively minor. Thus, despite its older age, this group feels healthier than cluster 1.

While this segment is only moderately venturesome, it displays above average maven tendencies, and has relatively positive attitudes toward marketing and consumerism, although the people here are only moderately materialistic. Probably due to their restricted incomes, this group displays high levels of price consciousness, and despite their older ages they are less adverse to credit than several other clusters. They display the most positive attitudes toward senior discounts.

This group are the highest users of TV, and are relatively high users of radio, newspapers and magazines. They are, however, the group that displays the lowest levels of Internet usage.

Despite being the oldest, they are by no means the most nostalgic. Fun and enjoyment is their least important value; this group places greater importance on a sense of belonging than any other. Perhaps this, and the fact that many live alone, are the underlying reasons for them seeing their friends more frequently than any other cluster.

Being the oldest groups, it is perhaps unsurprising that it contains the highest percentage (21) of people with only sedentary activities.

Nevertheless, 38% are still moderately active, and 42% have energetic pastimes. They do, however, take fewer holidays than any other cluster.

They enjoy having people around, and frequently socialise with their friends. They are also close to their families, as three quarters see their children at least once per week.

In terms of psychosocial factors, this group displays only average levels of social comparison, public self-consciousness, and self-esteem. They also display relatively low levels of positive affect. At the same time, however,

this group displays the lowest levels of negative effect – perhaps suggesting an element of ‘stiff upper lip.’

Cluster 3 (Self Assured Sociables)

This is another small segment, comprising only 6% of respondents. While this cluster’s average chronological age is 59 years, they are cognitively only 48, and are therefore the group with the highest levels of youthfulness (123). This is reflected in their age identities, which are the youngest of all the clusters, with 34% still feeling young and nobody feeling old.

They are drawn from a range of socio-economic statuses, as 39% are ABs, but at the same time 22% were unskilled workers. This has resulted in a segment with average incomes, which is also possibly due to the fact that only half are still working, one third are retired, and the remaining 16% are housewives, which is the largest percentage of housewives of all the groups. Married people comprise 68% of this group, which contains far less widows than clusters 1 and 2. Nevertheless, 18% are widowed, which is a relatively high number for a relatively young cluster. The remaining 15% are split between singles (5%) and divorced/separated (10%). While their children are typically aged 28-33, one third are still full nesters. Nevertheless, 62% are already grandparents, with at least 2 grandchildren. Unlike the previous clusters, these grandchildren are still preschoolers and primary schoolers, although the oldest are about to enter secondary school.

This is a fairly healthy group, with 70% enjoying good health and a further 20% rating their health as fairly good. Almost half, however, do have a long-standing health problem, although only 15% of these are limited a lot, and a further 19% limited a little. Over half (56%) have energetic activities, and a further quarter is moderately active. Nevertheless, 18% of this cluster has only sedentary activities.

They are a social group who enjoy having people around more than any other, and much prefer to go out with others than stay at home at watch

TV. They see their friends and family relatively frequently: 84% see their children, 75% see their friends, and 64% see their grandchildren at least once per week. Perhaps because they appear to be social beings, they are less lonely than any other segment and are relatively low users of TV; the time spent watching television is well below average for this sector. Likewise, they are the lowest users of newspapers and magazines, and only moderate users of the Internet. In contrast, they do like the radio, and are the highest users of this medium.

As consumers, they demonstrate relatively low levels of venturesomeness, and below average levels of market mavenism. They are highly price conscious, and sceptical towards credit. They hate the idea of senior discounts. They do, however, care about health food more than any other segment.

In terms of values, these are by far the least materialistic. At the same time, a sense of accomplishment is more important to them than to any other segment. That this group places such importance on a sense of accomplishment is no surprise, given that they demonstrate the highest levels of self-esteem, and the lowest levels of social comparison and the lowest levels of public self-consciousness. Clearly, this segment is self-assured.

Cluster 4 (Positive Pioneers)

This is a sizeable segment, comprising 30% of respondents. It is the youngest in terms of chronological age (56), cognitive age (46) and age identity (30% feel young, 70% middle aged, nobody feels old). It is a relatively affluent segment, with one third drawn from ABs and a further third from C1s. Two thirds are still working, one quarter is retired, and a further 11% are housewives.

This group contains the highest proportion (79%) of married people, with twice as many divorced/separated people (12%) than widows (6%). It also

has the fewest empty nests, with 44% still having children, typically aged 24-29, living at home. Nevertheless, more than half (52%) are grandparents to small children.

Even though this group are younger than segment 3, far less (54%) rate their health as good, and 41% prefer to rate their health as fairly good, suggesting relatively minor health problems in this cluster. Indeed, of the 35% who do have a long-standing health problem, only one third feel it limits them a lot.

More than half (53%) enjoy energetic activities, and a further third (34%) is moderately active. They also see a great deal of their families, and have more frequent contact with their children and grandchildren than any other segment. They also take the most holidays abroad.

As consumers, they are by far the most venturesome, and display far greater market maven tendencies than any other group. They also have the most positive attitudes toward marketing and consumerism, and display relatively high levels of materialism. They have positive attitudes towards credit, and are not particularly price conscious, although they are still unsure about senior discounts.

While they are the lowest users of radio, and are only average users of television and newspapers, this group do consume more magazines than is typical, and they are also relatively high users of the Internet.

In terms of their psychosocial profile, they display only average positive effect, and average negative effect. Likewise, they display average levels of self-esteem. However, they do tend to be aware of others, and demonstrate above average levels of both attention to social comparison and public self-consciousness.

Cluster 5 (Cautious Comfortables)

This final segment comprises 21% of respondents. It is another fairly young group, with an average chronological age of 58, and a cognitive age of 48. It contains the highest percentage of people who feel middle aged (79%) and 18% feel young. Only 3% have already attained an old age identity.

This is by far the most affluent cluster, with the highest incomes and the largest percentage of high socio economic groups. More than half (55%) are professionals, and only 8% are unskilled.

The percentage of working people (63%) is similar to that of cluster 4, but there are more retired (32%) people and fewer housewives (5%) in this segment. Three quarters are married, and 13% are divorced/separated. There are an almost equal number of widows (7%) and singles (6%). Almost two thirds (63%) are empty nesters, and their children are typically aged 26-31. Nevertheless, less than half (46%) are grandparents, and of those that are they least numbers of grandchildren than any other cluster.

This group is by far the healthiest. More than three quarters (77%) rate their health as good, and only 3% are in poor health. Only 27% have a long-standing health problem, and of these a tiny fraction (3%) find it limits their activities a lot.

Unsurprisingly, this is the most active segment, with 58% partaking in energetic activities on a regular basis, and only 7% having sedentary pastimes. They also take more holidays, both abroad and in the UK, than is usual. However, they do not appear to be particularly sociable: they see their friends less often than any other group, and enjoy having people around less than any other cluster. They tend to feel somewhat lonely.

That said, this group do still have frequent contact with their families, and place more importance on warm relationships with others than do any other cluster. At the same time, they care least about being well respected,

display the lowest levels of nostalgia, and below average levels of materialism.

In terms of their consumer behaviours, they are polar opposites to cluster 4. This segment is the least venturesome and displays by far the lowest market maven tendencies than any other. They do, however, display low levels of price consciousness, and the most positive attitudes towards credit. They do not have strong feelings about marketing and consumerism, and are still unsure about senior discounts.

This group contains by far the lowest users of television, relatively low users of radio, and they are relatively low users of newspapers and magazines. They do, however, use the Internet more than any other segment.

The psychosocial profile of this group is not particularly striking. While it displays the highest levels of positive effect, it has average negative effect and average levels of self-esteem. It displays relatively low levels of both social comparison and public self-consciousness.

The clusters represent segments of differing sizes, as shown in table 4.70.

Table 4.70: Segment Sizes

Segment Number	Percent	Size
1	5	864,760
2	38	6,572,176
3	6	1,037,712
4	30	5,188,560
5	21	3,631,992

4.7.13 Summary of Analysis of Consumer Behaviour Variables

This section considered a host of consumer behaviour variables. However, of the 15 measured, only 5 (consumer venturesomeness, usage intentions toward senior discounts, internet usage, attitudes toward health eating, and values) were clearly related to cognitive age. Constructs within a further variable (attitudes toward marketing and consumerism) were also related to cognitive age. However, no relationship was found between cognitive age and market mavenism, materialism, nostalgia, TV usage, radio usage, newspaper reading, magazine reading, price consciousness, or attitudes toward credit.

Given this situation, it was clear that cognitive age alone was not a sufficient basis upon which to segment the older consumer market. However, using cluster analysis with cognitive age as one of the input variables, it was shown that the older consumer market does indeed lend itself to segmentation. Moreover, the identification of 5 segments that differ significantly on a large number of variables, many of which were not part of the initial cluster analysis, lends credibility to the segmentation study.

4.8 CHAPTER SUMMARY

This chapter presented the results of the data analysis. It began by demonstrating that the sample, comprising 650 adults aged 50-79 is representative of the UK population in terms of 5-year age bands. Both genders, every marital status, and every work and socio-economic status, are represented.

For ease of reference, table 4.71 provided a summary of the findings relating to each proposition.

Table 4.71 Findings Relating to Each Proposition

Proposition		Outcome
P1	The majority of people aged 50-79 will reject the status old.	Supported
P2	The majority of consumers aged 50-79 will have a self-perceived age that is several years younger than their actual age, and this discrepancy will increase with advancing chronological age.	Supported, although youth bias peaks mid-late 60s
P3	The older a person's chronological age, the older their self-perceived age is likely to be.	Supported
P4	Gender is unlikely to be related to self-perceived age.	Supported for cognitive age, females have younger age identities than men
P5	Retirement per se is unlikely to be related to self-perceived age.	Supported for cognitive age, retired persons have older age identities than non-retired
P6	Persons with different marital status will have different self-perceived ages.	Supported: married people cognitively older, widows cognitively younger
P7	The ages of children and the presence and ages of grandchildren are related to self-perceived age.	Children & grandchildren do not add to cognitive age
P8	Persons with higher income are likely to have younger self-perceived ages than those with lower income.	Unsupported
P9	Persons with relatively younger self-perceived ages will participate in relatively energetic activities, while persons with older self-perceived ages will participate in more relatively sedentary activities.	Supported
P10	Self-perceived age is unrelated to measures of social relations.	Mixed support. Many social variables unrelated, but active social lives related to younger self-perceived age
P11	Self-perceived age will be associated with a measure of social comparison	Unsupported
P12	Respondent's who rate their health as good will have younger self-perceived ages than those who rate their health as poor.	Supported
P13	Physical manifestations of ageing are as salient as social and psychological variables for self-perceived age.	Supported
P14	Of all dimensions of self-perceived age, look-age will correspond most closely with chronological age.	Supported
P15	People who partake in vigorous exercise on a regular basis will have younger feel, look, do, and interest ages than those who do not.	Supported for all dimensions other than look age

	Proposition	Outcome
P16	Self-ratings of cognitive abilities will correlate with self-perceived age.	Supported in terms of general measure of mental shape, unsupported for other measures
P17	Subjective well-being and self-perceived age are inversely related.	Supported for positive affect, and for age identity and overall subjective well-being
P18	Self-perceived age and self-esteem are inversely related.	Supported
P19	Self-perceived age and self-confidence are inversely related.	Supported
P20	Self-perceived age and public self-consciousness are inversely related	Unsupported
P21	Self-perceived age will correlate with a venturesome trait.	Supported
P22	Self-perceived age will correlate with market mavenism.	No support in terms of cognitive age, mavens found to have younger age identities
P23	The central value basis of older consumers will be related to their self-perceived age.	Supported
P24	Materialism will correlate negatively with self-perceived age.	Unsupported
P25	Consumers with older self-perceived ages will have different attitudes toward marketing and consumerism than their younger-feeling counterparts.	Unsupported
P26	Consumers with younger self-perceived ages will have different usage intentions toward age-based sales promotions than those who feel closer to their chronological age.	Supported in that different groups have different usage intentions – middle aged demonstrate highest usage intentions
P27	Attitudes toward the past will correlate with self-perceived age.	Unsupported
P28	Media usage will correlate with self-perceived age.	Unsupported for all media other than internet usage – cognitively younger higher users of internet
P29	Price consciousness will correlate with self-perceived age.	Unsupported
P30	Attitudes toward credit will correlate with self-perceived age.	Unsupported for cognitive age, but younger age identities associated with more positive attitudes
P31	Self-perceived age will correlate with attitudes toward healthy eating.	Supported
P32	The older consumer market in the UK can be segmented using a variety of variables, including cognitive age	Supported

The chapter proceeded with an analysis of those demographic variables that might be important in relation to self-perceived age, and found, as expected, that chronological age is the most important variable. In relation to cognitive age, next in importance are progeny variables, while it was also found that being married appears to add years to a person's cognitive age. These variables emerged as more important predictors of cognitive age than gender, a number of retirement variables, and even income and social class. While a number of different variables were related to age identity, it was noted that because of the nature of this variable, analysis is somewhat limited because only non-parametric statistical techniques can be utilised.

The chapter then considered the relationship of a host of sociological variables to self-perceived age, and found that activity levels and seeing grandchildren were important. In contrast, a range of other social variables did not emerge as important.

Results pertaining to biological, or physical ageing were then considered. As expected, self-ratings of health clearly correlated with cognitive age. The analysis then turned to those things that reminded respondents of the ageing process, together with those actions taken to feel younger, where it was clearly shown that physical manifestations of ageing are as salient as social and psychological reminders. The individual dimensions of cognitive age were then considered, where it was confirmed that look age is the dimension that is most closely related to chronological age, although this finding does not hold true for those who partake in vigorous exercise on a regular basis.

The analyses of psychological variables revealed some cognitive abilities are related to self-perceived age. Additionally, while subjective well being overall was not related to cognitive age, both positive affect and negative affect emerged as important predictors. In contrast, self-esteem and self-confidence, while associated with cognitive age at the univariate level, were not significant predictors in a multivariate analysis. Finally, public

self-consciousness does not appear to be important to cognitive age at any level.

This chapter then considered a host of consumer behaviour variables, where it was found that many were not related to cognitive age. Thus, it became clear that cognitive age alone was not a sufficient basis upon which to segment the older consumer market. However, using cluster analysis with cognitive age as one of the input variables, it was shown that it is possible to segment the older consumer market into five distinct segments that differ significantly on a large number of demographic, social, physical, psychological, and attitudinal and behavioural variables.

The thesis now turns, then, to the final chapter, which incorporates a full discussion of the findings presented here, together with the implications for both marketing practice and further research.

CHAPTER 5

DISCUSSION, CONCLUSIONS & IMPLICATIONS

5.1 INTRODUCTION

This is the final chapter of this thesis. Whilst the previous chapter presented the analyses of the data, it did not discuss the results, nor did it suggest any practical recommendations based upon them. It is the purpose of this chapter to do so.

The chapter begins with a discussion of the implications of the research relating to self-perceived age and marketing to older adults in general. Then, once again taking each proposition in turn, the results of the research are analysed in relation to existing literature and theories. In parallel, the contributions to knowledge are addressed. Then, utilising a marketing planning framework, the implications of the research findings for marketing practice are discussed.

Wider public policy implications are then presented, before the chapter outlines a research agenda, using the implications for further research that the current study has identified. The chapter concludes with a final summary of the thesis.

For ease of reference, the relevant proposition number, sections in the literature review, and data analysis chapters are provided in parentheses.

5.2 DISCUSSION

5.2.1 Overall contributions to research

The overall contribution made to the fields of self-perceived age and marketing to older consumers by this research is threefold. First, despite the long history of self-perceived age research by gerontologists, the relatively new application of

this phenomenon to marketing means that more research into the older consumer was called for, particularly in light of the fact that “there is no precedent for the present generation” (Barak, 1998, p. 216). This was particularly true in the UK, where, apart from the author and her colleagues’ small-scale study (Sudbury, 2004; Sudbury, Simcock and Wright, 2004), only two self-perceived age studies had ever been conducted (Szmigin and Carrigan, 2000; Thompson *et al.*, 1990). Additionally, this is the first study to measure both age identity and cognitive age in a sample of older UK adults, and it is the largest and most comprehensive study into self-perceived age ever conducted in Britain. Moreover, it adds to the literature pertaining to segmentation of the mature market, and to the general consumer behaviour literature relating to older adults. It is one of the largest empirical studies into the consumer behaviour of older adults ever conducted in the UK.

Second, as Jowell (1998) observes, ‘the importance and utility to social science of rigorous cross-national measures is incontestable’ (p. 168). Yet, despite the pleas by American authors for perceived age studies to be conducted in other countries or cultures (Barak, 1998; Henderson, Goldsmith and Flynn, 1995; Johnson, 1995, 1996; Markides, 1980; Montepare, 1996a; Van Auken and Barry, 1995; Van Auken, Barry and Bagozzi, in press), there was still a paucity of studies that utilised self-perceived age in this country. This study therefore adds assurance that the cognitive age measure is applicable outside the USA.

Third, as Alwin, Braun, Harkness and Scott (2002) observe, different social structures in terms of politics, economics, social inequalities, and culture pose problems for the validity of measures. However, these authors insist that a common understanding of functional equivalence of research items is when results stand in identical relationships to the intended theoretical dimensions, which, they suggest, is a prerequisite for theory testing and for comparing nations. As will be specifically shown, many of the results from this research are comparable to those found in the US, and/or were expected on the basis of the propositions which were derived from previous research and theory. Thus, this research contributes confidence in the validity and reliability of the cognitive age scale. Construct validity is demonstrated because results suggest

that the measure has behaved in a theoretically sound manner. Moreover, statistical analysis using a range of methods demonstrated that the scale is reliable.

5.2.3 Socio-Demographics

Rejection Of The Status Old (P1, 2.3, 4.3.1)

The finding that the majority of respondents reject an old age identity was expected. However, the amount of rejection, in that only 1 in 10 respondents admitted to feeling old or elderly, is even greater than many of the studies conducted outside the UK. Typically, age identity studies report levels of rejection of an old age status of 40-80% (Breytspraak, 1984; Bultena and powers, 1978; Bengston, Bengston, Kasschau and Ragan, 1977; Bloom, 1961; Busse, Jeffers and Obrist, 1957; George, Mutran and Pennybacker, 1980; Guptill, 1969; Jyrkila, 1960; Kutner, 1956; Markides and Boldt, 1983; Puglisi and Jackson, 1978; Stephens, 1991; Tuckman and Lavelle, 1957; Tuckman and Lorge, 1954; Zola, 1962), and only two known studies (Barak, 1987; Barak and Stern, 1985) report higher levels of rejection, perhaps because of the lower age parameter used in them. Clearly, direct comparisons are difficult, given differences in the ages of samples, and the years in which the research was conducted. Nevertheless, in general it can be concluded that the rejection of an old age status is at least as, if not more, prevalent in the UK than has previously been found in the USA.

Thus, it may be that the ideology of age in the UK is even more negative than in the USA. Lannon's (1994) assertion that the British are even more out of touch with our old than any other old world culture may be true. Indeed, some of the US studies cited above were conducted several decades ago (more recent studies of self-perceived age tend to use alternative measures), so if anything one would perhaps expect a reduction in old age denial, if improvements in negative stereotypes and an acceptance of older age as a legitimate and productive state had occurred. However, a recent study (Alreck, 2000) revealed *no* significant change in age role norms and adherence to these since 1980. Thus, it seems as

though respondents are defending their identities by rejecting negative labels found in society. On the other hand, as George, Mutran and Pennybacker (1980) suggest, if negative stereotypes still abound in a culture, then it follows that older respondents will be reluctant to admit that they consider themselves old. These authors contend that this situation may result in systematic bias in response to the age identity question, because of the influence of social desirability. Equally plausible, however, is Nuesell's (1992) assertion that 'old' is merely a point on a continuum of longevity, and as life expectancy has increased, so too has the chronological notion of 'old'.

A youth bias that increases with advancing chronological age

(P2, 2.3.6, 4.3.2)

The expected youth bias of almost 10 years was shown to exist. This is in line with the author's previous study, and with the only other empirical study into cognitive age to be conducted in the UK (Szmigin and Carrigan, 2000). Whilst a number of studies conducted outside the UK and the US show the bias toward a more youthful self-perceived age to be less pronounced (Chua, Cote and Leong, 1990; Togonu-Bickersteth, 1986; Uotinen, 1998), findings are comparable to studies of older Americans, which typically report differences between actual and cognitive age to be between 8 and 12 years (Barak, 1998; Barak and Rahtz, 1999; Sherman, Schiffman and Mathur, 2001; Van Auken and Barry, 1995). Once again, therefore, in terms of the degree of youth bias, it would seem that the tendency to perceive oneself as youthful is at least as prevalent as in the US.

Turning to the numbers of respondents who perceive themselves to be youthful, 3 American studies (Barak and Schiffman, 1981; Goldsmith and Heiens, 1992; Johnson, 1995, 1996) allow for direct comparisons. Typically, these American studies found that between 56% and 74% of respondents in their 50s, between 70% and 80% of those in their 60s, and between 72% and 80% of those in their 70s have cognitive ages that are younger than their chronological age. In comparison, this study found these percentages to be 84%, 92%, and 93% respectively. Clearly, then, at least in terms of those American studies that allow for such direct comparisons, these findings suggest that an even greater number

of older UK adults in comparison to older Americans perceive themselves to be younger than their chronological age.

The finding that youth bias increases only up to a point, but then the increase ceases to be significant, is consistent with the author's previous study (Sudbury, 2004; Sudbury, Simcock and Wright, 2004). However, this finding is not consistent with American studies, which clearly suggest that the youth bias becomes more pronounced with advancing chronological age (Barak and Schiffman, 1981; Goldsmith and Heiens, 1992; Johnson 1996, 1998; Kastenbaum *et al.*, 1971; Underhill and Cadwell, 1983). Thus, while the numbers of people who report youthful cognitive ages are greater than those typically found in American studies, the mean youth bias is similar because the bias tails off in the UK, while the trend typically continues in American research. Perhaps, then, there comes a point to the older UK adult beyond which they will not go in terms of youth bias (typically between 10 and 11 years), which is a threshold their USA counterparts do not perceive.

The finding that youth bias is significantly greater for people whose chronological age falls in the latter half of a decade than it is for those whose age falls into the first half of a decade is an interesting one, and is worthy of further research. Perhaps those who are approaching the end of a particular decade resist ageing to a greater extent than those who have more recently experienced a landmark birthday. While very little work has been done on this area, this interpretation of these results seem to contradict the one study that has considered changes in self-perceived age in relation to nearness of birthdays. Montepare (1996a) ascertained that older adults displayed *less* youthful self-perceived ages the nearer their birthdays. However, this study was concerned with birthdays *per se*, while the pattern reported here suggests that nearness to landmark birthdays (50, 60, 70) may be of particular importance. Thus, there is a need for further research in this area, to determine the underlying reasons for the differences in youth bias which exist between the first and second half of each age decade.

Self-perceived age increases with advancing chronological age

(P3, 2.4.1, 4.3.3)

Results pertaining to proposition 3 clearly showed that the data behaved as expected. Moderate to high positive correlations were found between cognitive and chronological age, although the range of cognitive ages (demonstrated in the standard deviation figures of table 4.15) clearly increased as the age of the respondent increased. More important here is the finding relating to age identity, in that it is not until the seventh decade that substantial numbers (36%) begin to admit to feeling old. Thus, this finding fully supports the body of evidence which suggests that the age at which old age is perceived to begin increases as the age of the respondent increases (Age Concern, 2005; Cameron, 1969; Drevenstedt, 1976; Kogan, 1979; MetLife, 2005; Seccombe and Ishii-Kuntz, 1991; Tuckman and Lorge, 1953a, 1953b; Zepelin, Sills and Heath, 1987). Indeed, these findings lend credence to Salthouse's (1991) argument that 'classifications such as young, middle-aged, old – or the increasingly popular but oxymoronic term young-old – may be almost completely arbitrary (p 52).

Gender (P4, 2.4.2, 4.3.4)

The absence of any significant differences between the cognitive ages of males and females, true both for cognitive age overall and for all its component parts, is consistent with the large body of American research outlined in section 2.4.2 of this thesis. Indeed, the tiny (0.2 years) differences found in youth bias suggest both men and women have identical perceptions regarding cognitive age. This finding is also consistent with the authors' previous study, but is contrary to the other UK study (Szmigin and Carrigan, 2000), which found males to have significantly older cognitive ages than females. Quite why gender differences emerged in that study is unknown. Indeed, Barak suggested in 1998 that research findings could be generalised across men and women, given the conviction that cognitive age does not differ across gender. However, Szmigin and Carrigan's (2000) study introduced doubt into this conviction in terms of the UK, and it was possible that gender differences existed in this country. Now, however, with these results to add credence to the author's earlier work, it

seems safe to state that Barak's suggestion is a sound one, and is applicable in this country, too.

There are several potential explanations why there should be no cognitive age differences between genders. First, there is the possibility that a levelling process occurs, because both sexes have to cope with constant reminders of the aging process (Chappell and Havens, 1980; Sherman and Schiffman, 1984). Indeed, based on ethnographic literature, Keith (1990) suggests that in most social and cultural settings old women age with less difficulty than old men. Possible reasons for this include the greater likelihood of a woman drawing comfort from children and grandchildren than a man; that because women live out their lives within the domestic domain, the physical requirements of women's tasks are more adaptable to ageing; and that women are more experienced than men at adjusting to constraints imposed by such physical conditions as pregnancy, lactation, and menstruation, so that bodily changes associated with aging are less traumatic for women. Such a viewpoint does not necessarily disagree with the double standard of ageing hypothesis. Rather, it demonstrates a possible reason why, despite the double standard, there are no differences in terms of cognitive age. Both sexes feel about 10 years younger than their actual age: it is merely the way in which they arrive at this perception that differs. For women, ageing reminders may come from the menopause and the growth of their children. For men, the most salient reminders may come from work and retirement, loss of physical strength, and perhaps the knowledge of less longevity than their female counterparts.

Second, androgyny may account for the absence of any gender differences. It is well documented that in mid-life there begins a change that is marked by males showing feminine traits, whilst women demonstrate male traits. This sex-role reversal results in the older husband becoming more dependent on his wife while the older woman becomes more managerial and relatively tough-minded (Gutmann, 1979; Smith and Moschis, 1990). At the same time, the older woman's self-esteem is enhanced (Turner, 1979). Perhaps, therefore, these psychological changes also produce a levelling effect, in that the ageing woman

finds herself with a new ability to cope with the double standard found in society.

Finally, it may be that although there are essential differences in the way men and women perceive and experience ageing, the heterogeneity among women may be greater than between men and women. For some women, the increasing freedom from family responsibilities may be of more value than perceived sexual attractiveness. For others, it is possible that older age brings a relief from the sexual oppression they have endured as younger women (Safilios-Rothschild, 1979). Further, as Berkun (1983) found, not all women find changes to their appearance traumatic. It is possible that for those women who have never thought of themselves as particularly attractive, there comes a relief in dropping an unsuccessful role. Thus, as Bernard, Meade and Tinker (1993) suggest, there are many differences among women that may either exacerbate or ameliorate their situation. These differences include age cohort, class, ethnicity, marital status, and household composition.

Nevertheless, the clear differences in age identity between the genders supports the body of literature that suggests that society perceives women to age more quickly than men (Drevenstedt, 1976; Jackson, 1974; Kogan, 1979; Lipka, 1987; Seccombe and Ishii-Kuntz, 1991; Shanas, 1950; Staats, 1996; Zepelin, Sills and Heath, 1987). Thus, while both genders perceive themselves to be about 10 years younger than their actual age, the *label* old or aged is rejected by a greater number of females than males. If, as Sontag (1972) suggests, society is much more permissive about ageing in men, then it is unsurprising that more women claim to feel young, and less claim to feel old, than their male counterparts. It seems that admitting to being an old woman is worse than admitting to being an old man.

Thus, the different findings between the two different self-perceived age measures are not necessarily contradictory: cognitive age provides a holistic assessment of how old a person perceives themselves to be, while age identity assesses the age category an individual identifies with.

Retirement (P5, 2.4.3, 4.3.5)

The results clearly showed that cognitive age is not associated with retirement. This is true in terms of retirement status, in terms of the nature of retirement (i.e., voluntary or enforced), and in terms of length of retirement. Thus, there is no support for the theory of disengagement (Cumming and Henry, 1961). Rather, results suggest that retired respondents have either found substitute roles or activities to replace the work role, in which activity theory (Havinghurst and Albrecht, 1953; Lemon, Bengston and Peterson, 1972) is supported, or that those who assume retirement will lead to severe role loss have overestimated its effects, in which case continuity theory (Atchley, 1989) is supported.

Two perspectives suggest that the preconception of retirement as marking old age and a period of grave loss may be incorrect. The first relates to the possible differences in the attitudes toward retirement between retirees and younger persons. Kogan and Wallach (1961) found retirement, as a concept, to be evaluated more favourably by older persons (aged 47-85) than younger persons of college age. These authors suggested that the negative evaluation by younger people might be due to the assimilation of the retirement concept to the many negative stereotypes associated with old age. That there is a possibility that people misconceive retirement is borne out by Streib and Schneider's (1971) longitudinal study. Before retirement, subjects were asked if retirement would make them feel older, and responses were later compared with actual post-retirement evaluations. Approximately half of all pre-retirement respondents correctly felt that retirement would make no difference to their age self-perceptions. However, a greater proportion had felt that retirement would make them feel older than was the actual case. In other words, at least for some respondents, the perception of retirement was actually more negative than reality. Indeed, Tynan and Drayton (1985a) noted that their retired respondents adopted a more positive attitude toward retirement than did those who were still working, whilst a recent survey (IndependentAge, 2005) found young people are more concerned about old age in general than are the older generation itself.

Similarly, some studies have expected to find retirement associated with loss, and results have failed to support such expectations. For example, Atchley

(1976b) found no support for the assumption that a high positive work orientation would produce dissonance in his study of retired women, while George and Maddox (1979), in a 5-year longitudinal study, also found that retirement was not accompanied by the loss of a sense of general well being among men. Thus, the general assumption that the termination of the work role is likely to be crucially important is simply not borne out in a number of studies.

A second perspective points to a potential change in attitudes toward retirement between cohorts. Foner and Schwab (1983) suggest that since the 1950s major changes have occurred in the social context of retirement. Such changes include increases in positive orientations toward retirement, the redefining of retirement as a right earned after a lifetime of employment, and the increased acceptance of retirement as a role. Moreover, the increase in numbers of retired persons may make adjustment to the role easier for today's retirees than for previous cohorts, while leisure has become increasingly important. Thus, there appears to be growing acceptance of retirement as a legitimate state of life (Lowry, 1985) while at the same time the emphasis on work as the primary source of meaning and satisfaction may no longer have its original significance in society (Maddox, 1968b).

Moreover, those writings that suggest a lack of differences in attitudes toward retirement between voluntary and enforced retirees is also unsurprising. Foner and Schwab (1983) reviewed the evidence on some widely held beliefs about retirement, and uncovered the common misconception that retirement is forced upon people. Certainly, the tendency to portray retirees as victims can be found in the gerontology literature (for example Blau, 1973). However, in reference to the increase in voluntary retirement, Quinn and Burkhauser (1990) observe, "if retirement from the labour force marks the passage into old age, then the old among us have grown considerably younger in recent years" (p.307). Thus, this research found no support for Seltzer's (1976) suggestion that the more an individual views the scheduling of events (such as retirement) as under their control, the more likely they would be to perceive themselves as younger.

These findings are important for the advancement of knowledge for a number of reasons. First, retirement has never been measured in relation to cognitive age in the UK before. Second, given the lack of consensus among self-perceived age studies in relation to the effects of retirement, and the fact that this is one of the first studies that considers a range of retirement variables, such as voluntary and enforced, and length of retirement, these results add to the debate. Finally, the results have potential importance in terms of how retirement is assumed to affect the older consumer, as some authors have suggested that retirement may be a useful segmentation variable (Burnett, 1989; Carrigan, 1998a, 1999; French and Fox, 1985; Satterthwaite, 1990; Timmerman, 2004). At least in terms of cognitive age, these conjectures are clearly unsupported.

In terms of age identity, the major finding of these results is that the vast majority of older consumers do not feel old – this is true even once retirement age, with its potential social significance, is reached. Rather, the majority of older people maintain a middle-aged identity, even though slightly fewer retirees feel young and slightly more feel old than their non-retired counterparts. Thus, there was little evidence of a role loss or identity crisis, experienced through the adoption of an old age status, as suggested by some of the literature. The adoption of an old age identity by more retired respondents is likely to be due simply to the effects of chronological age. Indeed, many of the differences in results between the two self-perceived age measures are likely to be due to these effects, as the age identity scale, being ordinal, lends itself to much less powerful statistical analysis than does the cognitive age scale.

Marital Status (P6, 2.4.4, 4.3.6)

The finding that married people have the oldest cognitive age once chronological effects had been accounted for was unexpected, given that previous literature outlined in section 2.4.4 clearly found either no differences due to marital status, or found that married people have younger self-perceived ages than others (Barak and Rahtz, 1990; Mutran and Retitzes, 1981; Wilkes, 1992). However, as this section explained, a difference in results may be due to different classification systems, as little uniformity exists between studies.

That widows actually demonstrated the highest youth bias, and the results of the regression analysis that widowhood is associated with a younger cognitive age, does lend support for the majority of the literature outlined in section 2.4.4, which, contrary to expectations, have not found widowhood to be associated with an older self-perceived age. Perhaps, as Blau (1956) suggested, because the death of a marital partner is a natural event, rather than a socially induced one, it does not have great enough implications to affect self-perceived age.

An alternative possibility as to why widowhood is not, in the main, associated with an older self-perceived age may be due to the heterogeneity of widows. For example, Lopata (1972, 1973a) contends that the smaller the family unit, the more traumatic the experience of widowhood will be, while social class also adds complexity to widowhood. Lopata (1973b) identified three different types of widows: the 'traditional widow' whose loss does not seriously affect their lifestyle or identity; the 'social isolate' who exhibits the inability to effectively reengage in society; and the 'modern widow' characterised, after a period of intense grief, by eventual adjustment to a new identity and involvement in society. For the modern widow, it appears that their loss can result in what van den Hoonaard (1997) terms 'identity foreclosure' which strips a woman of her identity in terms of a sense of self. Eventually, however, these widows are able to develop new identities, through mastering new tasks and learning to function in their new world, which, at least for some, can eventually result in a new identity that is preferable to the one a woman had as a wife. It would be expected, therefore, that the traditional widow would experience few changes in self-concept, the social isolate would experience many changes, while the modern widow can eventually find a sense of self that is at least as strong as before her loss. The effects of widowhood on self-perceived age, therefore, may well depend upon the way in which the widow copes with the loss of a spouse. The paucity of research regarding widowers, largely due to the fact that widowhood confronts women far more than men (Streib and Binstock, 1990) makes generalisations about widowers difficult.

The finding that there appears to be a stronger relationship between cognitive and chronological age for singles than for any other marital status is worthy of further investigation. This result is clearly in line with Gubrium's (1976) assertion that single people view the ageing process differently to others. Certainly, without the growth of children and grandchildren to act as ageing reminders, it seems intuitively obvious that the self-perceived ages of older single people would be more reliant on chronological age than would be the case for another marital status.

Given the small numbers who made up single (30) and divorced/separated categories (62) here, a full regression analysis using either of these statuses as a dummy variable was not viable. Thus, there is clear need for further research into this area, particularly in light of a potential increase in divorce rates of older adults (Falkingham, 1997), and the potential implications for the family life cycle concept. As Heslop and Marshall (1991) point out, there is a major gap in the consumer behaviour literature regarding husband and wife decision-making among older consumers, because research on husband-wife consumer decision-making has not specifically investigated couples over the age of 50. Given that older husbands tend to become more involved in day-to-day household budgeting, begin to become more involved in household chores, and develop a renewed interest in leisure pursuits with their wives (Mason, 1987), this area is ripe for research. Moreover, marketers have particularly neglected the widowed (Schewe and Balazs, 1992), while older single persons appear to have been ignored by both marketers and self-perceived age researchers alike.

Children and Grandchildren (P7, 2.4.5, 4.3.7)

Very little previous research regarding the relationship between self-perceived age and children and grandchildren has been undertaken. Thus, the findings that parenthood and the age of the oldest grandchild are predictors of cognitive age are important additions to knowledge. The finding that it is parenthood *per se*, rather than the age of children, differs from previous American studies. Nevertheless, that parenthood emerged as a significant predictor supports

previous findings to the extent that parenthood obviously plays an important part in cognitive age (Barak and Gould, 1985; Barak, 1987). Little progress has been made since Bengston, Cutler, Mangen and Marshall (1985) noted that research on the social aspects of older adults and their children is usually descriptive, and there is a need to develop conceptual bases for examining the parent-child relationship in older age. These findings, therefore, go a small way to developing one such conceptual basis.

That it is the age of the oldest grandchild that emerged as more important than other variables relating to grandparenthood fully supports those few previous studies into grandparenthood and self-perceived age (Barak and Gould, 1985; Barak, 1987). Clearly, given the marketing potential of this role, and its relationship to cognitive age, more research is needed in this area, especially as traditional images of grandparents are often out of date (Jerrome, 1993). Indeed, an assortment of styles of grandparenting have been identified, including the formal, the fun seeker, the surrogate parent (found only in grandmothers) the reservoir of family wisdom (found mainly among grandfathers) and the distant figure (Neugarten and Weinstein, 1968; Thompson *et al.*, 1990). Moreover, the role of the grandparent varies throughout time, with the age of the grandparent and grandchild affecting it. Grandparents provide continuity with the past, and serve as alternative adult role models for children. Thus, the role is important for the personal development of the grandparent, as well as for the grandchild (Bengston, Rosenthal and Burton, 1990). Overall, therefore, it would seem that an investigation into different grand-parenting styles and their relationship to cognitive age would be a useful exercise.

Socio-Economic Status (P8, 2.4.6, 4.3.8)

The finding that occupational status is not related to either measure of self-perceived age once chronological age is held constant was expected, and reinforces a body of literature in this area (George, Mutran and Pannybacker, 1980; Markdies, 1981; Mutran and Reitzes, 1981). However, that there was no association with income is in stark contrast to the majority of American studies

outlined in section 2.4.6. Indeed, only a small number of previous studies have found no relationship between income and self-perceived age (Atchley and Seltzer, 1975; Cutler, 1982; Henderson, Goldsmith and Flynn, 1995). Moreover, these results do not support the assertion often found in the gerontological literature *viz.* higher SES groups have a configuration of advantages (Bengston, Kasschau and Ragan, 1977; Griffiths, Farley; Dean and Boon, 1971), which may explain the usual findings of an inverse relationship between self-perceived age and income.

Quite why these results are in contrast to previous studies is unknown. Perhaps it is merely a cultural difference, in that older UK adults do not have the same attitudes toward money as their American counterparts. Clearly, however, this is mere speculation, and because this is the first time that SES and self-perceived age have been considered in an older UK sample, there are no similar findings with which direct comparisons can be made. Thus, more research needs to be conducted in order to confirm or refute these findings, as well as provide possible explanations for them.

5.2.4 Wider Social Issues

Activities (P9, 2.5.1, 4.4.1)

The finding that almost half of all respondents regularly participate in energetic activities, with a further 35% being moderately active, confirms speculations in the marketing literature that today's older consumers are relatively active (e.g., Carrigan and Szmigin, 1998a). Comparisons with the Carnegie Inquiry into Third Age activity (1992) relating to data collected in 1986/87 suggest either that respondents in the current study were particularly active, or that activity among older adults in the UK has increased and become more energetic during this 15 year period.

The inverse relationship found between activity levels and both measures of self-perceived age fully supports an established body of literature (e.g., Chua,

Cote and Leong, 1990; Mutran and Reitzes, 1981). Indeed, it has long been recognised that activities can provide solutions to adjustment to older age (Havinghurst and Albrecht, 1953; Miller, 1968), and Long's (1987) UK study also found that people who engaged in a large number of leisure activities tended to express greater satisfaction with retirement than their less active counterparts, with some wondering how they ever had time to work.

Finally, it was interesting to note the popularity of both gardening and walking (especially with a dog) amongst respondents. Thus, the nature of walking (distance, speed, destination, etc.), and pet ownership, may be useful themes for further research.

Social Relations (P10, 2.5.2, 4.4.2)

From the battery of social relations indicators used in this research, few were related to self-perceived age. The absence of any relationship with either club membership or loneliness was unsurprising, given that previous research (outlined in 2.5.2) has failed to find a consensus. Nevertheless, these results add to the debate, and support several previous studies into self-perceived age and club affiliation (e.g., Atchley and Seltzer, 1975; Bultena and Powers, 1978; Johnson, 1993) and loneliness (Mutran and Burke, 1979).

Self-perceived age was not related to empty nests, which is unsurprising because although previous assumptions regarding the empty nest syndrome argued that women in particular would face anxiety and depression with the loss of a major role, it has since been recognised that although a minority of women do find the transition to empty nest to be stressful, these tend to be women whose lives were completely centered on the family (Maas, 1985), while the majority anticipate the change with pleasure and a positive affect on the self-concept occurs (Jerrome, 1993). Indeed, ageing brings new beginnings in that the empty nest means that parents can 'now afford the luxury of living out the potentials and pleasures they had to relinquish early on' (Guttman, 1975, p.

181), while marital happiness has been shown to be U-shaped, with newlyweds and empty nest couples demonstrating the highest levels of marital happiness (Hess and Waring, 1983).

Of the remaining family variables, the importance placed on grandchildren by these older adults once again became obvious. Indeed, once multivariate analysis was conducted, it became clear that the relationship found at the univariate level with seeing children was spurious, in that it was actually satisfaction with seeing grandchildren that was the more important variable. Clearly, as satisfaction with seeing grandchildren increases, so too does cognitive age. While results showed that the cognitively old do actually see more of their grandchildren than those with younger self-perceived ages, it may also be that those who feel old get tired with grandchildren around. Whatever the underlying reason, it is clear that the cognitively young would like to see more of their grandchildren. Moreover, seeing grandchildren is so important that it emerges as a significant variable in the prediction of cognitive age, of even greater importance than activities.

That the univariate relationships of frequency and satisfaction of seeing friends failed to emerge as significant at the multivariate level is consistent with previous studies, which have usually found that neither the number nor the amount of contact with friends is important in terms of self-perceived age (e.g., Atchley and Seltzer, 1975; Baum and Boxley, 1983). However, while the AIO items regarding social life in general are consistent with the limited number of previous studies in these areas (Barak, 1998; Barak and Rahtz, 1990) in that the cognitively young were found to prefer going out with others to watching television and to enjoy having people around, both these variables failed to emerge as significant predictors at the multivariate stage. Quite why this is the case is unknown, but is consistent with Wilke's (1992) study, which found no direct relationship between cognitive age and social involvement, which used measures such as 'I like to be around and involve myself with other people'.

Thus, it would seem that as long as a person stays active, and is satisfied with the amount of interaction they have with their grandchildren, their group

affiliations, number of friends, the levels of loneliness, and the amount of social interaction they have is of a lesser concern as far as cognitive age is concerned. Thus, there was no support either for Brakewell's (1986) suggestion that groups may be a useful way to cope with threats to identity, nor of the emergence of any ageing subculture. Furthermore, these results are useful because in addition to the amount of social interaction, they considered the nature of social interaction, which is a potentially important omission from a number of previous studies (Antonucci, 1985; Liang, *et al.*, 1980).

Social Comparison (P11, 2.5.3, 4.4.3)

Contrary to expectations, self-perceived age failed to correlate with Lennox and Wolfe's (1984) Attention to Social Comparison Information Scale. The theoretical underpinnings leading to this proposition were based on literature from the fields of gerontology, sociology and psychology, and indeed a number of different theoretical concepts were reviewed (section 2.5.3). Thus, the findings are not only unexpected, but also counter intuitive. Even so, this is the first known study to assess self-perceived age in relation to the Attention to Social Comparison Information Scale, and while no positive results were found, it nevertheless adds to the available body of knowledge.

Clearly, further research needs to be conducted in this area, possibly using alternative measures of social influence. Of particular interest may be the Consumer Susceptibility to Personal Influence Scale (Bearden, Netemeyer and Teel, 1989), Park and Lessig's (1977) Consumer Susceptibility to Reference Group Influence Scale, or indeed the Comparative Index utilised in Bultena and Power's (1978) study, which did show high levels of association with self-perceived age. Such a replication would allow for comparisons between countries and periods over time.

5.2.5 Physical Factors

Self-Assessed Health (P12, 2.6.1, 4.5.1)

The findings that self-assessed health is negatively related to both measures of self-perceived age, and that those who are limited by a health problem are cognitively older than those who are not, were expected, and supports a large body of previous research (e.g., Barak, 1998; Barak and Rahtz, 1990; Barak and Stern, 1985/86; Baum and Boxley, 1983; Carp and Carp, 1981; Chua, Cote and Leong, 1990; Cleaver and Muller, 2002; Gwinner and Stephens, 2001; Hubley and Hultsch, 1994; Steitz and McClary, 1988; Youn and Seo, 2000).

Over half of all respondents perceived their health to be good, and less than 6% felt they were in poor health. Thus, contrary to popular stereotypes, these results lend credence to the claim that older adults are not necessarily decrepit.

Nevertheless, whilst comparison with objective measures is impossible, these figures are high enough to suggest that respondents may have overestimated their health status. However, as the gerontological literature has long recognised, even though there may not be a perfect correlation between health perceptions and actual health, the former may be more important than the latter in determining how the individual functions in the community (Pihlblad and McNamara, 1965). Similarly, George and Landerman (1984) found that, unlike self-assessed health, physician-assessed health exhibits much lower correlations with overall feelings of general well being. Thus, as was argued in the literature review (section 2.6.1), for the purpose of social science research, these measures of health are perfectly acceptable. Moreover, given the clear and highly significant relationships that were found between the health measures and the self-perceived age measures, these results add to the argument that self-assessments of health are valid.

Physical manifestations of ageing (P13, 2.6.2, 4.5.2)

As section 2.6.2 of the literature review argued, all too often illness is not differentiated from other age-related physical changes in empirical studies.

When the few studies that do make a distinction between physiological age-

related changes and health were examined, it became clear that the more subtle physiological changes that occur with age are at least as important as health and other variables in reminding people of their age (Hori, 1994; Karp, 1986, 1988; Rossi, 1980). These findings wholeheartedly support these earlier studies. Indeed, almost three-quarters of all responses to the question, 'What if anything, reminds you that you are getting older?' pertained to physical, rather than social or psychological, factors.

Thus, Rossi's (1980) assertion that biological changes of the body are particularly important, because they present individuals with new needs, opportunities, and problems of adjustment, as well as affect the expectations of society, is supported here. In addition to general aches and pains, mobility and dexterity problems, and tiredness and a general slowing down, respondents talked of physical changes such as wrinkles, grey hair and balding, weight gain, and hearing problems, all of which are noticeable when interacting with others. Since these physical age cues are on display, they are likely to effect social interaction. (Lawrence, 1974; Montepare and Zebrowitz, 1998).

Logically, therefore, this social interaction is likely to affect perceptions of the self. It is therefore, as Whitbourne (1985) noted, unfortunate that so few studies have addressed some of the critical issues regarding the effects of the ageing body on the psychology of ageing. Given the paucity of attention that these issues have been given by both social psychologists and gerontologists in general, and self-perceived age researchers in particular, therefore, the present study provides a small but potentially significant contribution to knowledge in this area.

Look Age (P14, 2.6.2, 4.5.3)

Based on previous studies (e.g., Barak, 1998; Clark, Long and Schiffman, 1999; Heckhausen and Krueger, 1993; Johnson, 1995, 1996) the expectation that look age would correspond to chronological age far more closely than any other cognitive age dimension was fully supported. Indeed, while look age demonstrated a youth bias of less than 5.5 years, all other dimensions of

cognitive age had a youth bias of at least 10.5 years. Thus, the look age dimension appears to be a reality check, in that while people clearly feel much younger than their actual age, the mirror does remind them that they are getting older. Indeed, changes such as greying or loss of hair and wrinkles, which have no evident functional significance, may have a 'consequential threat to the self that may be as or even more significant psychologically than any actual diminution in functioning capacity' (Kuhlen, 1959, p. 863). For this reason, and contrary to Wilke's (1992) argument that the look age component should be omitted from future studies using cognitive age, the need for this component to remain as part of overall self-perceived age is crucial.

Regular, vigorous exercise (P15, 2.6.3, 4.4.1)

The finding that those who take regular, vigorous exercise perceive themselves to feel, act and have interests that are younger than those who do not participate in such activities supports previous research (Barak, 1998; Barak and Gould, 1985, Clark, Long and Schiffman, 1999). These findings are unsurprising given that, as Barak (1998) notes, participation in such exercise provides a sense of health, vigour, and energy, which of course are associated with youth. Indeed, Tappe and Duda (1988) found an association between the leisure activity patterns of older adults and life satisfaction, in that an older exercise participant who perceives himself or herself to be physically able, tends to be intrinsically motivated to engage in physical activity and not dependent on feedback from others, and is more satisfied with life in general.

Once again, the look age dimension of cognitive age differed from the other dimensions, in that this showed no significant differences between those who do participate in such exercise and those who do not. Such regular and vigorous exercise could be assumed to have benefits to the way the ageing body looks, thus it is somewhat surprising that there are no differences. It seems, then, that look age relates merely to the face, rather than the body as a whole, perhaps because others see this most.

5.2.6 Psychological Factors

Self-rated cognitive abilities (P16, 2.7.1, 4.6.1)

This is an area that has previously been totally neglected by self-perceived age research. Of the three measures pertaining to cognitive abilities, it is clear that an increase in tip-of-the-tongue experiences, while associated with an increase in chronological age, has no bearing on a person's self-perceived age. Similarly, self-rated memory performance does not affect self-perceived age. The finding that self-assessments of overall mental shape, while not being related to chronological age, is related to both measures of self-perceived age is an important one. Clearly, this more general measure taps into something that older adults can relate to, and the cognitively young feel that mentally, they are in as good a shape as they have ever been. In contrast, as cognitive age and age identity increase, the strength of agreement with this statement decreases.

It is perhaps surprising that self-assessments of neither tip-of-the-tongue experiences nor memory performances were related to self-perceived age, given the fact that they tap into what are commonly known as 'senior moments'. Thus, there appears to be a major difference between self-assessments of memory, and the overall general measure of mental shape. Perhaps, then, the measure of mental shape relates to cognitive abilities such as perceptual or processing speed. Of course, more research needs to be conducted in this area, both to confirm these findings and to perhaps delve deeper into the self-perceptions of mental shape, in order to better understand how this relates to self-perceived age. Nevertheless, this is an important finding that, while relatively small, makes a contribution to overall understanding of self-perceived age.

Subjective well being (P17, 2.7.2, 4.6.2)

The finding that self-perceived age is not related to negative affect (unhappiness) once chronological age is controlled is an important one, and gives credence to the need to ensure the effects of chronological age are accounted for. The inverse relationship between self-perceived age and positive affect (happiness) which remained even once controls for chronological age

were in place was expected, and is consistent with a major body of literature (e.g., 1979, 1998; Barak and Gould, 1985; Barak and Rahtz, 1990; Carp and Carp, 1981; Chua, Cote and Leong, 1990; Meadow *et al.*, 1992; Sherman, Schiffman and Dillon, 1988; Staats *et al.*, 1993). Thus, it is clear that while a youthful self-perceived age is related to higher levels of happiness, an older self-perceived age does not necessarily equate to higher levels of unhappiness. Indeed, as Adams (1971) concluded, although chronological age is not consistently related to satisfaction, self-perception of age does appear to show a decline in satisfaction as one moves from middle age to elderly to old self-concepts. In fact, the association is so consistent that it might be argued that this is a cultural dimension of satisfaction where the status of being so labelled is low.

Due to the maze of reported relationships, no simple theoretical structure between subjective well being and other psychological or social variables is known (Lieberman, 1980). However, variables that have consistently been found to be associated with higher levels of subjective well being include good health, higher SES, positive attitudes towards older people, and higher levels of physical, sexual and social activity (Adams, 1971; Bell, 1976; Edwards and Klemmack, 1973; Elwell and Maltbie-Crannell, 1981; George, 1981; Larson, 1978; McClelland, 1982; Mussen, 1985; Palmore, 1985b; Tappe and Duda, 1988; Willits and Crider, 1988). Such findings led Larson (1978) to comment that, just as in folklore, it appears that the basis for happiness is health, wealth, and love. Additionally then, while causality is not known, it appears that having a more youthful self-perceived age is either a further basis for happiness, or is an outcome of overall happiness, either as a result of objective circumstances or perhaps as a result of a particular positive outlook or personality trait.

The Self (P18-P20, 2.7.3, 4.6.3- 4.6.5)

At the univariate level, the findings that both self-esteem and self-confidence decreased as the two measures of self-perceived age increased were expected on the basis of previous findings (e.g., Barak, 1979, 1998; Barak and Gould, 1985,

1987; Barak and Rahtz, 1990; Carp and Carp, 1981; Linn and Hunter, 1979; Montepare, 1996c). However, the importance of both these measures to cognitive age disappeared when multivariate analysis was performed. Clearly, neither self-esteem nor self-confidence were important in relation to positive affect and being in good mental shape. Moreover, the finding that self-perceived age is unrelated to public self-consciousness is consistent with these results, but is contrary to earlier American findings (Barak, 1998; Barak and Gould, 1987; Gould and Barak, 1988).

In terms of self-esteem, it is possible that this measure was merely a proxy variable for an overall life satisfaction measure because, as outlined in section 2.7.3, self-esteem is a global measure that is made up of various elements of self-perception. Thus, when these different measures are considered in relation to each other, some cease to be significant. That said, two previous American studies (Linn and Hunger, 1979, Montepare, 1996c) have used Rosenberg's measure of self-esteem in relation to self-perceived age and have reported a significant relationship. Another possibility for this result is that suggested by Brubaker and Powers (1976). They present an alternative model in which it is hypothesised that a subjective self-definition as old would not necessarily result in lowered self-esteem unless the individual accepts a negative stereotype of old age. On this basis, future research that also measures attitudes toward age in conjunction with self-perceived age and perhaps an alternative measure of self-esteem would be an interesting study. Finally, one longitudinal UK study (Coleman, Ivani-Chelian and Robinson, 1993; Coleman, Aubin, Robinson, Ivani-Chalian, and Briggs, 1993) of older people found that although self-esteem was stable over a period of 10 or 13 years, there were shifts in the sources of self-esteem, away from the area of family and work and toward leisure pursuits and activities. Thus, in addition to the measures outlined above, a future study may benefit from consideration of the sources and antecedents of self-esteem among older adults, in order to better understand its relationship to self-perceived age.

However, while the preceding discussion may account for the unexpected findings relating to self-esteem, they do not explain the lack of association with self-confidence or public self-consciousness, where previous American findings have utilised the same scales and have consistently found these to be related to cognitive age (Barak, 1998; Barak and Gould, 1985, 1987; Wilkes, 1992). Moreover, whilst attention to social comparison information (P11) has never before been measured in relation to self-perceived age, the finding that this, too, is unrelated to self-perceived age is both consistent with these results, and contrary to expectations. Additionally, the majority of social relations indicators failed to be associated with self-perceived age. Thus, a pattern has emerged, whereby the results reported here are internally consistent, in that self-perceived age is not related to measures that are concerned with social interaction.

Rosenberg (1965) conceptualises self-esteem as a feeling of self-acceptance, and some items in the scale specifically ask respondents to make direct comparisons between themselves and others; Feningstein, Scheier and Buss (1975) define public self-consciousness as an awareness of the self as a social object; and Lennox and Wolfe (1984) explain that the Attention to Social Comparison Information scale measures the extent to which one is aware of the reactions of others and is concerned about those reactions. Clearly, then, these measures are concerned with broadly similar concepts, in that the self is viewed from a social perspective. Given the likelihood that cultural factors are the underlying reason for the difference in results, the obvious suggestion is the need for an Anglo-American cross-cultural study, with matched samples, that is specifically designed to measure different social constructs in relation to ageing and self-perceived age. Such a study would prove or disprove the results here, and in addition would allow for direct comparisons between the two countries and potentially explain the reasons for such disparate findings.

5.2.7 Consumer Issues

Consumer Traits (P22-23, 2.8.1, 4.7.1-4.7.2)

The finding that the cognitively young display higher levels of consumer venturesomeness is a potentially important one, given the lack of overall consensus in the literature. The finding is consistent with a small body of American research (Barak, 1979; Sherman, Schiffman and Dillon, 1988; Stephens, 1991), but contrary to the only previous UK study into cognitive age (Szmigin and Carrigan, 2000), which measured consumer innovativeness using holidays as the domain, and found no association. The measure utilised here incorporated individual questions pertaining to brand innovation, early adoption of new brands, and a liking for novelty. Thus, these cognitively young consumers are less cautious and less risk averse than their cognitively old counterparts.

In contrast, market mavenism is not related to cognitive age. This is despite a small number of studies which have found the cognitively young to be more involved in supermarket shopping, information seeking, and opinion leadership (Barak, 1979, 1998; Barak and Gould, 1987; Barak and Rahtz, 1990; Stephens, 1991). Thus, it would seem that for cognitive age, opinion leadership needs to be specifically measured for each product category, as these results suggest that the market maven, a type of generalised opinion leader (Solomon, Bamossy and Askengaard, 1999), is unrelated to cognitive age. Nevertheless, the finding that the market mavens among these older consumers are less likely to have old age identities is a potentially useful one. Moreover, this is the first known study to consider market mavenism in relation to self-perceived age.

Values (P23-24, 2.8.8, 4.7.3-4.7.4)

Several major points emerge from this research. First, just as similarities between older UK consumers and their American counterparts exist regarding cognitive age, so too are their central value bases broadly similar, at least in terms of the 4 primary values of self-respect, security, warm relationships, and a sense of accomplishment. Interestingly, one difference to emerge between the

two cultures is the importance placed on fun and enjoyment of life, which is typically ranked lower by Americans (Kahle, Poulos and Sukhdial 1988) than it was by these UK consumers. Thus, using this value may be a more successful strategy in the UK than in the US.

In terms of self-perceived age differences, this study lends support to Cleaver and Muller's (2002) Australian study in that those who have younger cognitive ages tend to place more importance on fun and enjoyment, while their cognitively older counterparts place greater importance on security. Rather than fun and enjoyment appealing to the hedonists, as originally thought, Kahle (1996) now suggests that people who demonstrate the highest levels of involvement with leisure activities give this value greater importance. As such, further research into the inter-relationships that exist with self-perceived age, values, and other lifestyle measures is warranted.

Clearly, the relative importance placed on warm relationships with others decreases as cognitive age increases. This is a surprising result that warrants further research in order to ascertain the underlying reasons for it. Finally, a sense of accomplishment showed a clear pattern, in that it becomes more important as the cognitive age of the respondent increased. Perhaps, then, as individuals perceive themselves to be ageing, they feel that time is beginning to run out, and begin to take stock of their accomplishments. Conversely, perhaps the cognitively young feel that there is plenty of time left in which to still achieve.

In contrast, the overall value of materialism showed no relationship to either measure of self-perceived age, or indeed to chronological age. Thus, these results failed to find any support either for the suggestion made by some older consumer researchers that as people age they become less materialistic, or for the body of gerontological literature that suggests an increase in materialism with age. Indeed, no significant differences between actual age decades or between cognitive age decades were found. Thus, materialism, at least as

measured by Richins and Dawson's (1992) Material Values scale, appears to have less utility for marketing to older adults than does the List of Values.

Interestingly, a short time after the research instrument for this study was designed, Richins (2004b) reassessed the scale, due to noticed deficiencies in the original measure, based on a review of the literature and 15 raw data sets. She noted that while the scale performs well in terms of reliability and empirical usefulness, the three factor model, which was utilised here, did not always emerge clearly in data analysis. Subsequently, three scale items were dropped, and a new version of the scale, based on the remaining 15 items, was recommended. In order to ascertain whether or not these recommended changes would alter the results found here, a new materialism value was computed for each respondent, based on the new 15-item scale, and the analysis re-run. There was still no significant relationship to emerge between self-perceived age and the overall measure of materialism.

Because no known study that measures materialism and self-perceived age has ever been published, there is nothing with which to make direct comparisons. However, a further recent study using this scale in Denmark, France and Russia (Griffin, Babin and Christensen, 2002) concluded that a new scale may be necessary to measure materialism in cross-cultural contexts, because America has such a strong 'culture of consumption' (p. 894), and may therefore be culturally different to other countries. Thus, while the scale displayed adequate reliability in this research, it is possible that this measure of materialism is inadequate for use in the UK. Again, therefore, more research is warranted in this area, perhaps using a variety of materialism scales for comparative purposes.

Attitudes (P25-P27, 2.8.3, 4.7.5-4.7.7)

Although results showed that chronologically older adults had more positive attitudes toward business and consumerism than their younger counterparts, these differences did not manifest themselves when self-perceived age was considered. These results contrast with an American study into cognitive age and attitudes toward advertising (Smith and Moschis, 1984), where a positive relationship was found. Nevertheless, this is the first known self-perceived age study to measure attitudes toward marketing in this way, and the findings are therefore still of potential use, and add to the one known study in this area. The search for meaningful differences in consumer attitudes related to self-perceived age thus continues, and future research may benefit from the selection of specific marketing and business areas, for example attitudes toward environmentalism, or perhaps fair trade products. Indeed, there have been recent suggestions that older consumers may be a viable target for ethical products (Carrigan, Szmigin and Wright, 2004).

In contrast, the relationship between age, self-perceived age and attitudes toward age-based sales promotions is a complex one. Nevertheless, a clear age-related pattern did emerge, even when income was controlled. It is those who are chronologically in their 60s, with cognitive ages in the 50s or 60s, and who have middle aged identities, who are prime targets for such discounts. In contrast, those who have both younger and older self-perceived ages have less positive attitudes toward such discounts, but for different reasons. Often, the cognitively old expressed scepticism about discounts, many thinking it would either encourage debt or 'junk mail'. In contrast, many of the cognitively young expressed a firm reluctance to use such discounts purely because they felt too young. Still others stated a willingness to use such discounts over the telephone or via post, but would not use them in a public place.

These results are consistent with a range of theoretical perspectives outlined in section 2.8.3. In particular, results are very similar to Tepper's (1994) American study, which also found that some consumers felt too young to qualify for such discounts (resistance to self-labelling), while others refused to use them in public (resistance to social labelling). Thus, these findings are of potential

importance to both self-perceived age research and marketing practice, especially in light of this being the first known study to empirically measure cognitive age in relation to sales promotions targeted at older consumers.

In contrast, nostalgia appears to have little to do with either chronological or self-perceived age. The lack of any association with chronological age is consistent with previous research into attitudes toward the past (Goulding, 1999; Holbrook and Schindler, 1994). However, the possibility that nostalgia may be related to self-perceived age had never before been measured. Thus, while results clearly refute any such possibility, investigation into it was nevertheless worthwhile, particularly in the light of some consumer behaviour writings (e.g., Schewe, 1991) that have suggested nostalgia may be a potentially useful positioning strategy when marketing to older adults.

Consumer Decisions (P28-31, 2.8.4, 4.7.8-4.7.11)

Because there was so much inconsistency between previous studies pertaining to age, self-perceived age and media usage, it was difficult to form expectations. The findings, then, that once chronological age is controlled, self-perceived age is not associated with watching television, listening to the radio, or reading newspapers or magazines therefore merely adds to the small but inconsistent body of research that already exists (e.g., Barak, 1979; Barak and Gould, 1985; Johnson, 1993; Smith and Moschis, 1994). Moreover, while much has been written in the marketing trade press pertaining to so-called 'senior surfers' (e.g., Campbell, 1998; Jones, 2002; Morrison, 2002), there is only one other known study into self-perceived age and internet usage, which also found older adults with younger cognitive ages use the internet more than their cognitively older counterparts (Eastman and Iyer, 2005). Thus, the finding that as cognitive age decreases internet usage increases is a potentially important one. Interestingly, these results contrasted with McMellon and Schiffman (2000), who found an inverse relationship between older internet users who perceive some level of limited mobility and the amount of time spent on the internet, in that it was those with the most positive self-ratings of health that are the highest users of the internet. However, the American study utilised members of on-line groups,

thus these sampling differences may account for the contrasting findings. Once again, more research is needed in this area, in order to establish the nature of internet use and types of internet buyer behaviour that exists among these cognitively young older adults.

A further area in which previous research lacks consensus is price consciousness. The fact that the significant relationship found between cognitive age and price consciousness disappeared once income was held constant illustrates the need to identify and control potentially intervening variables. In contrast, the finding that those who are cognitively very young (in their 40s) have more positive attitudes toward credit, while those who have old age identities have less positive attitudes, is an interesting one, and supports Thomas' (1994) assertion that older consumers have now accepted credit. This finding is obviously worthy of further exploration, and adds a further contribution to knowledge pertaining to self-perceived age and consumer behaviour.

Given that no study has previously measured the relationship between attitudes toward healthy eating and self-perceived age among older adults, the finding that attitudes toward healthy eating have more to do with cognitive rather than chronological age is of potentially great importance to marketers. Clearly, those whose cognitive age is much younger than their chronological age are more concerned with healthy eating overall, and make an effort to increase the fibre and reduce the fat in their diets. Interestingly, they are not prepared to pay extra for foods that do not contain artificial additives, yet all these results have nothing to do with income levels. That these consumers are not willing to pay a premium price for healthy food contradicts an earlier study (Leck, Szmigin and Carrigan, 2001) which suggested older consumers are prepared to pay extra for such products. However, the findings support the literature in terms of healthy eating amongst older adults overall (e.g., Meyer, 1990, Whetton, 1990), but what is more important here is that the greater the degree of youth bias, the more concerned with healthy eating the person is. Of course, causality cannot be assumed, it may be that these youthful older adults feel younger partly because they have a healthy diet, which of course may affect the rate of ageing (Davis

and Randall, 1983). On the other hand, it may be that those who feel young want to stay that way – thus ensuring their diet helps them to do this. Whatever the reason, these results go some way to the recent call (Russell and Cox, 2003) for the need to develop a better understanding of how older groups of consumers perceive healthy food.

Segmentation (P32, 2.8.5, 4.7.12)

The segmentation model to emerge from this research has a number of advantages over existing segmentation models for older UK adults. First, it is more comprehensive, because it incorporates a wide range of consumer behaviour variables, as well as a full range of socio-demographic information, health information, media usage, and a psychographic profile of each segment. It therefore answers calls for such a segmentation model that have appeared in the literature (e.g., Greco, 1984). Second, it is not limited to a specific product or product category, which is a major drawback of the models discussed in section 2.8.5. Third, again unlike those models previously suggested, it is not based on speculation or conjecture, but rather is the result of the largest empirical study into the consumer behaviour of older adults in this country, and is based on current knowledge about ageing and the behaviour of older people.

The model meets the criteria for effective segmentation, as suggested by Kotler and Armstrong (2004) in that the resulting segments are:

- **Measurable:** each cluster is representative of a percentage of the older consumer market, and it was therefore easy to calculate the size of each segment (table 4.69).
- **Accessible:** each segment can potentially be effectively reached and served, given the media usage profile of each segment.
- **Substantial:** all segments are large or profitable enough to serve. Even the smallest segment, cluster 1, which represents only 865,000 older adults, is nevertheless a viable target segment,

especially for an SME, for which older consumers are becoming increasingly important (Miller and Kim, 1999).

- Differentiable: each segment is distinguishable from other segments on a range of variables, and therefore should respond differently to different marketing mix elements.

Interestingly, the model also provides some insight into the possible reasons for the lack of association between cognitive age and a range of other variables, in that some segments have very similar cognitive ages, but are vastly different in terms of consumer attitudes and psychographic profiles. Segments 4 and 5, for example, have cognitive ages that differ by only two years, yet their attitudes toward a range of marketing variables are distinctly different. This is not to say that cognitive age is not a useful segmentation variable. On the contrary, it is potentially highly useful, but only when used in conjunction with a range of other variables. In terms of practical implications, therefore, the findings that cognitive age does not correlate with some consumer behaviours does not mean that these results are no longer useful. Rather, it means that such results have to be considered in relation to a host of other variables, and self-perceived age is one of them, from which a richer and deeper understanding of these older consumers can be gained. The thesis now turns, therefore, to the practical implications for marketing that this research has uncovered.

5.3 IMPLICATIONS FOR MARKETING PRACTICE

This research has resulted in a range of practical implications for marketers, many of which are interrelated. For clarity, the following discussion is structured loosely around the format of a marketing decision making process. Thus, it considers marketing research issues, internal staffing and organisational culture issues, segmentation and targeting implications, and concludes with a discussion structured around the marketing mix.

5.3.1 Inclusion In Marketing Research

Whilst there is evidence to suggest that some firms are at last taking notice of older consumers (Flass, 2002; Smith, 2000; Terhune and Kahn, 2003) an abundance of possible reasons why many firms still ignore this market have been proffered. Such reasons mainly centre round businesses obsession with youth (Chura, 2002; Treguer, 2005a). This has resulted in a situation where older consumers are often not included in marketing research (Lilley, 1996; Semon, 1995). If firms do not ask older consumers what they want, they are unlikely to know how to serve them, and will at best neglect and at worst alienate what is a potentially lucrative market. Thus, there appears to be a vicious circle, and the logical starting point to changing this pattern is to include older consumers in both surveys and focus group discussions. It is clear from the results of this research that, across a range of variables, the cognitively young display different attitudes and behaviours than those who are closer to or even older than their chronological age. It should therefore be ensured that older consumers with differing self-perceived ages are included in a sample for market research.

Furthermore, this research has shown that, as a whole, older consumers tend to be fairly positive in their attitudes toward marketing and consumerism. That said, the research has identified two segments, the solitary sceptics and the self-assured sociables (clusters 1 and 3), which clearly display a more negative or cynical view toward marketing practices. These two segments are different from each other in terms of average chronological (66 and 59 years) and cognitive ages (54 and 48 years respectively). Additionally, they have different levels of self-rated health, and differ significantly from each other on a number of psychographic measures. Solitary sceptics, for example, are the most materialistic segment in this market, whilst the self-assured sociables are the least. Given that these consumers appear to be the most cynical toward marketing, and a variety of different views and perspectives could be gained, it would seem prudent to include respondents from these segments in market research projects.

5.3.2 Internal Training Needs

According to Chura (2002) time is running out for those firms who still focus solely on the 18-49 year old demographic. However, before many organisations can seriously and successfully target older consumers staff training issues need to be dealt with, and some firms may even need a change in organisational culture. As chapter 1 of this thesis explained, marketing has long been criticised for its neglect of older consumers. The possible reasons for this neglect include the prevalence of out of date stereotypes among (young) marketing employees. Before any real changes can be made, it is crucial that employees understand that today's older consumer are not the stereotypical old often portrayed in the media and other sources, and such stereotypes need to be challenged.

A relatively easy starting point would be to conduct training sessions with all staff, during which they would need to complete attitudes and prejudices toward ageing questionnaires. While it is unlikely that anyone would admit to being ageist, by ensuring anonymity and confidentiality, perhaps through the scoring of the questionnaire by the person who completed it, employees may be encouraged to face up to their own prejudices. Additionally, role-plays, perhaps using aids to stimulate some of the physical manifestations of ageing, may aid younger employees in their ability to empathise with older consumers.

Overall, employees need to realise that, as this research has found, the majority of older UK adults do not feel old. Instead, most feel middle-aged or even young. As a group, they feel and act 11 years younger than their actual age, they have interests akin to a person more than 10 years their junior, and they perceive themselves to look about 5 years younger than their actual age. Moreover, contrary to the stereotype, many are relatively affluent, relatively fit, active, energetic and healthy, sociable, happy, and not stuck in the past. Employees who provide front-line care and service to older people may need training in order to be more sensitive to the feelings of patients and customers. Perhaps just as importantly, staff need to realise that not all older consumers are the same.

Additionally, ageism within the workplace needs to be tackled. A recent large-scale study into attitudes toward age (Age Concern, 2005) found age

discrimination to be ubiquitous, and ageism to be the most pervasive form of prejudice in the UK today (Radford, 2005). Butler (1975) defined ageism as “a process of systematic stereotyping of and discrimination against people because they are old, just as racism and sexism accomplish this with skin colour and gender” (p. 12). The dangers associated with ageism are significant for practice and policy decisions across and within a whole spectrum of organisations. Indeed, as Bytheway (1995) notes, “..the structuring of the organisation and its activities, the development of standards and the impact of budgetary controls, all contribute to the creation of relationships in which ageism can flourish” (p. 104). Moreover, an inverse correlation has been found between self-perceived age and work performance (Crook and Heinstein, 1958). Thus, there are potential productivity gains to be made by fostering a culture that is positive toward older workers, and positive discrimination in recruitment policies to recruit older workers should be considered.

5.3.3 Segmentation

This research has confirmed that the older consumer market in the UK is not homogenous, and has provided a model upon which the market can be segmented. However, this is a general model based on general consumer behaviours, and is therefore not product or industry specific. This fact, of course, provides it with many advantages over alternative segmentation models proffered in the past. However, it is acknowledged here that it may not be appropriate for all product categories, and bespoke marketing research will still be needed for in-depth understanding of attitudes and behaviours toward certain products and marketing practices. Nevertheless, it is a starting point for firms wishing to target this market, and does provide some insight into the many facets of opinions, attitudes, and perceptions among older consumers. In addition to the identification of five discrete segments, the research has uncovered several further implications for targeting.

5.3.4 Targeting Strategies

Gender

The findings pertaining to gender have practical implications for marketing. Clearly, Barak's (1998) assertion that there is no need to differentiate between men and women in terms of targeting older consumers on the basis of their cognitive age receives full support. Both men and women perceive themselves to be an average of 10 years younger than their chronological age. However, the finding that women have younger age identities than their male counterparts is an important one. Clearly, age-related references should be avoided when targeting all these older consumers, because so few accept the status old or elderly, and this is true for only slightly fewer women than men. However, even greater care with terminology needs to be given when targeting older women, because almost 22% of these older females still feel young, and have not yet accepted a middle-aged identity, let alone an old one. In comparison, less than 1 in 10 men still feel young. Thus, for products and promotions that are gender-specific, references to feeling young, or at least avoidance of any age-related terminology, is of even greater importance when the target is female.

Grandparenthood

Grandparents are clearly a viable target segment for marketers, particularly as grandchildren are significant predictors of cognitive age, and emerged as important in analyses of both demographic and social variables. Moreover, the majority of these older consumers are grandparents who see their grandchildren frequently, and, given the results in relation to self-perceived age, their grandchildren are a very important aspect of their lives. Marketers need to consider, therefore, the potential role that grandparents may play in the consumer decision-making process for higher involvement products and services for their grandchildren, in addition to their role as purchasers of gifts, toys, and sweets.

As was clear from the qualitative data, while the growth of their grandchildren acts as a reminder that these consumers are themselves ageing, mixing with

younger people, in particular their grandchildren, was also viewed by many as a way of feeling young. Paradoxically, several respondents admitted that while they felt tired, and therefore older, after a day spent with their grandchildren, playing with them also made them feel young again. On this basis, it would seem that portrayals of older consumers who are active with a youthful outlook and seen to be mixing with their grandchildren are likely to be well received. Thus, here is a viable targeting strategy that has perhaps been overlooked by many marketers in this country.

In contrast, America marketers have recognised that grandparents buy expensive toys, one tour operator offers educational trips for grandparents and their grandchildren, and even grandma and grandpa dolls can be purchased (Schewe and Balazs, 1992). Further, one empirical study has shown that an advertisement featuring a grandmother cast in a central role was preferred by subjects, whatever their own view of how central grandparenting was to their lives (Walker and Macklin, 1992). Thus, it is likely that there is a range of untapped marketing opportunities for UK firms, including the targeting of toys and gifts at grandparents, the development of new products and services offered to grandparents and their grandchildren, and the portrayal of older consumers as (relatively young and active) grandparents in advertising.

Health Foods

Whilst this research was not product specific, because of the recent attention that health foods and older consumers have been given in the literature, it did measure attitudes toward healthy eating. The finding that attitudes toward healthy eating are related to a person's degree of youth bias, as opposed to chronological age or even income, yet are not prepared to pay a premium for health foods has important practical implications for the food industry. Clearly, the cognitively young are a viable target for such products, and the nutritional benefits need to be stressed in food marketing campaigns. However, the need to reach older people with nutritional information goes beyond private food producers and has implications for public health marketing campaigns, also. It

may be that two different types of campaigns are needed, one for the cognitively young who already show positive attitudes toward healthy eating, and just need these attitudes reinforced, while another may be needed which is designed to change attitudes and behaviour among those less youthful. Moreover, targeting older consumers with healthy food and messages to promote healthy eating is likely to be a profitable strategy, given predictions that this will be a growth area in the near future (Lewis, 1998).

Innovators & Opinion Leaders

This research has identified a segment that is far more venturesome than any other, and which also displays far greater market maven tendencies than any other. Cluster 4 (the positive pioneers) clearly comprises the innovators, the early adopters and the generalised opinion leaders in this market. Indeed, previous research has found mavens to have more awareness of more brands across different product categories, and hence are prime targets for low involvement purchases and fast moving consumer goods (Ellitott and Warfield, 1993; Feick and Price, 1987). Interestingly, positive pioneers also display the most positive attitudes toward marketing and consumerism, which is good news for marketing practitioners. Here is a segment, comprising 30% of the older consumer market in the UK, which is likely to be a prime target for a range of new and improved products and brands. They are venturesome in that they will purchase a new brand out of curiosity, and they like to do so before others. Moreover, given their maven tendencies, these consumers like to introduce new brands to their friends and neighbours, and like to share information about a range of brands and different aspects of shopping. On this basis, as long as they are satisfied with their purchases, they are likely to be highly beneficial to the marketer in terms of word-of-mouth communications.

Although no clear socio-demographic profile of the market maven has ever been identified (Feik and Price, 1987), a further benefit to marketers from this research is that a profile can be provided of these older venturesome mavens. They are the youngest of all the segments, with an average chronological age of 56 and a cognitive age of only 46. None of them have old age identities, with

70% feeling middle aged and the rest still feeling young. They are not the most affluent segment, but they do have the next highest household incomes, with an average of £420 per week. Two thirds still work, and almost one quarter is retired. This segment has the least empty nests, yet more than half has (typically 2) young grandchildren. Marketers must also be aware that although these are the youngest consumers in this market, they are not the healthiest, as almost half do not perceive their health to be good. Given the clear adoption and diffusion opportunities, this is a key target for new and improved products that would help older consumers to overcome some age-related physical declines due to improved product and packaging design.

5.3.5 Product Policy

Design

The implications of this research for product policy are threefold. First, given that these older consumer's self-perceived ages are very much related to their health status and general physiology, particularly aches and pains and mobility and dexterity problems, it is crucial that the new product development process begins with consideration of these factors. Thus, older consumers need to be consulted at the idea generation stage, as problems with ergonomically unsound products are likely to be good sources of ideas for new and improved products. Designing products with young people in mind may well exclude older people, yet, as Peters (1994) noted, designing products that are easier to use by older people does not exclude the young. The design of goods suitable for older people with dexterity problems remains a neglected field, with designers often being more interested in aesthetics than ease of use (Hobman, 1990). Those relatively few companies that have incorporated the needs of older consumers in product design have reaped the benefits. Ford, for example, used 'Third-Age' suits, designed to simulate driving capabilities of people 30 or more years older than its engineers to wear during the design of the Ford Focus. The result was that everything in the car was within comfortable reach (Smith, 2000).

Moreover, research shows that some older adults are less able to utilise packaging information as easily as younger consumers (Burton and Andrews, 1996; Calcich and Blair, 1983; Cole and Gaeth, 1990). A well-designed product or easier to use packaging is beneficial to all consumers, not just to those who have age-related physical problems, and may also be another source of competitive advantage.

Product Augmentation

It is interesting to note that the two segments (clusters 1 and 3) that are the most sceptical toward marketing and consumerism are also the most nostalgic. Given that the scales that measure these constructs contain items that refer to product shoddiness in comparison to 'the good old days', and to a range of items relating to product quality and guarantees, it may be that products targeted at these segments need particular attention to after sales service in order to persuade these consumers to purchase.

Adaptation

Third, companies need to adapt their products in relation to both cognitive age and for different segments. Thus, for example, cognitively younger consumers (clusters 3-5) are far more energetic, and take more holidays abroad, and are in better health than their cognitively older counterparts (clusters 1 and 2). Thus, it makes sense to target the cognitively young with active pastimes and perhaps more energetic holidays. Conversely, cognitively older consumers are better targets for UK breaks and pastimes with a more leisurely pace, and mobility and dexterity aids. The cognitively old are also more likely to be empty nesters, thus smaller portions, smaller appliances, and smaller pack sizes are more appropriate for these consumers. Financial services products, too, need to be adapted for different cognitive ages. Products such as health care, insurance, and funeral plans are more likely to be targeted at the cognitively older consumer, and security is clearly an important consideration for them. In contrast, the cognitively young may prefer financial products that offer some equity release

that will perhaps allow them to pursue the fun and enjoyment of life upon which they place importance.

5.3.6 Distribution Strategy

As a whole, these older consumers feel the physical effects of ageing more acutely than any other ageing reminders in terms of adding years to their self-perceived age. Those physical reminders include general aches and pains, and mobility and dexterity problems. These factors clearly have practical implications for shopping. Stores need to consider everything from the proximity to public transport and disabled parking, through elevators and escalators, easy to use shopping trolleys and baskets, help with packing, accessibility of goods on shelves, and the implications of long queues for someone who aches or has mobility problems. If an older consumer's shopping experience results in discomfort or feelings of alienation, perhaps contradicting their youthful self-image, they are likely to switch their patronage. Indeed, research shows that regardless of the limitation on one's ability to shop, restrictions of any sort simply lead to lower usage of less accessible outlets (Barnes and Peters, 1982; Kang and Ridgway, 1996). Moreover, older consumers have been found to be less store loyal than younger consumers if they find merchandise selection and product availability to be less than satisfactory (Odekerken-Schroder, De Wulf, Kasper, Kleinjnen, Hockstra and Commandeur, 2001).

There is recent evidence to suggest that not all the retailing needs of older UK consumers are being met (Hare, 2003). Therefore, consideration of physical ageing and its effects on self-perceived age could give retailers a competitive advantage. Moreover, it is not only older consumers who would benefit from such improvements. Anyone with a physical disability needs easier access to goods, for example, while long queues add to the tiredness and frustration of everyone, especially pregnant women or those with young children. Thus, retail

design that has the needs of older consumers in mind is a potentially profitable strategy. It is of particular importance to those stores targeting the solitary sceptics and bargain hunting belongers (clusters 1 and 2), but all clusters have a substantial number of consumers who have some physical health problems. If a consumer's youthful self-perceived age is unthreatened by a shopping experience, it is more likely that they would revisit the outlet. Conversely, if the experience merely acts as a reminder that the person is ageing, it is more likely that they would seek an alternative store in the future.

5.3.7 Pricing Strategy

The first thing firms targeting older adults need to understand is there is no relationship between income and self-perceived age among older UK adults. Thus, the substantial amount of American literature that has constantly found that those with the most youthful self-perceived ages have the highest incomes is not applicable in this country. Also, there is not a straightforward relationship between income and price consciousness. Far too much trade literature still stresses the differences between younger and older adults (e.g. Sloan, 1994), instead of exploring the differences within the older consumer market. Clearly, this research has shown that older consumers are not a homogenous mass. This is true where both price consciousness and attitudes toward credit are concerned, which have implications for the pricing strategies of firms targeting older adults. Indeed, Mathur and Moschis (1994) challenged marketers' commonly held belief that older people do not use credit cards, and noted instead that marketers need to differentiate between those older adults who are more likely to use credit and those that are not. This research therefore fully supports their assertion, and, furthermore, has developed a practical way in which marketers can differentiate between segments with different attitudes toward both prices and credit.

Cluster 2 (bargain hunting belongers) is the least affluent segment, and is highly price consciousness. However, despite being the oldest segment, both

chronologically and cognitively, they display moderate attitudes towards credit, and are less averse to credit than are some other segments. Thus, while they have the lowest disposable incomes, they should not be automatically excluded as a target for more expensive purchases, as it may be possible to offer the right type of credit to this segment, allowing them to spread the cost.

Whilst clusters 1 and 3 are middle-income consumers with very similar levels of youthfulness, they display very different levels of price consciousness. Solitary sceptics (cluster 1) are actually the least price conscious segment, while self-assured sociables (cluster 3) are the most. Thus, self-assured sociables like to shop around to find a bargain, and are likely to be influenced by a low price, while cluster 1, perhaps due to their scepticism towards marketing and consumerism in general, are not. However, despite their very different levels of price consciousness, both segments are highly averse to credit, prefer to pay cash for their purchases, and are unlikely to be swayed by offers of credit or store cards.

Although clusters 4 and 5 have similar cognitive ages and also have the highest incomes and the most positive attitudes towards credit, they differ greatly in terms of price consciousness. Cautious comfortables (cluster 5) are as unlikely to shop around for bargains as solitary sceptics (cluster 1), while positive pioneers (cluster 4) are far more likely to compare prices, shop around, and look out for sales.

Senior Discounts

This research has clearly demonstrated that the relationship between attitudes towards age-related discounts and different age measures is a complex one, and it is not simply a matter of targeting those with older self-perceived ages with age-based sales promotions. Rather, there appear to be three groups of older consumers in terms of attitudes toward senior discounts. Those with positive attitudes are found in clusters 1 and 2. These are indeed the oldest segments, both chronologically and cognitively, and have the oldest age identities. They are also more likely to be retired empty nesters, and the vast majority are

grandparents with their oldest grandchild at a landmark 18 years old. Thus, their positive attitude toward age-based sales promotions is to be expected, given that these consumers have a host of other reminders that they are no longer young, and have therefore begun to accept the discounts offered to them, and are more likely to take advantage of as many senior promotions as possible. Indeed, these consumers seem to feel that price discounts based on seniority are rewards they have earned.

In contrast, marketers cannot assume that the cognitively young will all have negative attitudes toward such promotions. Rather, there is a second group of cognitively young consumers, found in clusters 4 and 5 (positive pioneers and cautious comfortables), who are still unsure about, but not completely averse to, such discounts. These consumers need to be targeted carefully with age-based promotions, and may prefer offers via post, the telephone or, given that they are the highest users of the internet, perhaps on-line senior discounts are appropriate. This way, maybe the possibility of interference with their young self-perceived age is minimised, as they do not have to admit to being old enough for such discounts in public.

The third and final group are very averse to senior discounts, and it is unlikely that such sales promotions would be an effective marketing strategy for this group. They are the self-assured sociables, found in cluster 3, and while this segment are cognitively still in their 40s, the same as the unsure group above, they do display the highest levels of youthfulness and the youngest age identities. Moreover, they are sceptical toward marketing and consumerism, and therefore are more likely to think there is a catch. They do however like a bargain, demonstrated by their high levels of price consciousness. Thus, instead of senior promotions, this group prefer to take advantage of low prices or sales promotions targeted at everyone.

There are two further issues that marketers need to consider in their design of age-based discounts. First, there is the obvious benefit of combining any discount scheme with database marketing, in order to track the consumer behaviour of customers who are more likely to use these discounts. In this way,

the firm will build mutually rewarding and hopefully long relationships with consumers, because it is well established that it costs more to recruit a customer than it does to keep one (Jobber, 2004). Second, a small amount of evidence suggests that some consumers of different ages are critical of age-based discounts (Gillett, Allen and Fuller, 1995). Therefore, marketers need to ensure that by offering sales promotions to older consumers, they do not alienate their younger consumers. Indeed, given that some older consumers themselves are averse to using senior discounts, while others are somewhat reluctant to do so in public, it may be that more creative ways of offering such promotions are needed, particularly when they are publicly consumed. For example, a leisure service provider that offers discounts to older consumers in order to encourage patronage during off-peak times may be better to position such incentives on the basis of time rather than age.

5.3.8 Marketing Communications

Advertising

While marketing in general is often criticised, it seems that advertising is particularly disparaged (e.g., Carrigan and Szmigin, 1999a, b; Crain, 1999; Theodore, 2000). Indeed, research conducted in the UK suggests that older consumers feel overlooked by advertising in this country (Beale, 1998; Crawford, 1998; Lavery, 1999; Mills, 1998). Content analyses of UK advertisements have revealed that while older models are portrayed in a positive light, they are underrepresented in both print media (Carrigan and Szmigin, 1998a) and television advertising (Simcock and Sudbury, in press), and this is particularly true for older women. It seems that only those media that target older adults contain ads with older models to levels that are representative of the UK demographic (Carrigan and Szmigin, 1999b). This research has demonstrated the importance of older consumers to marketers, and as such a sound starting point would be for marketers to increase the number of older models in advertisements.

However, it is not just inclusion that advertising needs to be concerned with. The portrayal of older models is crucial in successfully reaching these consumers. Advertisers need to portray older consumers in the way they perceive themselves, which means feeling, acting and having interests akin to a person more than a decade younger than they really are. They need to be portrayed as relatively healthy, happy, active, sociable, and in positive mental shape, in order to protect their identities and increase the likelihood of older consumers identifying with such ads. However, care needs to be given to how old models look, because these consumers only perceive themselves to look about 5 years younger than their actual age, and presenting images that are idealised can lead to consumer discontent (Richins, 1991, 1995). Thus, portrayal of older consumers is more about a youthful outlook than it is about looking much younger. Inappropriate portrayal of older adults in advertising has already resulted in the boycotting of products by almost one third of older Americans (Meyer, 1990), suggesting that mistakes can be costly to the firm.

In addition to their own prejudices of older adults, advertisers have often demonstrated reluctance to utilise older models because of the fear that such a strategy would alienate their younger audiences (Aldersey-Williams, 1993). However, while this may be true for some conspicuous services, such as restaurants or bars, likely to be patronised by groups of young people (Day and Stafford, 1997) advertisers need to understand that the balance of empirical evidence refutes this possibility (e.g., Greco, Swayne and Johnson, 1997; Klock and Traylor, 1983; Rotfeld, Reid and Wilcox, 1982). Moreover, one study found older models to actually be perceived as being more credible and believable than young models (Milliman and Erffmeyer, 1990). On the other hand, empirical evidence suggests that while cognitively young consumers may be able to identify with middle-aged models, those with older self-perceived ages and low levels of life satisfaction do feel alienated by younger models (Nelson and Smith, 1988). Indeed, while no model can fully explain the effects of all advertising (Ambler, 2000), one of the objectives of most ads is to persuade target consumers to adopt a particular product, service, or idea (Meyers-Levy and Malaviya, 1999). Persuasion occurs, in part, through the process of identification with the source of a message (Kelman, 1961), often taken to refer

to the actual spokesperson in the ad (Belch and Belch, 1998). Moreover, it has been suggested that pictures, as opposed to merely copy, is beneficial in advertisements targeting older adults (Law, Hawkins and Craik, 1998). Clearly, then, there is a need to target older consumers with advertising that portrays them in the way they perceive themselves.

The marketing communications environment is becoming increasingly fast-paced and cluttered (Hawkins, Hock and Meyers-Levy, 2001), and much expenditure is still wasted in ineffective campaigns (Vakratsas and Ambler, 1999). However, merely increasing frequency is not a viable response to this situation, as repetition may actually diminish the persuasive impact of a message (Belch, 1982) because consumers can become bored or irritated. Rather, a series of advertisements within an overall campaign may be a better solution, as research clearly shows that varied ad executions can enhance recall (Calder and Strenthal, 1980; Rao and Burnkrant, 1991) and prevent early decay of ad effects, at least in low-involvement situations (Cacioppo and Petty, 1985).

Alternatively, advertisers may consider using at least one older person in an ad, ensuring that they are fully integrated. Indeed, using multiple people can generate higher levels of message involvement, at least under conditions of strong ad messages (Moore and Reardon, 1987). Thus, by incorporating older models, either as part of a series in a campaign or in a multiple person advertisement, marketers will not only portray older models as sociable, but can attempt to increase the likelihood that both older and younger audiences will identify with the images portrayed.

Media Planning

Marketers will be able to reach specific segments identified in this research with considered media planning. For increased effectiveness and efficiency, media strategies should be tailored for specific segments. Thus, segments 1 and 2 are best reached using both television and print media (magazines and newspapers). Because these segments comprise the cognitively oldest consumers, who

admitted that mentally they are not in as good a shape as they have been, extra consideration needs to be given regarding the design of the actual advertisements. Although some research disputes the need to increase the length of television ads targeted at older adults (Ensley and Pride, 1991), some prior studies have found that television clutter and cognitive speed are negatively related, thus slower paced television ads may be more effective (Johnson and Cobb-Walgren, 1994; Stephens, 1982). Additionally, there is the need to ensure that the items to be remembered are presented both visually and auditory, as opposed to one of these methods alone, as this strategy can result in enhanced memory (Bäckman, Mäntylä and Herlitz, 1990).

Segment 3 is the highest user of radio, while segment 4 watches television, reads magazines and uses the internet. Finally, although segment 5 consumes less television and print media than other segments, they are the highest users of the internet. Furthermore, it is not necessarily more expensive to target older adults, as the benefits of increasing frequency in a media schedule failed to find any support in two empirical studies (Singh, Mishra, Bendapudi and Linville, 1994; Stephen and Warrens, 1984). Finally, a wealth of available research suggests that when conditions are similar at the encoding and retrieval stages, age differences are often reduced or eliminated (Bäckman, Mäntylä and Herlitz, 1990; Cunningham and Brookbank, 1988; John and Cole, 1986). Clearly, therefore, there is the need to ensure a fully integrated communications campaign targeted at older consumers, whereby point-of-purchase materials provide retrieval cues that are integrated with advertising.

Positioning

Intuitively, it seems as though the portrayal of older adults in ads, and the positioning strategies adopted, may be highly relevant to the success of a campaign. While this has not been tested empirically, it has been suggested that successful advertising to older adults merely needs to contain material that is relevant specifically to that generation (Schewe and Meredith, 1994; Stephens, 1982). This is because evidence shows that recall levels of older adults improve

(sometimes to the point where they outperform younger people) when the nature of the to-be-remembered material is historically relevant. For example, older subjects recalled more from a biographical sketch of a cohort-relevant person than did their younger counterparts. Conversely, younger adults did better when the sketch involved a figure taken from a more recent cohort (Hultsch and Dixon, 1983). On this basis, scenes based on ‘the good old days’ may be relevant for some campaigns, particularly when targeting segments 1 and 3, given their relatively high predispositions toward nostalgia.

Other positioning strategies and advertising themes could use the list of values. As a whole, these older adults place great importance on self-respect. Additionally, because the cognitively young place more importance on warm relationships with others, fun and enjoyment of life, and self-fulfilment than do their cognitively older counterparts, themes based around these values may be more effective when targeting the cognitively young. In contrast, security is likely to be a successful positioning strategy when targeting cognitively older adults, as is a sense of accomplishment. The positioning strategy is crucially important for any marketing campaign as it holds the facets of the campaign together, and allows for a product or service to build distinctiveness in the marketplace. By building a distinct brand that is positioned on values that these older consumers find important, marketers can begin to reach these older consumers and tap into what is currently a wasted and overlooked opportunity for many firms.

5.4 IMPLICATIONS FOR PUBLIC POLICY

The potential negative impact of ageism is exacerbated when one considers that the likely target of ageism does not feel old, and have a self-perceived age that is about a decade younger than their actual age. Thus, legislation needs to address ageism. At the moment, older people have no legal protection against ageism, or even a statutory body to complain to if they are victims of

discrimination (Age Concern, 2005). However, the new Commission for Equality and Human Rights will, hopefully, deal with ageism and age discrimination in the same way as gender, racial, and other forms of discrimination are addressed. Nevertheless, government bodies and other public institutions have a part to play in tackling discrimination on the basis of age.

While the advertising industry has never fostered diversity in any form (Crain, 1999), the Advertising Standards Authority also has a moral duty in ensuring that advertising in the UK does not stereotype older adults. Contrary to socialisation theory, some research found that advertising practitioners do not believe that older adults learn how to behave from the portrayals of older people in advertising (Greco, 1988). However, most writers acknowledge the potential damage that can be done through negative and or stereotypical representation of older adults in advertising (Carrigan and Szmigin, 2000a, b; Murphy, 1998; Pollay, 1986). Thus, as the regulatory body for advertising in the UK, the ASA has a clear moral responsibility to regulate against ageism and a code of practice pertaining to older adults in advertising is needed. This is especially important in light of Carrigan and Szmigin's (2003) findings that UK advertising practitioners themselves admit that the industry is ageist, and may require regulation in order to respond to older consumers.

The wider media, too, need to wake up to their obligations. The mass media plays a significant role in the socialisation process (Langmeyer, 1983) and is an important source of education for the public (Bailey, Harrell and Anderson, 1993). The recent survey into attitudes toward age in the UK (Age Concern, 2005) found 58% of people in this country believe the media portray older people in a negative way. As theories and concepts such as labelling theory and the social breakdown syndrome argue, such negative images can not only reinforce and perpetuate stereotyping and discrimination, but can actually affect the self-perceptions and identities of older adults themselves. Indeed, a recent study found a direct negative link between perceived age discrimination and well-being among older adults (Garstka, Schmitt, Branscombe and Hummert (2004). If, as Thompson (1992) argues, the image of old age that is absorbed from the media is a seriously unbalanced version of reality that helps to sanction

social and health policies that focus on the crises of age, then the result is that resources are not put into the upbeat, preventative and positive measures for dealing with age. Perhaps, then, what is needed is far more emphasis on the positive, rather than the negative, aspects of ageing.

5.5 IMPLICATIONS FOR FURTHER RESEARCH

This research continued in the tradition of attempting to further knowledge pertaining to self-perceived age, and thus built on prior studies. Research often raises more questions than it answers, and while this research did address some important issues, it is no different in terms of raising more questions. Thus, a clear research agenda has emerged. First, there is a need to utilise a contrasting methodology. Qualitative research is needed to delve deeper into areas such as the perceived treatment older adults receive, in society in general and by the marketing industry in particular, in order to better understand *why* the results pertaining to self-perceived age emerged. Is it, for example, a perception that to admit to being old is to admit defeat? Is this country so far out of touch with older people that to be old is to be stigmatised or ignored? Or is it merely that as health has improved and life expectancy increased, people perceive themselves as old at a later stage than in previous generations? If that is the case, why do women, who have the same cognitive ages as men, have younger age identities? Why is it worse to be an old woman than an old man? Likewise, what are the perceptions of retirement? Why, contrary to expectations, does retirement not make a person feel older? The use of in-depth interviews, focus group discussions, and even diary research would make valuable contributions to the understanding of how older adults are affected by a range of different treatments, landmarks, and perceptions.

This research has also raised questions pertaining to a range of socio-demographic variables. The finding that socio-economic status is not related to cognitive age is one of the few major differences to the body of American

findings. Thus, further analysis is needed. The results pertaining to different marital status, too, may have implications for the concept of the traditional family life-cycle, and consumer decision making in later life. Crucially, the research has shown categorically that grandparenthood is of the utmost importance to these older consumers. Further research into the buyer behaviour, both purchases and decision-making role, of older adults in relation to their grandchildren is also needed.

In terms of the wider social issues, more research needs to be conducted into the overall lifestyles of older people, and how this affects self-perceived age. From a battery of social relations indicators, few correlations emerged, thus the search continues for meaningful social antecedents of cognitive age. In particular, alternative ways of measuring social comparison, as outlined in section 5.2.4 are called for.

This research has confirmed that self-perceived health is related to self-perceived age. What is needed next is further research into the actual health perceptions and problems of older adults. In particular, research into the physical problems encountered in the marketplace, and the problems in using particular products and packaging would be beneficial to marketing. In this way, marketers could better respond to the needs of this market, and perhaps gain competitive advantage at the same time.

Psychological factors, too, need more attention. The possible psychological considerations that could be examined in relation to self-perceived age are so extensive that this study has merely explored the tip of the iceberg. Personality traits, a range of measures pertaining to the self, alternative ways of measuring morale, and a whole battery of measures concerned with cognitive abilities need to be studied in relation to both cognitive age and age identity.

Whilst this research has considered a range of consumer behaviours, and has extended knowledge pertaining to consumer behaviour and the self-perceived age of older UK adults to a greater extent than any other known study, it still leaves a comprehensive agenda for research. Many of the consumer behaviour

traits and attitudes that were considered here have never before been measured anywhere in the world in relation to self-perceived age. Such measures include market mavenism, materialism, nostalgia, attitudes toward marketing and consumerism, attitudes toward credit, and attitudes toward healthy eating. Thus, more research is needed in order to refute or support the findings. Additionally, some measures have been considered outside the UK, but it needs further studies to confirm the findings. These include central values, attitudes toward age-based marketing promotions, media usage, and price consciousness.

Finally, more exploration into those areas that contrast with American studies is needed, in order to ascertain the underlying reasons for the differences. This is particularly true for the finding that older UK adults seem to plateau in their youth bias, while their American counterparts demonstrate continued increases with advancing chronological age. Additionally, the results of this study contrast with American literature in relation to socio-economic status, and perhaps more important is the need to conduct an Anglo-American cross-cultural study into the different measures pertaining to the self in relation to self-perceived age, as it seems as though these results, while consistent within themselves, are in contrast to American findings.

5.6 SUMMARY AND CONCLUSIONS

This thesis has many practical implications for marketing to older UK consumers. Nevertheless, as its title suggests, the thesis was primarily concerned with self-perceived age, and as such the study of ageing, and the meaning of different types of age, were its major focus. Thus, the thesis is clearly bound in gerontology, with its practical implications applied to the marketing discipline.

Chapter 1 laid the foundations for the research and showed that older consumers are important to marketers, in terms of size, relative wealth, and apparent willingness to spend. Yet it was noted that very little empirical research pertaining to this market is based on older UK adults. At the same time, it was

argued that the concept of self-perceived age for marketing to older adults was potentially useful. However, in contrast to the US, which has a relatively well-established body of research in the area, this country lags markedly behind. On this basis, the research was designed to advance knowledge pertaining to self-perceived age among older UK adults.

Because ageing and self-perceived age are multidimensional (Kastenbaum, *et al.*, 1972; Moody, 1988; Moschis, 1994; Riley, 1992), the literature reviewed in this thesis originated from a variety of disciplines, including sociology, biology, psychology, and marketing. However, the common bond that united the literature was the study of ageing with a focus on self-perceived age, thus these disciplines came together under the rubric of gerontology. Appropriate gerontological theories and concepts were integrated into the literature review in order to add depth. The purpose of the literature review was twofold. First, it aimed to synthesise and analyse research findings pertaining to self-perceived age, noting areas of consensus and disagreement. Second, it evaluated the growing body of marketing literature on older consumers, in order to identify potentially important areas that had previously been neglected by self-perceived age studies. Based on the review of each area, a total of 32 propositions were developed, which guided the design of the primary research.

Both the literature review and Appendix A demonstrate that the vast majority of empirical studies relating to self-perceived age are quantitative surveys. In order to advance knowledge of this phenomenon, and enable this study to sit within this current body of knowledge, a large-scale survey was conducted, using a self-administered questionnaire. Chapter 3 explained and justified both the choice of methodology and the choice of research methods that addressed the research propositions.

After profiling the 650 respondents, Chapter 4 presented the analyses of the data. Taking each proposition in turn, the statistical techniques used in the data analyses, and the results of the analyses, were provided. The final chapter in this thesis then discussed the results in relation to previous research, and in relation to their practical implications for marketing and wider social issues. Finally, the

contributions to knowledge, and the areas that need further research were outlined.

Thus, the research has met its original aims and objectives. Knowledge pertaining to self-perceived age has been advanced, and implications for both marketing practice and further research have been suggested. The major conclusions to arise from the research that pertain to gerontology and self-perceived age overall are fourfold. First, the research concludes that whilst age identity and cognitive age are clearly related, this relationship is not perfect, and thus the two age measures are distinct. Therefore, whilst both are clearly useful for marketing practitioners, they are not interchangeable. Second, this research has advanced knowledge pertaining to self-perceived age in that it has both replicated and supported a range of American empirical studies, and considered a host of new variables, too. Thus, it adds to a body of established gerontological knowledge, and indeed extends that knowledge from its consideration of a range of socio-demographic, social, psychological, physical, and behavioural variables.

Third, this research lends credence to the validity of the cognitive age scale. Face validity is apparent, because the scale is consistent with the theoretical domain of the construct. That is, the scale is multidimensional, as is ageing *per se*, and taps into the physical/biological aspects of ageing (look age), psychological (feel and interests age), social (do age and interests age). Thus, the scale demonstrates face validity in that it conforms to Birren's (1959) cornerstone theory that suggested that any type of ageing cannot be understood without reference to other types. Likewise, this research has clearly demonstrated the cognitive age scale's predictive validity, because it correlates with a range of measures and scales that, theoretically, it should be able to predict. These include the age identity scale and the predicted directions, strength of correlation, and pattern of relationships with chronological age. The results also provided evidence of the predictive validity of the scale in terms of expected outcomes in relation to gender, retirement, progeny, activities and exercise participation, self-perceived health status, positive affect, self-esteem, self-confidence, and central values.

Fourth, this research has found similarities in cognitive ages and corresponding degrees of youthfulness of older UK adults to be strikingly similar to their American counterparts. On the basis of these similarities, and the fact that the data behaved in such an expected manner, many previous findings that emerged from the USA and the corresponding suggested marketing strategies may be applicable in this country, too. Thus, the research adds credence to the universality of the phenomenon of self-perceived age and of the cognitive age scale in particular. This research adds the UK to the range of countries in which self-perceived age has been studied, and its findings are therefore of potential importance not only in the UK, but worldwide.

Several important implications for marketing practice emerged from the research. The research clearly establishes that self-perceived age is a widespread and extensive phenomenon amongst older UK adults, and as such is a useful marketing variable. Moreover, the research has established that older UK adults are not a homogeneous group, and that cognitive age is indeed a useful segmentation variable when used with other variables. Indeed, the multivariate segmentation model to emerge from this research is the first of its kind in Britain, and has potential for practical use.

Finally, whilst the research answers many questions regarding older adults and self-perceived age, it answered them quantitatively. Thus, it is now known that the possession of a younger self-perceived age is extensive among older adults in the UK. However, *why* this is the case has not been answered in this thesis, thus a research agenda has been set, as it is recognised that further research, particularly that of a qualitative nature, is needed.

In sum, whether public or private sector, those organisations that will succeed are the ones that train their staff to better understand the needs and motivations of a large and growing sector of the population who are unwilling to embrace the 'pipe and slipper' stereotype of yesterday's older person. This research has demonstrated that being 'young at heart' is no longer an abstract concept, but one that is reality to many older people.

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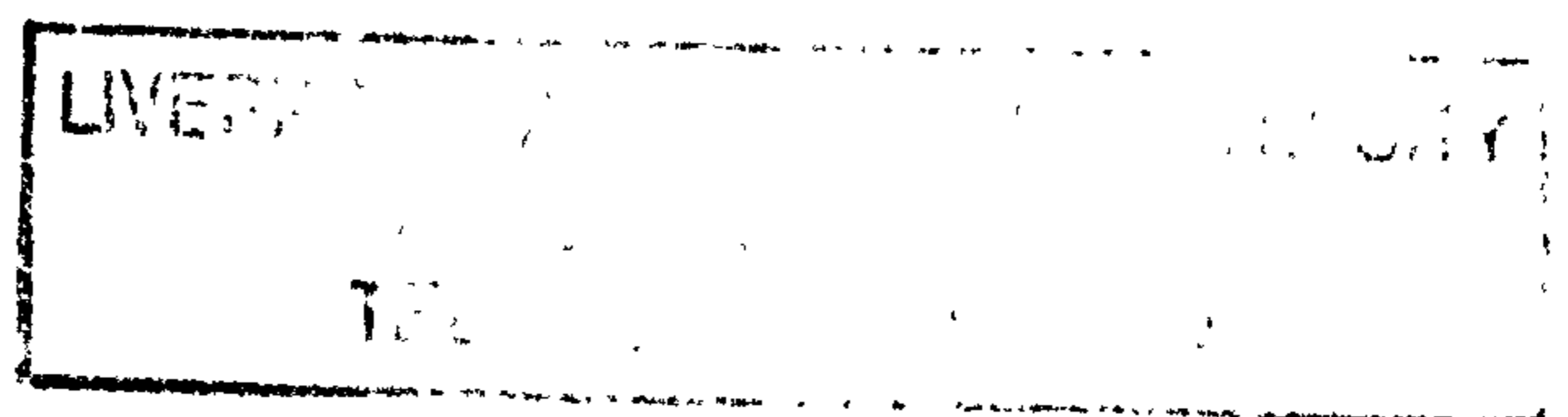
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APPENDIX A

SAMPLING & ADMINISTRATIVE DETAILS OF EMPIRICAL SELF-PERCEIVED AGE STUDIES REVIEWED



Empirical Self-Perceived Age Studies

Author(s)	n	Administration	Self-Perceived Age Measure
Aisenberg 1964	174	Mail questionnaire	Feel old question
Atchley 1976	3630	Mail questionnaire	Age identity
Atchley and George 1973	3510	Mail questionnaire	Age identity
Atchley and Seltzer 1975	3463	Mail questionnaire	Age identity
Back and Gergen 1963	Not detailed	Not detailed	Time perspective
Barak 1979	324	Interview	Cognitive age
Barak 1987	422	Self-report questionnaire	Age identity; Cognitive age; Ideal age
Barak 1998	334	Self-report questionnaire	Cognitive age; Ideal age
Barak and Gould 1985	430	Self-report questionnaire	Cognitive age; Ideal age
Barak and Gould 1987	677	Self-report questionnaire	Cognitive age; Ideal age
Barak, Mathur, Lee and Zhang 2001	578	Self-report questionnaire	Cognitive age; Ideal age; Age identity
Barak, Mathur, Zhang, Lee and Erondu 2003	1470	Self-report questionnaire	Cognitive age; Ideal age
Barak and Rahtz 1990	673	Self-report mail survey	Cognitive age; Youthfulness
Barak and Rahtz 1999	668	Self-report mail survey	Cognitive age; Youthfulness
Barak and Schiffman 1981	324	Interview	Cognitive age
Barak and Stern 1985	422	Self-report questionnaire	Cognitive age; Age identity
Barak and Stern 1985/86	567	Self-report questionnaire	Age identity
Barak and Stern 1986	614	Self-report questionnaire	Cognitive age; Age identity; Ideal age
Barak, Stern and Gould 1988	578	Self-report questionnaire	Cognitive age; Ideal ages
Barnes-Farrell and Piotrowski 1989	845	Anonymous survey	Feel age
Batten, Barton, Durstine and Osborne 1966	4000	Telephone interview	Comparative age
Baum and Boxley 1983	308	Self-report & administered questionnaire	Comparative age

Author(s)	n	Administration	Self-Perceived Age Measure
Bell 1967	55	Interview	Feeling old question
Bengston, Cuellar and Ragan 197	1269	Interview	Age identity
Blau 1956 (reporting Elmira study)	468	Interview implied	Age identity
Blau 1973 (reporting Kips Bay study)	500	Interview	Age identity
Bloom 1961	83	Self-report questionnaire	Age identity
Breytspraak 1984	1474	Not detailed	Age identity
Bultena and Powers 1978	235	Interview	Age identity
Burgess 1962	131	Card selection	Age identity
Busse, Jeffers and Obrist 1957	162	Interview	Age identity
Carp 1967	115	Administered sentence completion instrument	Age identity
Carp and Carp 1981	352	Interview	Age identity
Chua, Cote and Leong 1990	301	Self-report questionnaire	Cognitive age
Clark, Long and Schiffman 1999	376	Self-report questionnaire	Modified cognitive age
Cleveland and Shore 1992	415	Mail questionnaire	Age identity
Cornell Study (reported in Rosow, 1967)	1480	Interview	Identity age
Crook and Heinstei 1958	846	Interview	Age identity
Cutler 1974 (Reported in Cutler 1982)	2158	Unclear	Feel close
Daum 1978**	200	Not detailed	Semantic age identification
Dolinsky 1997	102	Mail questionnaire	Cognitive age
Eastman and Iyer 2005	171	Internet survey	Cognitive age
George 1985	345	Not detailed	Age identity
George, Mutran and Pennybacker 1980	341	Self-report mail questionnaire	1. Age identity 2. Stereotypical age role identity
Goldsmith and Heiens 1992	607	Self-report mail survey	Cognitive age dimensions
Gould and Barak 1988	679	Self-report questionnaire	Cognitive age

Author(s)	n	Administration	Self-Perceived Age Measure
Griffiths, Farley, Dean and Boon 1971	376	Interview	Modified feeling old question
Guiot 2001	225	Self-administered questionnaire	Cognitive age, desired age
Guptill 1969	425	Unclear	Semantic age identification
Gwinner and Stephens 2001	355	Interview	Cognitive age
Hansen and Yoshioka 1962	6356	Interview	Age identity
Havinghurst and Albrecht 1953	100	Interview	Age identity
Heckhausen and Krueger 1993	180	Interview	Elements of cognitive age (look and activities); comparative age
Henderson, Goldsmith and Flynn 1995	Study 1 185	Self-report questionnaire	Cognitive age dimensions
Henderson, Goldsmith and Flynn 1995	Study 2 607	Self-report mail survey	Cognitive age dimensions
Hori 1994	370	Unclear	Feeling old question
Hubley and Hultsch 1994	Sample 1: 241	Self-administered questionnaire	Feel age; Ideal age
	Sample 2: 355		
Jeffers, Eisdorfer & Busse 1962	168	Self administered questionnaire, and card sort	Age identity
Johnson 1993	148	Self administered questionnaire	Personal age
Johnson 1995 and 1996	612	Mail questionnaire	Cognitive age
Jyrkila 1960 (reporting Elmira study)	468	Interview	Age identity
Kaliterna, Larsen and Brkljacic 2002	118	Self administered questionnaire	Cognitive age
Karp 1985	47	Interview	Ideal age
Kastenbaum, Derbin, Sabatini and Artt 1972	75	Interview	Personal age
Kastenbaum and Durkee 1964	49	Interview	Age identity
Keith 1977	169	Structured interview	Age identity
Kogan and Wallach 1961	69	Structured interview	Age identity
Kutner, Fanshel, Togo and Langner 1956	500	Interview	Age identity
Lehr and Puschner 1964	500	Interview	Feeling old question

Author(s)	n	Administration	Self-Perceived Age Measure
Linn and Hunter 1979	150	Interview	Comparative age
Lowenthal and Haven 1968	280	Interview	Comparative age
Lutsky 1978	32	Interview	Age identity; feel age; look age
Markides 1980	485	Interview	Age identity
Markides and Bolt 1983	323	Interview	Age identity
Markides and Pappas	338	Interview	Age identity
Mason 1954	120	Interview	Age identity
Mathur, Sherman and Schiffman 1998	199	Self-administered questionnaire	Modified Cognitive Age
Matthews 1979	38	Observation Interview	Age identity
McMellon, Schffman and Sherman 1997	6	On-line depth interviews	Cognitive age
Meadow, Mentzer, Rahtz and Sirgy 1992	Study 1 752	Mail survey	Cognitive age
	Study 2 529		
Messer 1968	243	Interview	Open-ended age identity question
Miller, Gurin and Gurin 1980	Sample 1: 628 Sample 2: 531	Interviews	Feel close
Minnigerode 1976	95	Self administered questionnaire	Age identity
Montepare 1996(a, c)	290	Administered and self-report questionnaire	Comparative age; Modified Ideal age
Montepare 1996 (b)	265	Administered questionnaire	Comparative age
Montepare and Lachman 1989	188	Self-report questionnaire	Modification of cognitive age & Ideal age
Muller and O'Cass 2001	356	Self-report questionnaire	Feel age
Mutran and Burke 1979a	1170	Interview	Typical age role identity
Mutran and Burke 1979b	1044	Interview	Typical age role identity
Mutran and George 1982	341	Mail survey	1. Age identity 2. Typical age role identity 3. Stereotypical age role identity
Mutran and Reitzes 1981	3104	Not stated	Typical age role identity
Nelson and Smith 1988	122	Interview	Cognitive age

Author(s)	n	Administration	Self-Perceived Age Measure
Neugarten 1968	100	Interview	Modified identity age
Neugarten and Garron 1959	625	Interview	Identity age
Osteen and Best 1985	80	Not detailed	Age identity
Palmore, Fillenbaum and George 1984 (Utilising data from Duke Second Longitudinal Study 1969-76)	502	Not detailed	Age identity
Patterson, Freeman and Butler 1974	47	Interviews	Denial of ageing changes
Perlin and Butler 1963	47	Interviews	Age identity
Phillips 1957	968	Interview	Age identity
Phillips 1961	257	Interview	Age identity
Pihlblad and McNamara 1965	151	Interview	Age identity
Plath and Ikeda 1975	169	Self-administered questionnaire	Age identity
Plawecki and Plawecki 1980, 1981	54	Interview	Modified feel age
Preston 1968	99	Self-report questionnaire	Feeling old question
Preston 1970	47 (+ 99 from above)	Semi structured interview	Feeling old question
Preston and Williams 1971	100	Semi-structured interview	Feeling old question; Ideal age
Puglisi and Jackson 1978	71	Self-administered questionnaire	Age identity
Rahtz, Sirgy and Meadow 1989	752	Mail survey	Cognitive age
Rosow 1967	1174	Not detailed	Identity age
Ross 1981	4000	Mail survey	Cognitive age
Rossi 1980	not detailed	Not detailed	Feel age Ideal age
Sellick 2004	947	Questionnaire	Cognitive age
Shanas 1950	388	Not detailed	Age identity
Sheppard and Belitsky 1966	455	Interview	Age identity
Sherman, Schiffman and Dillon 1988	450	Not detailed	Cognitive age

Author(s)	n	Administration	Self-Perceived Age Measure
Sherman 1994	101	Interview	Modified feeling old question
Sherman, Schiffman and Mathur 2001	323	Self administered questionnaire	Cognitive age
Smith and Moschis 1984	286	Self administered questionnaire	Cognitive age
Staats 1996	334	Self-report questionnaire	Comparative age
Staats, Heaphey, Miller, Partlo, Romine and Stubbs 1993	250	Interview	Modified personal age
Steitz and McClary 1988	93	Mail survey	Comparative age
Stephens 1991	355	Interview	1. Age identity 2. Semantic age identification 3. Stereotypical age role identity 4. Cognitive age
Streib and Schneider 1971	1969	Mail survey	Age identity
Suchman, Phillips and Streib 1958	2993	Self administered questionnaire	Age identity
Szmigin and Carrigan 2000	231	Mail survey	Cognitive age
Taietz 1976	920	Interview	Age identity
Taves and Hansen 1962	938	Interview	Age identity
Taves and Hansen 1963	1400	Interview	Feeling old question
Terpstra, Terpstra, Plawecki and Streeter 1989	67	Interview	Feel age
Thompson, Itzin and Abendstern 1990	43	Interview	Feeling old question
Togonu-Bickersteth 1986	440	Interview	Age identity
Tuckman and Lavell 1957	80	Interview	Feeling old question
Tuckman and Lorge 1954	1032	Self-report questionnaire	Age identity
Underhill and Cadwell 1983	1009	Telephone interview	Feel age
Uotinen 1998	1355	Mail questionnaire	Feel age: Ideal age. Disparity age
Van Auken, Barry and Anderson, 1993; Van Auken and Barry 1995	323	Mail questionnaire	Cognitive age
Van Auken, Barry and Bagozzi, in press	752	Mail questionnaire	Cognitive age: Ideal age

Author(s)	n	Administration	Self-Perceived Age Measure
Ward 1977	323	Interview	Age identity
Wilkes 1992	363	Self-report questionnaire	Cognitive age
Zola 1962	219	Interview	Feel age; Ideal age

APPENDIX B

FINAL QUESTIONNAIRE

**TEXT BOUND INTO
THE SPINE**

Please tick one box for each statement.

How Do You Shop?					
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
When I see a new brand on the shelf I often buy it just to see what it's like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often try new brands before my friends and neighbours do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to try new and different things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like introducing new brands and products to my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like helping people by providing them with information about many kinds of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People ask me for information about products, places to shop, or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If someone asked where to get the best buy on several types of products, I could tell him or her where to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends think of me as a good source of information when it comes to new products or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say that this description fits you?</p> <p>very well <input type="checkbox"/> fairly well <input type="checkbox"/> unsure <input type="checkbox"/> not so well <input type="checkbox"/> not very well at all <input type="checkbox"/></p>					

Shopping Around					
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I shop a lot for special offers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find myself checking the prices in the supermarket even for small items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually watch out for announcements of sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A person can save a lot of money by shopping around for bargains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I buy many things with a credit card or a store card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to pay cash for everything I buy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's good to have credit cards or store cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's unwise to buy on credit, except a house or car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Good Old Days?					
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
They don't make 'em like they used to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Things used to be better in the good old days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products are getting shoddier and shoddier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technological change will insure a brighter future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time has shown a steady improvement in human welfare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are experiencing a decline in the quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steady economic growth has brought increased human happiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modern business constantly builds a better tomorrow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Companies And Customers

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Most manufacturers operate on the philosophy that the 'consumer' is always right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Despite what is frequently said, 'let the buyer beware' is the guiding philosophy of most manufacturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition ensures that consumers pay fair prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers seldom shirk their responsibility to the consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most manufacturers are more interested in making profits than in serving consumers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most product advertising is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements are reliable sources of information about the quality and performance of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, advertised products are more dependable than unadvertised ones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements usually present a true picture of the products advertised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally speaking, the products required by the average family are easily available at convenient places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the quality of repair and maintenance service provided by manufacturers and dealers is getting better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, product guarantees are honoured by the manufacturers who make them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The games and contests that manufacturers sponsor to encourage people to buy their products are usually dishonest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material Things

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I admire people who own expensive homes, cars, and clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some of the most important achievements in life include acquiring material possessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I place emphasis on the amount of material objects people own as a sign of their success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own say a lot about how well I'm doing in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to own things that impress people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't pay much attention to the material objects other people own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually buy only the things I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to keep my life simple, as far as possessions are concerned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own aren't all that important to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy spending money on things that aren't practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buying things gives me a lot of pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like a lot of luxury in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I put less emphasis on material things than most people I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have all the things I really need to enjoy life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My life would be better if I owned certain things I don't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wouldn't be any happier if I owned nicer things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'd be happier if I could afford to buy more things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Most people seem to have other 'ages' besides their official or 'date of birth' age. The questions that follow have been developed to find out about your 'unofficial age'. Please specify which age decade you FEEL you really belong to

	teens	20s	30s	40s	50s	60s	70s	80s
I FEEL as though I am in my...	—	—	—	—	—	—	—	—
I LOOK as though I am in my...	—	—	—	—	—	—	—	—
I DO most things as though I were in my...	—	—	—	—	—	—	—	—
My INTERESTS are mostly those of a person in his/her...	—	—	—	—	—	—	—	—

On the whole, do you feel that you are:

Young

Middle-aged

Old/Elderly

What, if anything, reminds you that you are getting older?

What, if anything, do you do to 'stay young'?

Many firms and organisations now offer discount cards to people over 50. These give money off a range of products and services.

If you already own one of these cards, do you use it:

As much as possible

Most of the time

Sometimes

Rarely

Never

If you don't already have one, how interested are you in owning one?

Extremely interested

Fairly interested

Not sure

Not very interested

Not at all interested

Would you use a card like this?

Definitely yes

Probably yes

Not sure

Probably not

Definitely not

Please explain the reason(s) for your answers:

Your Health And Well Being

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I try to eat healthier foods these days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am prepared to pay more for foods that don't contain artificial additives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I include plenty of fibre in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to eat less fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat plenty of fresh fruit and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The experience of a word being 'on the tip of my tongue' happens more often nowadays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My memory has never been better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentally, I'm in as good a shape as I've ever been	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>On the whole, would you say your health is:</i> Good <input type="checkbox"/> Fairly Good <input type="checkbox"/> Not Good <input type="checkbox"/></p> <p><i>Do you have a long-standing health problem?</i> No <input type="checkbox"/> Yes <input type="checkbox"/></p> <p><i>If so, does it limit your activities:</i> A lot <input type="checkbox"/> A little <input type="checkbox"/> Not at all <input type="checkbox"/></p>					

How You've Felt Recently

	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<i>During the past few weeks did you ever feel...</i>		
Pleased about having accomplished something?	<input type="checkbox"/>	<input type="checkbox"/>
That things were going your way?	<input type="checkbox"/>	<input type="checkbox"/>
Proud because someone complimented you on something you had done?	<input type="checkbox"/>	<input type="checkbox"/>
Particularly excited or interested in something?	<input type="checkbox"/>	<input type="checkbox"/>
On top of the world?	<input type="checkbox"/>	<input type="checkbox"/>
So restless that you couldn't sit long in a chair?	<input type="checkbox"/>	<input type="checkbox"/>
Bored?	<input type="checkbox"/>	<input type="checkbox"/>
Depressed or very unhappy?	<input type="checkbox"/>	<input type="checkbox"/>
Very lonely or remote from other people?	<input type="checkbox"/>	<input type="checkbox"/>
Upset because someone criticised you?	<input type="checkbox"/>	<input type="checkbox"/>

Being With Others

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I'm concerned about my style of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about the way I present myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm self conscious about the way I look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually worry about making a good impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the last things I do before I leave my house is look in the mirror	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about what other people think of me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm usually aware of my appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The only time I really feel alive is when I am with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes feel very lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes have the idea that I really am alone in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy having people around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would really rather watch a good TV programme than go out with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Behaving In Company

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I actively avoid wearing clothes that are not in style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At parties I usually try to behave in a manner that makes me fit in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I am uncertain how to act in a social situation, I look to the behaviour of others for clues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to pay attention to the reactions of others to my behaviour in order to avoid being out of place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find that I tend to pick up slang expressions from others and use them as a part of my own vocabulary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I tend to pay attention to what others are wearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's important to me to fit into the group I'm with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My behaviour often depends on how I feel others wish me to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I am the least bit uncertain as to how to act in a social situation, I look to the behaviour of others for cues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually keep up with clothing style changes by watching what others wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When in a social situation, I tend not to follow the crowd, but instead to behave in a manner that suits my particular mood at the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How You Feel About Yourself

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I feel that I'm a person of worth, at least on an equal plane with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All in all, I am inclined to feel that I am a failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to do things as well as most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I do not have much to be proud of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take a positive attitude toward myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I could have more respect for myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I certainly feel useless at times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At times I think I am no good at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have more self-confidence than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am more independent than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have a lot of personal ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to be considered a leader	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How You Spend Your Time

How long do you spend watching television on an average weekday?

Less than 1 hour

1-3 hours

4-5 hours

More than 5 hours

How long do you spend watching television in an average weekend?

Less than 1 hour

1-3 hours

4-5 hours

More than 5 hours

How long do you spend listening to the radio on an average day?

Less than 1 hour

1-3 hours

4-5 hours

more than 5 hours

How many days per week do you read a newspaper, in an average week?

None

1-2

3-4

5 or more

How long do you spend reading the newspaper on an average day?

Less than 10 minutes

10-20 minutes

20-30 minutes

more than 30 minutes

About how many magazines do you read in an average month?

None

1-2

3-4

5 or more

About how many books have you read in the past 3 months or so?

None

1-2

3-4

5 or more

About how many times have you used the internet in the last 3 months or so?

None

1-2

3-4

5 or more

How many holidays abroad have you taken in the last year?

None

1

2

3 or more

How many holidays (and short breaks) in the UK have you taken in the last year?

None

1

2

3 or more

Apart from the activities listed above, how else do you spend your spare time? We want to know your hobbies, interests, and ways of keeping fit. Please list any other activities you do on a regular (at least every month) basis:

Are you a member of a club or organisation linked to any of these activities? No Yes

What's Important In Your Life?

*The following is a list of things that some people look for or want out of life.
Please study the list carefully and then rate each thing on how important it is in your daily life, where
1 = not at all important, and 9 = extremely important*

	Not Important								Very Important
	1	2	3	4	5	6	7	8	9
Sense of Belonging	1	2	3	4	5	6	7	8	9
Warm Relationships with Others	1	2	3	4	5	6	7	8	9
Self-Fulfilment	1	2	3	4	5	6	7	8	9
Being Well Respected	1	2	3	4	5	6	7	8	9
Fun and Enjoyment of Life	1	2	3	4	5	6	7	8	9
Security	1	2	3	4	5	6	7	8	9
Self-Respect	1	2	3	4	5	6	7	8	9
A Sense of Accomplishment	1	2	3	4	5	6	7	8	9

Now re-read the items and put a star by the one thing that is MOST important to you in your daily life

Your Family And Friends

How many children do you have? _____ age of oldest _____ age of youngest _____

How many grandchildren do you have? _____ age of oldest _____ age of youngest _____

Do any of your children or grandchildren live in the same house as you? Yes No

On average, how often do you see your children?
 More than once a week About once a week 2-3 times a month about once a month less than once a month

On average, how often do you see your grandchildren?
 More than once a week About once a week 2-3 times a month about once a month less than once a month

On average, how often do you see your friends?
 More than once a week About once a week 2-3 times a month about once a month less than once a month

How satisfied are you with the frequency of these meetings?

	Very Dissatisfied				Very Satisfied
	1	2	3	4	5
Children	1	2	3	4	5
Grandchildren	1	2	3	4	5
Friends	1	2	3	4	5

And Finally

Are you: Male Female

How old are you? _____

Are you: Married Single (never married) Divorced/separated Widowed

If you are not currently married, do you have a partner? Yes No

Are you: Working Housewife Retired

If retired: how long ago did you retire? _____ Was your retirement voluntary? Yes No

Approximately what is your household income, after taxes, per week?

less than £100 £100-199 £200 - £299 £300 - £399 £400 -£499 £500+

If you would like to be entered into the prize draw for £200 Marks & Spencer vouchers, please enter your telephone number below.

Thank you for your time it is much appreciated.

Please tick one box for each statement.

Products & Merchandise

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1 When I see a new brand on the shelf I often buy it just to see what it's like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 I often try new brands before my friends and neighbours do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 I like to try new and different things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 I like introducing new brands and products to my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 I like helping people by providing them with information about many kinds of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 People ask me for information about products, places to shop, or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 If someone asked where to get the best buy on several types of products, I could tell him or her where to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 My friends think of me as a good source of information when it comes to new products or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>9 Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say that this description fits you?</p> <p>very well <input type="checkbox"/> fairly well <input type="checkbox"/> unsure <input type="checkbox"/> not so well <input type="checkbox"/> not very well at all <input type="checkbox"/></p>					

Shopping Around

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
10 I shop a lot for special offers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 I find myself checking the prices in the supermarket even for small items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 I usually watch out for announcements of sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 A person can save a lot of money by shopping around for bargains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 I buy many things with a credit card or a store card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 I like to pay cash for everything I buy *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 It's good to have credit cards or store cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17 It's unwise to buy on credit, except a house or car *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Good Old Days?

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
18 They don't make 'em like they used to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19 Things used to be better in the good old days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20 Products are getting shoddier and shoddier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21 Technological change will ensure a brighter future *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 Time has shown a steady improvement in human welfare *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23 We are experiencing a decline in the quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24 Steady economic growth has brought increased human happiness *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25 Modern business constantly builds a better tomorrow *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Companies And Customers

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
26 Most manufacturers operate on the philosophy that the customer is always right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 Despite what is frequently said, 'let the buyer beware' is the guiding philosophy of most manufacturers *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28 Competition ensures that consumers pay fair prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 Manufacturers seldom shirk their responsibility to the consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30 Most manufacturers are more interested in making profits than in serving consumers *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31 Most product advertising is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32 Manufacturers' advertisements are reliable sources of information about the quality and performance of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33 Generally, advertised products are more dependable than unadvertised ones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34 Manufacturers' advertisements usually present a true picture of the products advertised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35 Generally speaking, the products required by the average family are easily available at convenient places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36 In general, the quality of repair and maintenance service provided by manufacturers and dealers is getting better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 Generally, product guarantees are honoured by the manufacturers who make them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38 The games and contests that manufacturers sponsor to encourage people to buy their products are usually dishonest *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material Things

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
39 I admire people who own expensive homes, cars, and clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40 Some of the most important achievements in life include acquiring material possessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41 I place emphasis on the amount of material objects people own as a sign of their success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 The things I own say a lot about how well I'm doing in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43 I like to own things that impress people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44 I don't pay much attention to the material objects other people own *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45 I usually buy only the things I need *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46 I try to keep my life simple, as far as possessions are concerned *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47 The things I own aren't all that important to me *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48 I enjoy spending money on things that aren't practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49 Buying things gives me a lot of pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50 I like a lot of luxury in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51 I put <u>less</u> emphasis on material things than most people I know *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52 I have all the things I really need to enjoy life *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53 My life would be better if I owned certain things I don't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54 I wouldn't be any happier if I owned nicer things *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55 I'd be happier if I could afford to buy more things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56 It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Most people seem to have other 'ages' besides their official or 'date of birth' age. The questions that follow have been developed to find out about your 'unofficial age. Please specify which age decade you FEEL you really belong to

	teens	20s	30s	40s	50s	60s	70s	80s
57 I FEEL as though I am in my...	—	—	—	—	—	—	—	—
58 I LOOK as though I am in my...	—	—	—	—	—	—	—	—
59 I DO most things as though I were in my...	—	—	—	—	—	—	—	—
60 My INTERESTS are mostly those of a person in his/her...	—	—	—	—	—	—	—	—

61 *On the whole, do you feel that you are:*

Young

Middle-aged

Old/Elderly

What, if anything, reminds you that you are getting older?

What, if anything, do you do to 'stay young'?

62 *Many firms and organisations now offer discounts to people over 50. Do you take advantage of these discounts?*

As much as possible

Most of the time

Sometimes

Rarely

Never

63 *Some firms offer 'senior' cards that give money off a range of products and services. If you don't already have one of these cards, how interested are you in owning one?*

Extremely interested

Fairly interested

Not sure

Not very interested

Not at all interested

64 *Would you use a card like this?*

Definitely yes

Probably yes

Not sure

Probably not

Definitely not

Please explain the reason(s) for your answers:

How You Spend Your Time

65 How long do you spend watching television on an average weekday?

Less than 1 hour

1-3 hours

4-5 hours

more than 5 hours

66 How long do you spend watching television in an average weekend?

Less than 1 hour

1-3 hours

4-5 hours

more than 5 hours

67 How long do you spend listening to the radio on an average day?

Less than 1 hour

1-3 hours

4-5 hours

more than 5 hours

68 How many days per week do you read a newspaper, in an average week?

None

1-2

3-4

5 or more

69 How long do you spend reading the newspaper on an average day?

Less than 10 minutes

10-20 minutes

20-30 minutes

more than 30 minutes

70 About how many magazines do you read in an average month?

None

1-2

3-4

5 or more

71 About how many books have you read in the past 3 months or so?

None

1-2

3-4

5 or more

72 About how many times have you used the internet in the last 3 months or so?

None

1-2

3-4

5 or more

73 How many holidays abroad have you taken in the last year?

None

1

2

3 or more

74 How many holidays (and short breaks) in the UK have you taken in the last year?

None

1

2

3 or more

75 *Apart from the activities listed above, how else do you spend your spare time? We want to know your hobbies, interests, and ways of keeping fit. Please list any other activities you do on a regular (at least every month) basis:*

76 *Are you a member of a club or organisation linked to any of these activities?* No Yes

Your Health And Well Being

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
77 I try to eat healthier foods these days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78 I am prepared to pay more for foods that don't contain artificial additives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79 I include plenty of fibre in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80 I try to eat less fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81 I eat plenty of fresh fruit and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82 The experience of a word being 'on the tip of my tongue' happens more often nowadays *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83 My memory has never been better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84 Mentally, I'm in as good a shape as I've ever been	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85 On the whole, would you say your health is:	Good <input type="checkbox"/>		Fairly Good <input type="checkbox"/>		Not Good <input type="checkbox"/>
86 Do you have a long-standing health problem?	No <input type="checkbox"/>		Yes <input type="checkbox"/>		
87 If so, does it limit your activities:	A lot <input type="checkbox"/>		A little <input type="checkbox"/>		Not at all <input type="checkbox"/>

How You've Felt Recently

During the past few weeks did you ever feel...

88 Pleased about having accomplished something?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
89 That things were going your way?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
90 Proud because someone complimented you on something you had done?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
91 Particularly excited or interested in something?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
92 On top of the world?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
93 So restless that you couldn't sit long in a chair?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
94 Bored?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
95 Depressed or very unhappy?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
96 Very lonely or remote from other people?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
97 Upset because someone criticised you?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Being With Others

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
98 I'm concerned about my style of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99 I'm concerned about the way I present myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100 I'm self conscious about the way I look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101 I usually worry about making a good impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102 One of the last things I do before I leave my house is look in the mirror	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103 I'm concerned about what other people think of me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104 I'm usually aware of my appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105 The only time I really feel alive is when I am with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106 I sometimes feel very lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107 I sometimes have the idea that I really am alone in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108 I enjoy having people around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109 I would really rather watch a good TV programme than go out with others *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Behaving In Company

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
110 It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111 I actively avoid wearing clothes that are not in style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
112 At parties I usually try to behave in a manner that makes me fit in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
113 When I am uncertain how to act in a social situation, I look to the behaviour of others for clues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
114 I try to pay attention to the reactions of others to my behaviour in order to avoid being out of place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
115 I find that I tend to pick up slang expressions from others and use them as a part of my own vocabulary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
116 I tend to pay attention to what others are wearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
117 The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
118 It's important to me to fit into the group I'm with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
119 My behaviour often depends on how I feel others wish me to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120 I usually keep up with clothing style changes by watching what others wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
121 When in a social situation, I tend not to follow the crowd, but instead to behave in a manner that suits my particular mood at the time *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How You Feel About Yourself

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
122 I feel that I'm a person of worth, at least on an equal plane with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
123 I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
124 All in all, I am inclined to feel that I am a failure *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
125 I am able to do things as well as most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
126 I feel I do not have much to be proud of *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
127 I take a positive attitude toward myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
128 On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
129 I wish I could have more respect for myself *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130 I certainly feel useless at times *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
131 At times I think I am no good at all *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
132 I think I have more self-confidence than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
133 I am more independent than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
134 I think I have a lot of personal ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
135 I like to be considered a leader	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What's Important In Your Life?

*The following is a list of things that some people look for or want out of life.
Please study the list carefully and then rate each thing on how important it is in your daily life, where
1 = not at all important, and 9 = very important*

	Not Important								Very Important
	1	2	3	4	5	6	7	8	9
136 Sense of Belonging	1	2	3	4	5	6	7	8	9
137 Warm Relationships with Others	1	2	3	4	5	6	7	8	9
138 Self-Fulfilment	1	2	3	4	5	6	7	8	9
139 Being Well Respected	1	2	3	4	5	6	7	8	9
140 Fun and Enjoyment of Life	1	2	3	4	5	6	7	8	9
141 Security	1	2	3	4	5	6	7	8	9
142 Self-Respect	1	2	3	4	5	6	7	8	9
143 A Sense of Accomplishment	1	2	3	4	5	6	7	8	9

144 Now re-read the items and put a star by the one thing that is MOST important to you in your daily life

Your Family And Friends

145 How many children do you have? _____ age of oldest 146 _____ age of youngest 147 _____

148 How many grandchildren do you have? _____ age of oldest 149 _____ age of youngest 150 _____

151 Do any of your children or grandchildren live in the same house as you? Yes No

152 On average, how often do you see your children?

More than once a week About once a week 2-3 times a month about once a month less than once a month

153 On average, how often do you see your grandchildren?

More than once a week About once a week 2-3 times a month about once a month less than once a month

154 On average, how often do you see your friends?

More than once a week About once a week 2-3 times a month about once a month less than once a month

How satisfied are you with the frequency of these meetings?

	Very Dissatisfied				Very Satisfied
	1	2	3	4	5
155 Children	1	2	3	4	5
156 Grandchildren	1	2	3	4	5
157 Friends	1	2	3	4	5

And Finally

158 Are you: Male Female

159 How old are you? _____

160 Are you: Married Single (never married) Divorced/separated Widowed

161 If you are not currently married, do you have a partner? Yes No

162 Are you: Working Housewife Retired

163 What is your job? (If retired, please state what your job was) _____

164 If retired: how long ago did you retire? _____

165 Was your retirement voluntary? Yes No

166 Approximately what is your household income, after taxes, per week?

less than £100 £100-199 £200 - £299 £300 - £399 £400 -£499 £500+

If you would like to be entered into the prize draw for £200 Marks & Spencer vouchers, please enter your telephone number below.

Thank you for your time it is much appreciated.

APPENDIX C

FIRST DRAFT & PILOTED QUESTIONNAIRES

Please tell us how much you agree or disagree with the following statements:

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
When I see a new brand on the shelf I often buy it just to see what it's like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often try new brands before my friends and neighbours do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to try new and different things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to eat healthier foods these days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am prepared to pay more for foods that don't contain artificial additives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I include plenty of fibre in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to eat less fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat plenty of fresh fruit and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I shop a lot for 'specials'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find myself checking the prices in the grocery store even for small items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually watch the advertisements for announcements of sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A person can save a lot of money by shopping around for bargains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I buy many things with a credit card or a charge card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to pay cash for everything I buy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is good to have charge accounts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To buy anything, other than a house or a car, on credit is unwise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like introducing new brands and products to my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like helping people by providing them with information about many kinds of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People ask me for information about products, places to shop, or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If someone asked where to get the best buy on several types of products, I could tell him or her where to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends think of me as a good source of information when it comes to new products or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say that this description fits you?

very well

fairly well

unsure

not so well

not very well at all

Most people seem to have other 'ages' besides their official or 'date of birth' age. The questions that follow have been developed to find out about your 'unofficial age'. Please specify which age decade you FEEL you really belong to.

	teens	20s	30s	40s	50s	60s	70s	80s
I FEEL as though I am in my...	___	___	___	___	___	___	___	___
I LOOK as though I am in my...	___	___	___	___	___	___	___	___
I DO most things as though I were in my	___	___	___	___	___	___	___	___
My INTERESTS are mostly those of a person in his/her...	___	___	___	___	___	___	___	___

On the whole, do you feel that you are:

Young

Middle-aged

Old/Elderly

What, if anything, reminds you that you are getting older?

What, if anything, do you do to 'stay young'?

Many firms and organisations now offer discount cards to people over 50. These give money off a range of products and services.

If you already own one of these cards, do you use it:

As much as possible

Most of the time

Sometimes

Rarely

Never

If you don't already have one, how interested are you in owning one?

Extremely interested

Fairly interested

Not sure

Not very interested

Not at all interested

Would you use a card like this?

Definitely yes

Probably yes

Not sure

Probably not

Definitely not

Please explain the reason(s) for your answers:

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Most manufacturers operate on the philosophy that the 'consumer' is always right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Despite what is frequently said, 'let the buyer beware' is the guiding philosophy of most manufacturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition ensures that consumers pay fair prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers seldom shirk their responsibility to the consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most manufacturers are more interested in making profits than in serving consumers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most product advertising is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements are reliable sources of information about the quality and performance of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, advertised products are more dependable than unadvertised ones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements usually present a true picture of the products advertised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally speaking, the products required by the average family are easily available at convenient places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the quality of repair and maintenance service provided by manufacturers and dealers is getting better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, product guarantees are backed by the manufacturers who make them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The games and contests that manufacturers sponsor to encourage people to buy their products are usually dishonest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I admire people who own expensive homes, cars, and clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some of the most important achievements in life include acquiring material possessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't place much emphasis on the amount of material objects people own as a sign of success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own say a lot about how well I'm doing in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to own things that impress people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't pay much attention to the material objects other people own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually buy only the things I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to keep my life simple, as far as possessions are concerned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own aren't all that important to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy spending money on things that aren't practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buying things gives me a lot of pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like a lot of luxury in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I put less emphasis on material things than most people I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have all the things I really need to enjoy life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My life would be better if I owned certain things I don't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wouldn't be any happier if I owned nicer things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'd be happier if I could afford to buy more things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I feel that I'm a person of worth, at least on an equal plane with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All in all, I am inclined to feel that I am a failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to do things as well as most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I do not have much to be proud of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take a positive attitude toward myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I could have more respect for myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I certainly feel useless at times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At times I think I am no good at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I actively avoid wearing clothes that are not in style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At parties I usually try to behave in a manner that makes me fit in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I am uncertain how to act in a social situation, I look to the behaviour of others for clues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to pay attention to the reactions of others to my behaviour in order to avoid being out of place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find that I tend to pick up slang expressions from others and use them as a part of my own vocabulary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I tend to pay attention to what others are wearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's important to me to fit into the group I'm with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My behaviour often depends on how I feel others wish me to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I am the least bit uncertain as to how to act in a social situation, I look to the behaviour of others for cues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually keep up with clothing style changes by watching what others wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When in a social situation, I tend not to follow the crowd, but instead to behave in a manner that suits my particular mood at the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The experience of a word being 'on the tip of my tongue' happens more often nowadays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My memory has never been better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentally, I'm in as good a shape as I've ever been	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have more self-confidence than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am more independent than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have a lot of personal ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to be considered a leader	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
They don't make 'em like they used to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Things used to be better in the good old days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products are getting shoddier and shoddier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technological change will insure a brighter future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
History involves a steady improvement in human welfare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are experiencing a decline in the quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steady growth of GNP has brought increased human happiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modern business constantly builds a better tomorrow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about my style of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about the way I present myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm self conscious about the way I look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually worry about making a good impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the last things I do before I leave my house is look in the mirror	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about what other people think of me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm usually aware of my appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The only time I really feel alive is when I am with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes feel very lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes have the idea that I really am alone in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy having people around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would really rather watch a good TV programme than go out with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following is a list of things that some people look for or want out of life. Please study the list carefully and then rate each thing on how important it is in your daily life, where 1 = not at all important, and 9 = extremely important

	Not Important					Very Important				
	1	2	3	4	5	6	7	8	9	
Sense of Belonging	1	2	3	4	5	6	7	8	9	
Warm Relationships with Others	1	2	3	4	5	6	7	8	9	
Self-Fulfilment	1	2	3	4	5	6	7	8	9	
Being Well Respected	1	2	3	4	5	6	7	8	9	
Fun and Enjoyment of Life	1	2	3	4	5	6	7	8	9	
Security	1	2	3	4	5	6	7	8	9	
Self-Respect	1	2	3	4	5	6	7	8	9	
A Sense of Accomplishment	1	2	3	4	5	6	7	8	9	

Now re-read the items and circle the one thing that is MOST important to you in your daily life

How many children do you have? _____ age of oldest _____ age of youngest _____

How many grandchildren do you have? _____ age of oldest _____ age of youngest _____

Do any of your children or grandchildren live in the same house as you? Yes No

On average, how often do you see your:	More than once a week	About once a week	2-3 times per month	About once a month	Less than once a month
Children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandchildren	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How satisfied are you with the frequency of these meetings?	Very Dissatisfied				Very Satisfied
Children	1	2	3	4	5
Grandchildren	1	2	3	4	5
Friends	1	2	3	4	5

Are you: Male Female

How old are you? _____

Are you: Married Single (never married) Divorced/separated Widowed

If you are not currently married, do you have a partner? Yes No

Are you: Working Housewife Retired

If retired: how long ago did you retire? _____ Was your retirement voluntary? Yes No

Approximately what is your household income, after taxes, per week?

less than £100 £100-199 £200 - £299 £300 - £399 £400 -£499 £500+

Thank-you very much!

If you would like to be entered into the prize draw, please give us a contact number overleaf

Please tick one box for each statement.

Products & Merchandise

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
When I see a new brand on the shelf I often buy it just to see what it's like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often try new brands before my friends and neighbours do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to try new and different things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like introducing new brands and products to my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like helping people by providing them with information about many kinds of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People ask me for information about products, places to shop, or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If someone asked where to get the best buy on several types of products, I could tell him or her where to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends think of me as a good source of information when it comes to new products or sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say that this description fits you?</p> <p>very well <input type="checkbox"/> fairly well <input type="checkbox"/> unsure <input type="checkbox"/> not so well <input type="checkbox"/> not very well at all <input type="checkbox"/></p>					

Shopping Around

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I shop a lot for special offers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find myself checking the prices in the supermarket even for small items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually watch out for announcements of sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A person can save a lot of money by shopping around for bargains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I buy many things with a credit card or a store card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to pay cash for everything I buy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's good to have credit cards or store cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's unwise to buy on credit, except a house or car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Good Old Days?

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
They don't make 'em like they used to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Things used to be better in the good old days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products are getting shoddier and shoddier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technological change will ensure a brighter future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time has shown a steady improvement in human welfare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are experiencing a decline in the quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steady economic growth has brought increased human happiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modern business constantly builds a better tomorrow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Companies And Customers

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Most manufacturers operate on the philosophy that the customer is always right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Despite what is frequently said, 'let the buyer beware' is the guiding philosophy of most manufacturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition ensures that consumers pay fair prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers seldom shirk their responsibility to the consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most manufacturers are more interested in making profits than in serving consumers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most product advertising is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements are reliable sources of information about the quality and performance of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, advertised products are more dependable than unadvertised ones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers' advertisements usually present a true picture of the products advertised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally speaking, the products required by the average family are easily available at convenient places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, the quality of repair and maintenance service provided by manufacturers and dealers is getting better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally, product guarantees are honoured by the manufacturers who make them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The games and contests that manufacturers sponsor to encourage people to buy their products are usually dishonest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material Things

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I admire people who own expensive homes, cars, and clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some of the most important achievements in life include acquiring material possessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I place emphasis on the amount of material objects people own as a sign of their success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own say a lot about how well I'm doing in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to own things that impress people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't pay much attention to the material objects other people own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually buy only the things I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to keep my life simple, as far as possessions are concerned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The things I own aren't all that important to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy spending money on things that aren't practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buying things gives me a lot of pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like a lot of luxury in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I put less emphasis on material things than most people I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have all the things I really need to enjoy life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My life would be better if I owned certain things I don't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wouldn't be any happier if I owned nicer things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'd be happier if I could afford to buy more things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Most people seem to have other 'ages' besides their official or 'date of birth' age. The questions that follow have been developed to find out about your 'unofficial age. Please specify which age decade you FEEL you really belong to

	teens	20s	30s	40s	50s	60s	70s	80s
I FEEL as though I am in my...	—	—	—	—	—	—	—	—
I LOOK as though I am in my...	—	—	—	—	—	—	—	—
I DO most things as though I were in my...	—	—	—	—	—	—	—	—
My INTERESTS are mostly those of a person in his/her...	—	—	—	—	—	—	—	—

On the whole, do you feel that you are:

Young

Middle-aged

Old/Elderly

What, if anything, reminds you that you are getting older?

What, if anything, do you do to 'stay young'?

Many firms and organisations now offer discounts to people over 50. Do you take advantage of these discounts?

As much as possible

Most of the time

Sometimes

Rarely

Never

Some firms offer 'senior' cards that give money off a range of products and services. If you don't already have one of these cards, how interested are you in owning one?

Extremely interested

Fairly interested

Not sure

Not very interested

Not at all interested

Would you use a card like this?

Definitely yes

Probably yes

Not sure

Probably not

Definitely not

Please explain the reason(s) for your answers:

How You Spend Your Time

How long do you spend watching television on an average weekday?

Less than 1 hour 1-3 hours 4-5 hours more than 5 hours

How long do you spend watching television in an average weekend?

Less than 1 hour 1-3 hours 4-5 hours more than 5 hours

How long do you spend listening to the radio on an average day?

Less than 1 hour 1-3 hours 4-5 hours more than 5 hours

How many days per week do you read a newspaper, in an average week?

None 1-2 3-4 5 or more

How long do you spend reading the newspaper on an average day?

Less than 10 minutes 10-20 minutes 20-30 minutes more than 30 minutes

About how many magazines do you read in an average month?

None 1-2 3-4 5 or more

About how many books have you read in the past 3 months or so?

None 1-2 3-4 5 or more

About how many times have you used the internet in the last 3 months or so?

None 1-2 3-4 5 or more

How many holidays abroad have you taken in the last year?

None 1 2 3 or more

How many holidays (and short breaks) in the UK have you taken in the last year?

None 1 2 3 or more

Apart from the activities listed above, how else do you spend your spare time? We want to know your hobbies, interests, and ways of keeping fit. Please list any other activities you do on a regular (at least every month) basis:

Are you a member of a club or organisation linked to any of these activities? No Yes

Your Health And Well Being

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I try to eat healthier foods these days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am prepared to pay more for foods that don't contain artificial additives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I include plenty of fibre in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to eat less fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat plenty of fresh fruit and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The experience of a word being 'on the tip of my tongue' happens more often nowadays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My memory has never been better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentally, I'm in as good a shape as I've ever been	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>On the whole, would you say your health is:</i>	Good <input type="checkbox"/>	Fairly Good <input type="checkbox"/>	Not Good <input type="checkbox"/>		
<i>Do you have a long-standing health problem?</i>	No <input type="checkbox"/>		Yes <input type="checkbox"/>		
<i>If so, does it limit your activities:</i>	A lot <input type="checkbox"/>		A little <input type="checkbox"/>		Not at all <input type="checkbox"/>

How You've Felt Recently

During the past few weeks did you ever feel...

Pleased about having accomplished something?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
That things were going your way?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Proud because someone complimented you on something you had done?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Particularly excited or interested in something?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
On top of the world?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
So restless that you couldn't sit long in a chair?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bored?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Depressed or very unhappy?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Very lonely or remote from other people?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Upset because someone criticised you?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Being With Others

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I'm concerned about my style of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about the way I present myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm self conscious about the way I look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually worry about making a good impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the last things I do before I leave my house is look in the mirror	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm concerned about what other people think of me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm usually aware of my appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The only time I really feel alive is when I am with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes feel very lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes have the idea that I really am alone in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy having people around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would really rather watch a good TV programme than go out with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Behaving In Company

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I actively avoid wearing clothes that are not in style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At parties I usually try to behave in a manner that makes me fit in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I am uncertain how to act in a social situation, I look to the behaviour of others for clues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to pay attention to the reactions of others to my behaviour in order to avoid being out of place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find that I tend to pick up slang expressions from others and use them as a part of my own vocabulary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I tend to pay attention to what others are wearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's important to me to fit into the group I'm with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My behaviour often depends on how I feel others wish me to behave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually keep up with clothing style changes by watching what others wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When in a social situation, I tend not to follow the crowd, but instead to behave in a manner that suits my particular mood at the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How You Feel About Yourself

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I feel that I'm a person of worth, at least on an equal plane with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All in all, I am inclined to feel that I am a failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to do things as well as most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I do not have much to be proud of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take a positive attitude toward myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I could have more respect for myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I certainly feel useless at times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At times I think I am no good at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have more self-confidence than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am more independent than most people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think I have a lot of personal ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to be considered a leader	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What's Important In Your Life?

*The following is a list of things that some people look for or want out of life.
Please study the list carefully and then rate each thing on how important it is in your daily life, where
1 = not at all important, and 9 = very important*

	Not Important					Very Important			
	1	2	3	4	5	6	7	8	9
Sense of Belonging	1	2	3	4	5	6	7	8	9
Warm Relationships with Others	1	2	3	4	5	6	7	8	9
Self-Fulfilment	1	2	3	4	5	6	7	8	9
Being Well Respected	1	2	3	4	5	6	7	8	9
Fun and Enjoyment of Life	1	2	3	4	5	6	7	8	9
Security	1	2	3	4	5	6	7	8	9
Self-Respect	1	2	3	4	5	6	7	8	9
A Sense of Accomplishment	1	2	3	4	5	6	7	8	9

Now re-read the items and put a star by the one thing that is MOST important to you in your daily life

Your Family And Friends

How many children do you have? _____ age of oldest _____ age of youngest _____

How many grandchildren do you have? _____ age of oldest _____ age of youngest _____

Do any of your children or grandchildren live in the same house as you? Yes No

On average, how often do you see your children?

More than once a week About once a week 2-3 times a month about once a month less than once a month

On average, how often do you see your grandchildren?

More than once a week About once a week 2-3 times a month about once a month less than once a month

On average, how often do you see your friends?

More than once a week About once a week 2-3 times a month about once a month less than once a month

How satisfied are you with the frequency of these meetings?

Very
Dissatisfied

Very
Satisfied

Children	1	2	3	4	5
Grandchildren	1	2	3	4	5
Friends	1	2	3	4	5

And Finally

Are you: Male Female

How old are you? _____

Are you: Married Single (never married) Divorced/separated Widowed

If you are not currently married, do you have a partner? Yes No

Are you: Working Housewife Retired

What is your job? (If retired, please state what your job was) _____

If retired: how long ago did you retire? _____ Was your retirement voluntary? Yes No

Approximately what is your household income, after taxes, per week?

less than £100 £100-199 £200 - £299 £300 - £399 £400 -£499 £500+

If you would like to be entered into the prize draw for £200 Marks & Spencer vouchers, please enter your telephone number below.

Thank you for your time it is much appreciated.

APPENDIX D

COVER LETTER



Hello

Please will you spare me about 20 minutes of your time? I've included a chocolate biscuit for you to take a break while you help me by filling in the enclosed questionnaire. Also, if you leave your telephone number I'll enter you into the prize draw for £200 of Marks & Spencer's vouchers.

I'm from Liverpool John Moores University, and this research is part of my PhD studies and will not be used for commercial purposes.

All answers are anonymous and in complete confidence.

Please send back your completed questionnaire in the *freepost* envelope provided.

Many thanks for your co-operation.

Lynn Sudbury, Faculty of Business & Law

APPENDIX E

PUBLICATIONS



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Call for Papers

2005 AMA Summer Marketing Educators' Conference

“Advancing Marketing Theory and Practice”

San Francisco Marriott, San Francisco, CA
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“Advancing Marketing Theory and Practice” is the theme for the AMA 2005 Summer Marketing Educators' Conference scheduled from July 29 – August 1, 2005 at the San Francisco Marriott in San Francisco, California. The Conference Co-Chairs, Beth A. Walker (Arizona State University) and Mark B. Houston (University of Missouri – Columbia), as well as the track chairs listed below, invite your participation in the program.

OLDER CONSUMERS, COGNITIVE AGE AND THE LIST OF VALUES (LOV): AN EMPIRICAL STUDY.

Lynn Sudbury & Peter Simcock

Paper Presented at the Summer Marketing Educator's Conference
Advancing Marketing Theory and Practice
San Francisco Marriott, San Francisco, California, USA
29 July – 1 August 2005

ABSTRACT

While the importance of older consumers to marketers is well documented, there exists a relative paucity of UK-based empirical studies into the perceptions and values of these consumers. This is the first study to investigate the relationship between age, cognitive age, and values of consumers aged between 50 and 79 years ($n = 650$). Results confirm that there is a great deal of similarity between UK consumers and their American counterparts. Moreover, the List of Values (LOV) appears to have greater potential for understanding older consumers than does the Material Values scale. The implications for marketing to older adults are discussed.

THE OLDER CONSUMER MARKET

The rapidly ageing population of the industrialized world is well documented. Global life expectancy has increased more in the last 50 years than in the previous 5000 years, and projections suggest that by 2030 the over-65s will comprise 25% of the total populations in some 30 different countries in the developed world (Catero and Graham 2005). Additionally, there is evidence to suggest older people are relatively affluent (Kavanagh 1995; Nicholson-Lord 1995; Oliver 1995). It is therefore now recognised that older consumers are an increasingly important market for a variety of

goods and services (Buck 1990; Burt and Gabbott 1995; Chura 2002; Kennett, Moschis and Bellenger 1995; Lannon 1994; Miller and Soyoung 1999; Schewe 1991).

Despite this importance, the UK older consumer market is among the least researched and understood of market segments (Ahmad 2002; Gunter 1998). While an abundance of literature pertaining to the older consumers can be found, the vast majority is either descriptive or based only on US consumers with limited evidence that it can be generalised internationally. Even scarcer is research that considers the self-perceived age of older adults. Additionally, research into the specific values held as important to older consumers is sparse. Thus, by considering values in relation to the self-perceived ages of older adults this study aims to fill a small but potentially important gap in the literature.

SELF-PERCEIVED AGE

Chronological age is a constant in daily life, age related research, and marketing. The use of chronological age as an objective measure that shapes the lives of individuals can be illustrated by the age restrictions imposed by the government dictating, for example, the point at which an individual can drive, vote, drink alcohol, marry, and claim a state pension. In gerontological research, chronological age is the most commonly used yardstick when studying the ageing process (Cunningham and Brookbank 1988). In marketing, chronological age is the most frequently used of all demographic variables to describe consumer behaviour research and to segment consumer markets (Barak and Schiffman 1981).

Despite these numerous uses, the limitations of chronological age have long been acknowledged (Adams 1971; Heron and Chown 1967). Whilst chronological age may be a useful clue to performance during early life (Jarvik 1975), ageing does not perfectly coincide with chronological age (Bell 1972), so homogeneity in individual lifestyles and conditions among age groups cannot be assumed. Indeed, the number of years lived is a poor indicator of a person's attitudes and consumer behaviour (Chua, Cote and Leong 1990; Van Auken, Barry and Anderson 1993). Such observations have led to predictions that chronological age will progressively have less and less utility as a research variable (Maddox and Campbell 1985).

Given the limitations of chronological age, the implications of the cliché that a person is as young, or as old as they feel may be more useful in understanding the behaviour of older people. Research shows that the age a person perceives themselves to be, or identifies with, constrains them to recognise changes in themselves and to perceive that attitudes toward them have changed (Peters 1971). Thus, the age a person identifies with gives an insight into the behaviours that the individual thinks society expects from them (Guptill 1969). Likewise, an individual's self-perceived age gives a better insight into their likely consumer behaviour than does chronological age alone (Barak and Schiffman 1981; Cleaver and Muller 2002; Schiffman and Sherman 1991; Stephens 1991). For these reasons, self-perceived age has been of interest to American gerontologists for over half a century (Cavan et al. 1949; Havinghurst and Albrecht 1953) and American marketing researchers for over two decades (Barak and Schiffman 1981).

American studies typically report differences between actual and self-perceived age to be between 8 and 12 years (Barak 1998; Barak and Rahtz 1999; Sherman, Schiffman and Mathur 2001; Van Auken and Barry 1995), and recent research has found this to also be true for older UK consumers (Sudbury 2004; Sudbury, Simcock and Wright 2004), although a number of studies conducted elsewhere show the bias toward a youthful self-perceived age to be less pronounced (Chua, Cote and Leong 1990; Togonu-Bickerstech 1986; Uotinen 1998). In addition to the usefulness of self-perceived age for segmentation and targeting, research has found self-perceived age to be associated with a range of consumer behaviour variables, including propensity to try new brands (Stephens 1991), fashion consciousness (Wilkes 1992), satisfaction with complaint outcomes (Dolinsky 1997), attitudes toward advertising (Smith and Moschis 1984), and media usage (Barak and Gould 1985; Johnson 1993).

AGE AND VALUES

The literature devoted to older consumers clearly suggests that older people have different values to younger people. Yovovich (1983) for example, suggests that older people are not as concerned with environmental preservation as younger generations. In contrast, however, most authors paint a picture of a less selfish older consumer who has “compassion for others and concern for the world about them” (Wolfe 1988, p. 50), and is less concerned with success or being streetwise and places more importance on the values of trustworthiness and being responsible and sensible (De Jonquieres 1993). Security and safety, too, are cited as key to the older generation (Dychtwald and Flower 1989; Schewe 1990) as well as a sense of purpose, social

connectedness, and spirituality (Schewe 1991). Indeed, Wolfe (1994) identifies 5 key values that he suggests form the root motivations' of older consumers: autonomy and self-sufficiency, social and spiritual connectedness, altruism, personal growth, and revitalisation.

As Kahle and Kennedy (1988) point out, business has too often neglected the importance of values, despite the prominence given to them by philosophers and social scientists. Values not only have hierarchical primacy over attitudes (Homer and Kahle 1988; Kahle, Liu and Watkins 1992), but influence a variety of consumer behaviours, including reactions to products (Batra, Homer and Kahle 2001; Kahle 1986), snack and convenience foods (Goldsmith, Frieden and Henderson, 1995), media preferences (Beatty et al. 1985), positioning (Kennedy, Best and Kahle 1988), advertising, packaging, personal selling, and retailing (Beatty, Homer and Kahle 1988). Moreover, age differences in the importance placed on different values have been identified (Kahle, Beatty and Homer 1986; Kahle, Poulos and Sukhdial 1988).

Despite the obvious importance of values in consumer behaviour, the relatively large amount of writing devoted to the values of older consumers, and the fact that age differences have been identified in values research, only one recent Australian study has investigated values in relation to a form of self-perceived age, where respondents were asked how old they felt. Cleaver and Muller (2002) found that the importance placed on the value *fun and enjoyment in life* was predictive of a younger feel age, while those who felt closer to their actual age placed more importance on *security*.

In addition to the general values outlined above, materialism may be a value that is worth specific investigation in relation to older consumers. Materialism is best viewed as a value rather than an attitude or a trait (Richins and Dawson 1990), and is defined as “the importance a consumer attaches to worldly possessions” (Ger and Belk 1990, p.186). Theory suggests that the relationship a person has with material items changes over time (Belk 1988; Richins and Dawson 1990). Indeed, Belk (1985) found materialistic traits to be weaker among older than younger people. Often viewed as a Western characteristic (Ger and Belk 1990), it is known that people who place high importance on material possessions are less satisfied with their lives (Sirgy 1998), and place greater emphasis on financial security and less on personal relationships (Richins and Dawson 1992). Of particular relevance to marketers are the findings that compared to low-materialism consumers, high-materialism consumers spend more on themselves and less on others, are more concerned with design and aesthetics of their possessions (Richins 1994), and experience more negative affect following acquisition of goods (Richins, McKeage and Najjar 1992).

Writings within the older consumer literature suggest that as people age they become less materialistic (Haller 1995) and more interested in experiences than things (Dychtwald and Flower 1989; Wolfe 1988; 1990; 1992). This observation, however, goes against much of the gerontological literature that indicates that possessions become increasingly important in later life (Moschis 1992). Schiffman and Sherman (1991) suggest that the ‘new age elderly’ are less interested in accumulating possessions, while Meikle (2000) predicts a segment of older consumers that is concerned with self-fulfilment and is more self-focused as it imitates “the lifestyles of the young” (p. 9). Given that “low-materialism consumers are more hedonically

orientated than their high-materialism counterparts” (Richins 1994, p. 530), it would seem to be an omission that materialism has never been empirically measured against self-perceived age.

METHOD

Sample

A self-administered questionnaire was used in the study. The lower age parameter of 50 was chosen on the basis that this is the starting point for many United Kingdom age related services (for example SAGA, Age Concern) offered to older consumers. In order to attain a sample that mirrored the older UK population in terms of 5-year age groups, and because no practical sampling frame that details all people over 50 in the UK is readily available, quota sampling was employed. Quota sampling is quite acceptable and widely used in the UK and most of Europe (Taylor, Harris and Associates 1995). Corlett (1996) cites evidence to suggest that a quota sample is about equally likely to give more accurate or less accurate estimates as a random sample of the same size, while Fennell (1990) names several large-scale gerontological studies that have employed quota sampling and are ‘presumed to be typical’ (p. 66). The procedure resulted in a usable sample size of 650, whose ages ranged from 50 to 79 years (mean age 62.4, s.d. 8.4), the distribution of which mirrors UK population in terms of 5-year age bands, as shown in table 1.

Table 1: Sample Ages Compared to Census

Age	Sample		UK Census	
	n	Percent	n (000s)	Percent
50-54	144	22.2	3847.2	22.2
55-59	137	21.1	3653.7	21.1
60-64	109	16.8	2888.5	16.7
65-69	99	15.2	2621.4	15.2
70-74	88	13.5	2343.1	13.5
75-79	73	11.2	1941.3	11.2
Total	650	100.0	17295.2	99.9

Measures

While a variety of techniques to measure self-perceived age have evolved over the years (Cavan et al. 1949; Kutner et al. 1956, Tuckman and Lavell 1957; Zola 1962; Guptill 1969; Mutran and Burke 1979; George, Mutran and Pennybacker 1980), the technique that has had the greatest impact for marketing research is the Cognitive Age Scale (Barak 1979; Barak and Schiffman 1981) which asks respondents to identify with age decades along the dimensions of feel (psychological/emotional), look (biological/physical), act (social), and think (cognitive/intellectual interests). Overall Cognitive Age is computed by averaging the midpoint values for the four age dimensions. The Cognitive Age scale is superior to other available instruments on the basis that it is easy to administer, easy to understand by respondents (Stephens 1991), is multidimensional, and has been shown to be a valid instrument (Van Auken, Barry and Anderson 1993; Van Auken and Barry 1995). Additionally, respondents were required to state their actual age. The reliability of the Cognitive Age scale was found to be acceptable (Cronbach's alpha .89).

General values were measured using Kahle's (1983) List Of Values (LOV), defined as beliefs that individuals hold about specific modes of conduct or end states (Batra,

Homer and Kahle 2001), and developed from a theoretical base most closely tied to social adaptation theory. The values relate to the major roles in life, such as marriage, parenting, work, leisure, and consumption (Kahle, Beatty and Homer 1986). LOV comprises 8 values: sense of belonging, warm relationships with others, self-fulfilment, being well respected, fun and enjoyment of life, security, self-respect, and a sense of accomplishment. The scoring system used here was selected from a number of alternatives (Kahle and Kennedy 1988; Kennedy, Best and Kahle 1988), and required respondents to rate each value on a 9-point scale of importance.

Materialism was measured using Richins and Dawson's (1992) Material Values scale. These authors conceptualise materialism as "a value that guides people's choices and conduct in a variety of situations, including, but not limited to, consumption arenas" (p. 307). The scale uses a 5-point Likert-type response format, and is now widely used in consumer behaviour research (Burroughs and Rindfleisch 2002; Micken and Roberts 1999). Moreover a great deal of evidence lends support to the scale's superiority to alternative materialism scales (Ellis 1992; Micken 1995). The reliability of the Material Values scale was found to be acceptable (Cronbach's alpha .82).

RESULTS

Table 2 shows the mean score for each value for the sample overall, and the ranked position of the value (1 = most important, 8 = least important).

As can be seen from table 2, the most important value to these older consumers is self-respect, followed by security, warm relationships with others, and then a sense of accomplishment. Being well respected is the least most important value.

Table 2: LOV by Score and Rank

Value	Mean Score	Rank
Self-respect	8.25	1
Security	8.11	2
Warm relationships with others	8.00	3
Sense of accomplishment	7.80	4
Fun and enjoyment of life	7.67	5
Self-fulfillment	7.64	6
Sense of belonging	7.59	7
Being well respected	7.55	8

Table 3 provides the ranking scores of each value broken down by cognitive age decade.

Table 3: LOV Ranking by Cognitive Age Decade

Value	Cognitive Age				
	30s	40s	50s	60s	70s
n	30	221	221	131	23
Sense of belonging	6	8	6	5	5
Warm relationships with others	1	2	3	3	4
Self-fulfillment	5	4	7	8	8
Being well respected	7	7	8	5	6
Fun and enjoyment of life	3	5	5	7	7
Security	3	3	2	2	1
Self-respect	2	1	1	1	2
Sense of accomplishment	6	5	4	4	3

As can be seen by table 3, there are differences between cognitive age groupings in the relative rankings of values. Clearly, self-respect is still of great significance to all respondents. However, it is not the most important value for those whose cognitive age is in the 30s or the 70s. Rather, those with the youngest cognitive ages place the greatest importance on warm relationships with others, while the cognitively oldest place greater emphasis on security. Indeed, the relative importance of warm relationships with others decreases over cognitive age decades, while the relative importance placed on security increases. Fun and enjoyment, too, shows a clear pattern, as its relative importance decreases as the cognitive age of the respondent increases.

In contrast, one-way ANOVA revealed no significant differences between either cognitive age groupings or indeed chronological age groupings and the material values scale overall. A correlation analysis found no significant relationship between material values and either age measure. Finally, analysis conducted after quartile splits confirmed there to be no significant differences between the high materialism group and the low materialism group on cognitive or chronological age. Thus, it appears that materialism has little to do with age.

DISCUSSION

Several major points emerge from this research. First, just as similarities between older UK consumers and their American counterparts exist regarding cognitive age, so too are their central value bases broadly similar, at least in terms of the 4 primary values of self-respect, security, warm relationships, and a sense of accomplishment.

These results suggest that positioning strategies and advertising themes based on these values are more likely to be well received than are those that use the lower ranked values of a sense of belonging or being well respected. Interestingly, one difference to emerge between the two cultures is the importance placed on fun and enjoyment of life, which is typically ranked lower by Americans (Kahle, Poulos and Sukhdial 1988) than it was by these UK consumers. Thus, using this value may be a more successful strategy in the UK than in the US.

In terms of self-perceived age differences, this study lends support to Cleaver and Muller's (2002) Australian study in that those who have younger cognitive ages tend to place more importance on fun and enjoyment, while their cognitively older counterparts place greater importance on security. Products such as health care, insurance, and funeral plans are more likely to be targeted at the cognitively old, and security is clearly an appropriate theme for marketing such products. In contrast, the cognitively young are more likely targets for leisure products, foreign holidays, fashion, and personal grooming products. Indeed, rather than this value appealing to the hedonists, as originally thought, Kahle (1996) now suggests that the value fun and enjoyment is chosen by people who demonstrate the highest levels of involvement with leisure activities. As such, the fun and enjoyment benefits should be emphasised in marketing and promotional campaigns for such products.

Finally, this study failed to find any support either for the suggestion made by some older consumer researchers that as people age they become less materialistic, or for the body of gerontological literature that suggests an increase in materialism with age. Rather, this study found no significant relationship between material values and either

chronological or cognitive age. Moreover, no significant differences between actual age decades or between cognitive age decades were found. Thus, materialism, at least as measured by the Material Values scale, appears to have less utility for marketing to older adults than does the List of Values.

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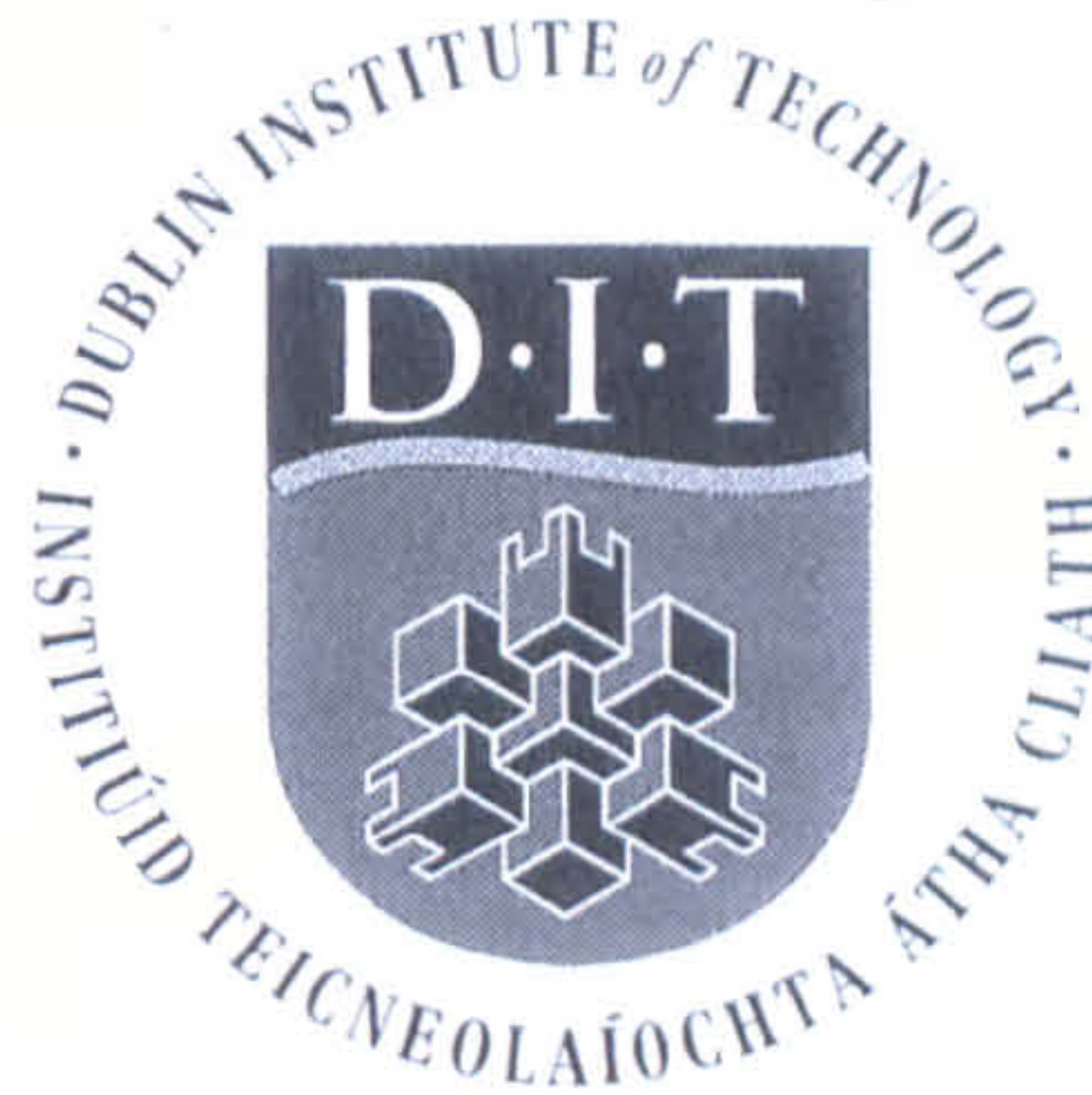
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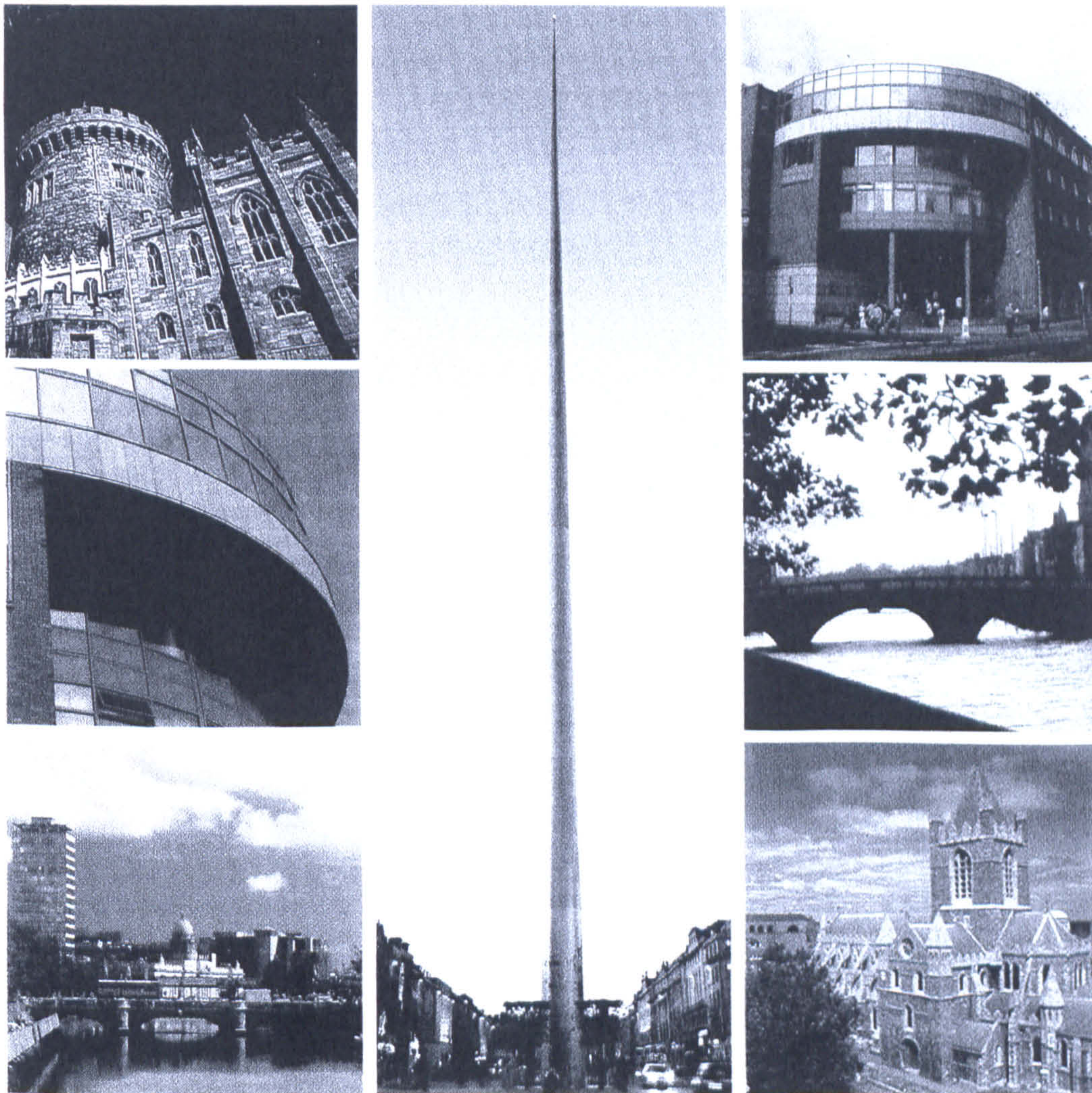
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Compilation of Abstracts

RETIRED FROM THE WORKPLACE, NOT THE MARKETPLACE:

The Implications Of Retirement For
The Self-Perceived Ages Of Older Consumers

Paper presented at the 5th American Marketing Association/Academy of Marketing
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Dublin Institute of Technology, Dublin, Ireland
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RETIRED FROM THE WORKPLACE, NOT THE MARKETPLACE: THE IMPLICATIONS OF RETIREMENT FOR THE SELF-PERCEIVED AGES OF OLDER CONSUMERS

ABSTRACT

The importance of the older consumer market is now beginning to be recognised. At the same time, UK researchers have begun to acknowledge the limitations of chronological age and the potential utility of alternative age measures. However, the study of these measures is still in its infancy in this country and has to date not been investigated in relation to a range of socio-demographic variables. The study reported here examines one such variable, retirement, in relation to two types of alternative age measures, using a sample of 650 adults aged between 50 and 79. Implications for marketing to older adults are discussed.

THE OLDER CONSUMER MARKET

The rapidly ageing population of the industrialised world is well documented. Global life expectancy has increased more in the last 50 years than in the previous 5000 years, and projections suggest that by 2030 the over-65s will comprise 25% of the total populations in some 30 different countries in the developed world (Catero and Graham 2005). Additionally, there is evidence to suggest older people are relatively affluent (Kavanagh 1995; Nicholson-Lord 1995; Oliver 1995). It is therefore now recognised that older consumers are an increasingly important market for a variety of goods and services (Burt and Gabbott 1995; Chura 2002; Kennett, Moschis and Bellenger 1995; Miller and Soyoung 1999).

Despite this importance, the UK older consumer market is among the least researched and understood of market segments (Ahmad 2002; Gunter 1998). While an abundance of literature pertaining to the older consumers can be found, the vast majority is either descriptive or based only on US consumers with limited evidence that it can be generalised internationally.

SELF-PERCEIVED AGE

Even scarcer is empirical research that considers the self-perceived age of older adults. In marketing, chronological age is the most frequently used of all demographic variables to describe consumer behaviour research and to segment consumer markets (Barak and Schiffman 1981). However, whilst chronological age may be a useful clue to performance during early life (Jarvik 1975), ageing does not perfectly coincide with chronological age (Bell 1972), and is therefore a poor indicator of an older adult's attitudes and consumer behaviour (Chua, Cote and Leong, 1990; Van Auken, Barry and Anderson, 1993).

Given these limitations of chronological age, the implications of the cliché that a person is as young, or as old, as they feel may be more useful in understanding the behaviour of older people. Research shows that the age a person perceives themselves to be, or identifies with, constrains them to recognise changes in themselves and to perceive that attitudes toward them have changed (Guptill 1969, Peters 1971). Thus, it has long been argued that a person's self-perceived age may give a better insight into their likely consumer behaviour than can chronological age alone (Cleaver and Muller 2002; Schiffman and Sherman 1991; Stephens 1991), and is clearly therefore of interest to consumer researchers and marketers who target older

consumers (Wilkes, 1992). While British researchers have now established that older UK consumers are comparable to their American counterparts in that most have self-perceived ages that are about 10 years younger than their actual age (Sudbury, 2004; Sudbury, Simcock and Wright, 2004; Szmigin and Carrigan, 2000), there is little evidence pertaining to the antecedents of and variables relating to self-perceived age.

One such potentially important variable is retirement status. Early writings suggested that retirement is 'a social pattern that implies invidious judgement about old people's lack of fitness to perform a culturally significant and coveted role. By social definition, therefore, retirement signifies old age' (Blau, 1973, p. 105).

RETIREMENT: CONCEPTUAL FRAMEWORKS

There are three contrasting theoretical perspectives that can be applied to retirement. Disengagement theory (Cumming and Henry, 1961) postulates that as a person ages they become less involved in the life around them than when they were younger. This process is marked by an *inevitable* and *mutual* withdrawal or disengagement between the individual and society. Given the oft-levelled accusation that marketers and advertisers largely ignore older consumers (Flanagan, 1994; Flatters, 1994; Fry, 1992; Higham, 1999; Nicholason-Lord, 1995; Philp, Haynes and Helms, 1992), it appears that disengagement theory, consciously or unconsciously, is the preferred paradigm for many marketers viewing older consumers.

A second perspective is activity theory (Lemon, Bengston and Peterson, 1972). While there is some debate as to whether or not this is the antithesis of disengagement theory (Burbank, 1986), it nevertheless provides an alternative framework for viewing role loss in old age. Retirement has been described as a period of permanent role losses that are mainly involuntary, unwelcome, and result in role ambiguity (Cunningham and Brookbank, 1988; Kuhlen, 1959; Rosow, 1967, 1974, 1985). On this basis, activity theory suggested that older people must substitute new roles for those lost (Passuth and Bengston, 1988), in order to maintain a positive self-concept (Lemon, Bengston and Peterson, 1972, p. 515). In other words, the individual who ages optimally is the one who stays active and who manages to resist the shrinkage of their social world (Barrow and Smith, 1983). Thus it is suggested that with the correct marketing stimuli, older consumers might be encouraged to be much more active consumers of products and services that allow them to age optimally. On this basis, a range of opportunities are available to the marketer, in terms of targeting older consumers with leisure products and services that provide a mechanism for keeping active, socialising, and maintaining a positive self-concept.

A third perspective that can be applied to retirement is that of continuity theory, which postulates that older adults attempt to preserve and maintain existing ways of life through the application of familiar strategies, in order to maintain a consistency of self-concept and identity (Atchley, 1989). This perspective therefore suggests that those who assume that retirement will cause an identity crisis have overestimated the effects of change. Indeed, it has been shown that when some people retire, they retain identification with their former occupational status (Atchley, 1976; Rowe, 1976; Strauss, Aldrich and Lipman, 1976). Conversely, for others, retirement from a job that offered little opportunity for personalisation and reinforcement of identity is likely to be easy.

RETIREMENT AND SELF-PERCEIVED AGE

The theories of disengagement, activity and continuity offer very different perspectives on the likely impact of retirement for the consumer. Disengagement would suggest that retirement is likely to be associated with an older self-perceived age. No such change would be likely, however, if a continuity perspective was taken. Finally, activity theory would suggest that retirement might be associated with an older self-perceived age unless substitute roles or activities have been found, in which case no change would be likely.

American research into self-perceived age fails to unanimously support any of these three perspectives. The number of studies that have found retirement to be associated with an older self-perceived age or identity, even when chronological age is held constant (Barak and Rahtz, 1990; Blau, 1956; George, Mutran and Pennybacker, 1980; Guptill, 1969; Johnson, 1993; Mutran and George, 1982), are almost equal to the number that have found no relationship (Atchley and Seltzer, 1975; Baum and Boxley, 1983; Cutler, 1982; Mutran and Reitzes, 1981; Streib and Schneider, 1971; Wilkes, 1992).

Nevertheless, marketing practitioners and researchers appear to view retirement as momentous, at least in terms of differential targeting and promotional strategies. This is illustrated both in the many discounts offered to 'OAPs' on entrance to a variety of cultural and leisure pursuits, and in the marketing literature that clearly suggests that retirement is a viable segmentation variable. French and Fox (1985), for example, suggest that adjustment to retirement is a sound basis for segmenting the senior market, while in the UK Carrigan (1998, 1999) suggests a potential segmentation model of older consumers based on 'lifegroups'. The first group, the 'young-old', are pre-retired, while the second, the 'new-old', comprise newly retired persons. Satterthwaite (1990), too, suggested that the consumer behaviours of retired persons will differ from pre-retired, when he stated that retired persons 'are more responsive to promotions than people who are working' (p.52).

Self-perceived age and retirement status together have never been considered in relation to older UK adults, despite their potential importance. Thus, this study aims to fill a small but potentially important gap in the literature.

METHOD

SAMPLE

A self-administered questionnaire was used as part of a larger study into consumer behaviour and self-perceived age. A lower age parameter of 50 was chosen on the basis that this is the starting point for many age related services (for example SAGA, Age Concern) offered to older consumers. In order to attain a sample that mirrored the older UK population in terms of 5-year age groups, and because no practical sampling frame that details all people over 50 in the UK is readily available, quota sampling was employed. Quota sampling is quite acceptable and widely used in the UK and most of Europe (Taylor, Harris and Associates 1995). Corlett (1996) cites evidence to suggest that a quota sample is about equally likely to give more accurate or less accurate estimates as a random sample of the same size, while Fennell (1990) names several large-scale gerontological studies that have employed quota sampling and are 'presumed to be typical' (p. 66). The procedure resulted in a usable sample size of

650, whose ages ranged from 50 to 79 years (mean age 62.4, s.d. 8.4), the distribution of which mirrors UK population in terms of 5-year age bands, as shown in table 1.

Table 1: Sample Ages Compared to Census

Age	Sample		UK Census	
	n	Percent	n (000s)	Percent
50-54	144	22.2	3847.2	22.2
55-59	137	21.1	3653.7	21.1
60-64	109	16.8	2888.5	16.7
65-69	99	15.2	2621.4	15.2
70-74	88	13.5	2343.1	13.5
75-79	73	11.2	1941.3	11.2
Total	650	100.0	17295.2	99.9

Measures

The most usual form of classification is age categories (Goody, 1976), which are embedded in every culture and define the life course. The earliest measure of self-perceived age, known as age identity, utilises age categories to provide a self-assessment of how one conceptualises oneself both in relation to the rest of society and their own life cycle (Guptill, 1969). Respondents were therefore asked if they thought themselves to be young, middle aged, or old/elderly.

The second self-perceived age measure incorporated into the study was cognitive age (Barak 1979; Barak and Schiffman 1981). While a variety of techniques to measure self-perceived age have evolved over the years (Tuckman and Lavell 1957; Zola 1962; Mutran and Burke 1979; George, Mutran and Pennybacker 1980), this technique has had the greatest impact for marketing research. The cognitive age scale asks respondents to identify with age decades along the dimensions of feel (psychological/emotional), look (biological/physical), act (social), and think (cognitive/intellectual interests). Overall cognitive age is computed by averaging the midpoint values for the four age dimensions. The scale is superior to other available instruments on the basis that it is easy to administer, easy to understand by respondents (Stephens 1991), is multidimensional, and has been shown to be a valid instrument (Van Auken, Barry and Anderson 1993; Van Auken and Barry 1995).

Retirement status was measured using three categories (working, housewife, retired). Questions relating to the length of retirement and whether or not the retirement was voluntary were also included, in recognition of the possibility that these factors may affect the way an individual views retirement status. Additionally, respondents were required to state their actual age. This enabled the calculation of 'youth bias,' defined as the difference in years between a person's actual and cognitive age.

RESULTS

When the self-perceived age variable under consideration was age identity, a significant effect of retirement status emerged ($X^2 = 67.551$, $df = 4$, $p < 0.001$), and subsequent analysis confirmed that retired people have older age identities than both workers ($U = 26950.0$, $N_1 = 249$, $N_2 = 312$, $p < 0.001$) and housewives ($U = 5420.5$, $N_1 = 42$, $N_2 = 312$, $p < 0.05$). As there were no significant differences in age identity between workers and housewives, the data were recoded into retired and not retired for illustrative purposes. As is clear from table 2, the vast majority of respondents,

whether retired or not, felt middle-aged. Nevertheless, once retirement is reached, fewer retired persons feel young and more have older age identities than non-retired persons ($U = 32370.5$, $N_1 = 291$, $N_2 = 312$, $p < 0.001$).

Table 2: Age Identity By Retirement Status

Retirement Status	Age Identity (percent)		
	Young	Middle-Aged	Old
Not retired	27	71	2
Retired	10	72	18

Turning to cognitive age, the reliability of the scale was found to be acceptable (Cronbach's alpha .89). Table 3 details the mean actual and cognitive ages for the sample as a whole. The difference between cognitive and chronological age was actually *greater* for retired persons than it was for workers or housewives. One-Way ANOVA indicated significant group differences ($F = 3.462$ (2,619), $p < 0.05$), and further analysis revealed that the difference in youth bias between workers and retirees was not significant. Indeed, the only significant effect of work status to emerge was that retired people had a significantly larger youth bias than housewives ($t = 1.996$, $df = 365$, $p < 0.05$).

Table 3: Youth Bias By Retirement Status

Retirement Status	Mean Actual Age	Mean Cognitive Age	Mean Youth Bias
working	55	46	9
housewife	60	52	8
retired	68	58	10
Total	62.3	52.5	9.8

The absence of any retirement effects on cognitive age was later confirmed with hierarchical multiple regression analysis, where retirement status was not a significant predictor of cognitive age when chronological age was included in the model.

Moreover, it appears that enforced retirement does not affect a person's self-perceived age any differently to those who choose to retire early. Independent *t*-tests confirmed there were no significant differences between voluntary and enforced retirees in terms of chronological age, cognitive age, or age identity.

On the other hand, very highly significant positive correlations were found between length of retirement and both cognitive age ($r = .452$, $n = 319$, $p < 0.001$) and age identity ($\rho = .335$, $n = 306$, $p < 0.001$). However, once chronological age was held constant a barely significant association with cognitive age remained ($r = .1437$, $n = 316$, $p = 0.01$), and hierarchical regression analysis later confirmed that the length of retirement is not a contributor to a person's cognitive age.

DISCUSSION

The major finding of this research is that the vast majority of older consumers do not feel old – this is true even once retirement age, with its social significance, is reached. Rather, while slightly fewer retirees feel young and slightly more feel old than their non-retired counterparts, the majority maintain a middle-aged identity, and feel an

average of 10 years younger than their actual age, well into retirement. These findings hold true even for those who have had retirement forced upon them. Likewise, length of retirement does not appear to add years to a person's self-perceived age, other than what might be expected for the passing of time.

Thus, there was no evidence of retirement resulting in an identity crisis, experienced through the adoption of an old age status. These results therefore lend no support to disengagement theory, which clearly suggests an old age identity would be an expected outcome from retirement. On the other hand, it may be that some respondents have replaced the work role with activities and pastimes that keep them busy and allow them to maintain a positive self-concept, thus lending support for activity theory. Alternatively, for some it may be the maintenance of a youthful outlook that allows a consistency, or continuity of identity, despite retirement. The need for further research into the association between self-perceived age and activities is therefore highlighted.

Two perspectives suggest the preconception of retirement as marking old age and a period of grave loss may be incorrect. The first relates to the possible differences in attitudes toward retirement between retirees and younger persons. Several studies have found retirement to be more favourably evaluated by older people than by younger people (Kogan and Wallach, 1961; Streib and Schneider, 1971; George and Maddox, 1979). Thus, it is possible that the general assumption that termination of the work role is likely to be crucially important is simply not borne out in reality. Indeed, a recent MORI survey conducted for Independent Age found young people are more concerned about old age in general than are the older generation itself (Evening Standard, 2005).

Second, from a cohort perspective, it may be that attitudes toward retirement have changed with today's older generation. Certainly, as Quinn and Burkhauser (1990) state, "if retirement from the labour force marks the passage into old age, then the old among us have grown considerably younger in recent years" (p.307). Indeed, Foner and Schwab (1983) suggest that since the 1950s major changes have occurred in the social context of retirement. Such changes include increases in positive orientations toward retirement, the redefining of retirement as a right earned after a lifetime of employment, and the increased acceptance of retirement as a role. Moreover, the increase in numbers of retired persons may make adjustment to the role easier for today's retirees than for previous cohorts, while leisure has become increasingly important. Thus, there appears to be growing acceptance of retirement as a legitimate state of life (Lowry, 1985), thus lending support to Maddox's (1968) prediction that the emphasis on work as the primary source of meaning and satisfaction will no longer have its original significance in society.

IMPLICATIONS FOR MARKETING

This research has implications for marketing a variety of goods and services to older consumers. Older adults are clearly not a homogeneous group, and while retirement may no longer be a useful segmentation variable, cognitive age does have major potential to better serve this market. The leisure industry has already made progress in targeting older consumers, with, for example, holidays exclusive to the over 50s. Much more needs to be done, however, in terms of differential product offerings based on cognitive, and not chronological age. It may be that the cognitively young

demand activity holidays with lots going on and a relatively lively atmosphere, while the cognitively old prefer a less demanding itinerary or more peaceful locations. Older consumers do have more leisure time and can make use of off-peak discounts, which in turn aid capacity management. However, discounts which are promoted for 'Old Age Pensioners' and attained through open and public admittance of such a status is likely to be a major turn-off to the cognitively young. More creative and subtle promotions are therefore needed.

Health care providers and marketers of health supplements also need to understand the implications of cognitive age. While the cognitively old are clearly a target for products such as mobility and dexterity aids, the cognitively young will want to stay that way, thus positioning a product or service on the basis of its preventative potential that stresses not just length of life but the ability to put extra life into older age may be an astute strategy.

There are implications for the financial services industry, too. The apparent perception that retirement is a major milestone in an individual's life is perhaps true in terms of reduced income. However, the duration of financial products targeted at older consumers may need to be determined more by outlook - and therefore cognitive age - than actual age. Moreover, while the cognitively old will still demand products that offer security, the cognitively young need financial services products that will provide them with opportunities to put life into older age. Indeed, recent research found the cognitively old to value security, while the cognitively young place more emphasis on fun and enjoyment of life (Simcock and Sudbury, 2005).

Overall, then, the marketer likely to succeed with today's older consumers is one who understands that this is a generation like none before. These older consumers resist an old age identity, by feeling ten years younger and considering themselves to be middle-aged. Not even retirement makes them feel old. They are therefore likely to be turned off by references to old age, or by the portrayal of their generation as stereotypically old. Moreover, retirement may not be a useful segmentation variable for this market, other than to be used as a proxy for the amount of leisure time enjoyed. Nevertheless, apparent changes in attitudes toward retirement and age provide marketers with opportunities to target goods and services to a cohort that has been socialised to expect more in terms of both material and personal fulfilment (Foner and Schwab, 1983) than previous generations.

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THE NEW OLDER CONSUMER: WE'RE NOT READY TO ACT OUR AGE!
AN EMPIRICAL INVESTIGATION OF THE YOUNG-AT-HEART PHILOSOPHY

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Abstract

The number of years a person has lived is a poor indicator of their self-perceptions, attitudes and behaviours. For these reasons, gerontologists have looked to alternative measures of age, including self-perceived or subjective age. While American researchers have built up a body of knowledge pertaining to self-perceived age for more than half a century, little is known about the concept in the UK. This paper presents the findings of an empirical study into the self-perceived age of a group of UK citizens (n = 356) aged 50-79 (mean age 60.2 years). Using the cognitive age scale, respondents were asked how old they perceived themselves to be on the dimensions of feel, look, act, and interests. Overall, respondents indicated a self-perceived age of more than 10 years younger than their chronological age. These results suggest that the phenomenon is at least as extensive as in the US, where it is frequently argued that youth is valued over age. Marketing implications are discussed.

Key Words: Cognitive Age; Self-perceived Age; Subjective Age; Youthfulness

Introduction

Demographic trends in the United Kingdom show that the number of people over 50 years of age is rising, while the number of 16-34 year olds is declining (ONS, 2000). Older people already own an estimated 80 per cent of this country's private wealth (Kavanagh, 1995; Nicholson-Lord, 1995; Oliver, 1995), while dwindling numbers

and the mortgage trap are eroding the spending power of younger age groups (Byrne, 1994). Because of these profound changes, the market for older consumers is at least as, if not more important to marketers than the younger consumers upon whom they have traditionally focused (Buck, 1990; Chura, 2002; Kennett, Moschis and Bellenger, 1995; Lannon, 1994; Miller and Soyoung, 1999; Schewe, 1991).

Despite this importance, the UK older consumer market is among the least intensively researched and understood of market segments (Ahmad, 2002; Gunter, 1998). While an abundance of literature pertaining to the older consumer can be found, the vast majority is American, and cannot therefore be assumed to be valid in this country, or is descriptive in nature. Many articles stress the importance of the older consumer market in demographic and economic terms (for example, Barr, 1994; Elliott, 1995; Kreitzman, 1994) and warn companies that they must do more to target this potentially lucrative segment (for example, Aldersey-Williams, 1993; Banks, 1990; Burnstein, 1983; Flanagan, 1994; Fry, 1992; Nicholason-Lord, 1995; Philp, Haynes and Helms, 1992; Peters, 1994; Whetton, 1990), often offering advice on how to do so (Hauser and Skarisbrick-Hauser, 1995). Articles that accuse marketing of ageism and an inability to empathise with older consumers are plentiful (for example, Byrne, 1994; Elliott, 1993; Flatters, 1994; Higham, 1999; Thomas, 1990). There is also a growing body of research that describes those products and services that older consumers prefer (Abrams, 1990; Oliver, 1995). However, while a small number of researchers have recently become interested in older consumers (notably Carrigan and Szmigin 1998, 1999; Szmigin and Carrigan, 2000, 2001), there still lacks of body of knowledge pertaining to the underlying consumer behaviour of older UK citizens that can guide marketing strategies.

Self-Perceived Age

Chronological age, i.e. the number of years a person has lived, is a constant in daily life, in age related research, and in marketing. The use of chronological age as an objective measure that shapes the lives of individuals can be illustrated by the age restrictions imposed by the government. For example, chronological age dictates the point at which an individual can drive, vote, drink alcohol, marry, and claim a state pension. In research, chronological age is the most commonly used yardstick when

studying the ageing process (Cunningham and Brookbank, 1988). In the marketing field, chronological age is the most frequently used of all demographic variables to describe consumer behaviour research and to segment consumer markets (Barak and Schiffman, 1981).

Despite these numerous uses, the limitations of chronological age have long been acknowledged (Adams, 1971; Heron and Chown, 1967). Whilst chronological age may be a useful clue to performance during early life (Jarvik, 1975), ageing does not perfectly coincide with chronological age (Bell, 1972), so homogeneity in individual lifestyles and conditions among age groups cannot be assumed. Indeed, the number of years lived is a poor indicator of a person's attitudes and consumer behaviour (Chua, Cote and Leong, 1990; Van Auken, Barry and Anderson, 1993). Such observations have led to predictions that chronological age will progressively have less and less utility as a research variable (Maddox and Campbell, 1985).

Given the limitations of chronological age, the implications of the cliché that a person is as young, or as old, as they feel may be more useful in understanding the behaviour of older people. Research shows that the age a person perceives themselves to be, or identifies with, constrains them to recognise changes in themselves and to perceive that attitudes toward them have changed (Peters, 1971). Thus, the age a person identifies with gives an insight into the behaviours that the individual thinks society expects from them (Guptill, 1969). Likewise, an individual's self-perceived age gives a better insight into their likely consumer behaviour than can chronological age alone (Barak and Schiffman, 1981; Cleaver and Muller, 2002; Schiffman and Sherman, 1991; Stephens, 1991).

For these reasons, self-perceived age has been of interest to American gerontologists for over half a century (Cavan et al., 1949; Havinghurst and Albrecht, 1953) and American marketing researchers for over two decades (Barak and Schiffman, 1981). A group of early age identity studies asked people to classify themselves into age categories such as young, middle-aged, elderly, or old (Busse, Jeffers and Obrist, 1957; Shanas, 1950). Since then, the concept has evolved into techniques that allow a person's self-perceived age to be quantified (Zola, 1962) and recognise the multi-dimensionality of age (Kastenbaum et al., 1972). The most popular of these

techniques is the cognitive age scale (Barak, 1979), which is shown in figure 1. The scale asks respondents to identify with age decades along the dimensions of feel (psychological/emotional), look (biological/physical), act (social), and think (cognitive/intellectual interests). Overall cognitive age is computed by averaging the midpoint values for the four age dimensions. The cognitive age scale has been used extensively in America (Clark, Long and Schiffman, 1999; Gwinner and Stephens, 2001; Johnson, 1995, 1996; Ross, 1981; Sherman, Schiffman and Dillon, 1988; Smith, Moschis and Moore, 1984; Stephens, 1991; Van Auken, Barry and Anderson, 1993; Van Auken and Barry, 1995; Wilkes, 1992).

Figure 1: Cognitive Age Scale

	teens	20s	30s	40s	50s	60s	70s	80s
I FEEL as though I am in my...	----	----	----					
I LOOK as though I am in my...	----	----	----					
I DO most things as though I were in my...	----	----	----					
My INTERESTS are mostly those of a person in his/her...	----	----	----					

Source: Barak and Schiffman, 1981

Previous Findings

The overwhelming finding from studies of age identity is that the vast majority of older Americans do not identify with the age categories 'elderly' or 'old', preferring instead to consider themselves 'middle aged' (Blau, 1956; Busse, Jeffers and Obrist, 1957; Tuckman and Lorge, 1954). The only known British study of age identity (Thompson, Itzin and Abendstern, 1990) asked 43 persons aged 58-86 years if they felt old. Only 2 people admitted to being old, while 36 replied to the question with a categorical "No", regardless of their actual age.

Those American studies that have utilised a multidimensional scale to measure the self-perceived age of older people (for example, Barak, 1998; Barak and Schiffman, 1981; Barak and Gould, 1985; Barak and Rahtz, 1990, 1999; Barak, Stern and Gould, 1988; Clark, Long and Schiffman, 1999; Goldsmith and Heins, 1992; Johnson, 1995, 1996; Kastenbaum et al, 1982; Mathur, Sherman and Schiffman, 1998; Wilkes, 1992) have found a strong degree of consistency, in that:

- There is little agreement between self-perceived age and chronological age, although the two correlate.
- There is a strong bias towards a more youthful self-perceived age.
- This youthful bias becomes more pronounced with advancing chronological age.
- The look age dimension is closest to actual age than any of the other self-perceived age dimensions.
- Cognitive age does not differ between genders.

American studies typically report differences between actual and cognitive age to be between 8 and 12 years (Barak, 1998; Barak and Rahtz, 1999; Sherman, Schiffman and Mathur, 2001; Van Auken and Barry, 1995). However, a number of studies conducted outside the US show the bias toward a more youthful self-perceived age to be less pronounced than in America (Chua, Cote and Leong, 1990; Togonubi-Bickersteth, 1986; Uotinen, 1998).

The only UK study to use the cognitive age scale was conducted by Szmigin and Carrigan (2000). They found the self-perceived youthful bias to be 10.3 years, which is clearly comparable to American findings, but in other respects their data did not perform in a predictable way. For example, while Szmigin and Carrigan (*ibid*) report a correlation between cognitive and chronological age, the discrepancy between actual and cognitive age for people aged 61-65, 66-70, and 71-75, was 12.6, 6.3 and 21.5 years respectively. Clearly, this is not the pattern found by an overwhelming number of American researchers. This, however, may have been due to the small numbers of respondents in the oldest age groups, as only 5 people were above the age of 71 in their sample. More importantly, these authors found the males in their study to have significantly older cognitive ages than their female counterparts, which is inconsistent with an established body of American findings.

Churchill (1979) asserts that in order to establish the construct validity of a measure, the researcher needs to determine whether the measure behaves as expected. The anomalies outlined above may be due to a number of factors. One possibility that

cannot be ignored, however, is that the cognitive age measure is low in external validity: in other words, it does not apply to older consumers in the UK. A body of writing asserts that validity is a dynamic process that results from the accumulation of evidence over time (Wells, 1975; Neuman, 2000), and the aggregation of results (Peter, 1981). Indeed, Epstein (1980) argues that “there is no more fundamental requirement in science than that the replicability of findings be established” (p. 796). Clearly, the concept of cognitive age has been accepted into the mainstream consumer behaviour literature in America. However, before the concept can be used in this country with the same ease, it needs further investigation.

The Study

In order to make direct comparisons with both American and Szmigin and Carrigan’s (2000) UK research, the cognitive age scale (see figure 1) was the instrument used to measure self-perceived age in the current study. The scale is superior to other available instruments on the basis that it is easy to administer, easily understood by respondents, is multidimensional, and has been used extensively in prior American studies. In-depth scrutiny by American researchers has shown the cognitive age scale to be a valid instrument (Van Auken, Barry and Anderson, 1993; Van Auken and Barry, 1995) in that country.

The scale was administered in the form of a self-complete questionnaire to a random sample of older men and women mainly in shopping centres around Merseyside. Instructions to respondents were adapted from the original studies (Barak, 1979; Barak and Schiffman, 1981), to read, “Most people seem to have other ‘ages’ besides their official or ‘date of birth’ age. The questions that follow have been developed to find out about your ‘unofficial age. Please specify which age decade you FEEL you really belong to.” The questionnaire also requested respondents to specify their actual chronological age.

Completed questionnaires received from people below the age of 50 and above the age of 79 were discarded. The lower age parameter of 50 was chosen on the basis that this is the starting point for many age-related services (for example, SAGA, Age Concern) offered to ‘older’ people. The upper age parameter of 79 was chosen purely

on the basis that only a small number of respondents were aged 80 or over, and this study aimed to overcome one of the main limitations of the only other British study into cognitive age. This process resulted in the collection of 356 usable questionnaires (mean age 60.2 years, standard deviation 7.71). The characteristics of the sample are shown in table 1.

Table 1: Sample Characteristics

Age Group	n	Mean Age (years)	Male (%)	Female (%)
50-59	188	54	41	59
60-69	117	64	37	63
70-79	51	74	27	73
Total sample	356	60.2	38	62

Results

The cognitive age scale demonstrated reasonably high reliability (Alpha Coefficients = .8782), showing the scale to be internally consistent and stable. As expected, a significant positive correlation was found between chronological and cognitive age ($r = .676, p < 0.01$). Perceiving oneself to be youthful was typical of the sample, with only 22 respondents (6%) choosing a cognitive age that was older than their actual age.

Table 2 shows the levels of agreement between actual and cognitive age in decades. It can be seen that 22% of those aged 50-59 have cognitive ages that are also in the 50s. These levels of agreement fall to 16 and 14 per cent for those aged 60-69 and 70-79 respectively. Conversely, 76.5 per cent of those aged 50-59 perceives themselves to still be “40 something” (or less) while 81% of 60-69 year olds are still subjectively under 60. For those aged 70+, 86% are cognitively still in their 60s or under. Thus, the age bias typical to American findings is clearly present.

Table 2: Percentage Levels of Agreement Between Cognitive Age and Actual Age (Decades)

Actual Age (Decades)	Cognitive Age (Decades)		
	Older	Same	Younger

50s	1.5	22	76.5
60s	3	16	81
70s	0	14	86
Total	1.5	19	79.5

Turning to the actual differential between chronological and cognitive ages, table 3 shows that those aged 50-54, whose mean actual age was 52, had a mean cognitive age of 43.3, a difference of 8.7 years. This difference is greater for those in their mid to late 50s, with these respondents perceiving themselves to be almost 11 years younger. All other groups demonstrate a youth bias of between 10.5 years (70-74 year olds) and 12.1 years (65-69 year olds).

Table 3: Comparison of Chronological and Cognitive Ages By Age Group

Chronological Age Decade	n	Mean Chronological Age	Mean Cognitive Age	Youth Bias (years)
50-54	106	52	43.3	8.7
55-59	82	56.9	46.1	10.8
60-64	62	61.3	50.6	10.7
65-69	55	67.2	55.1	12.1
70-74	31	71.8	61.3	10.5
75-79	20	76.6	64.7	11.9
Total	356	60.2	49.8	10.4

While the extent of these differences is clearly similar to American findings, it is noteworthy that the youth bias peaks at about 12 years for those in their mid to late 60s. No significant difference in the cognitive ages of different age groups was found. Thus, neither the increasing differential typical to American research, nor the dip observed by Szmigin and Carrigan (2000) in the UK study, is present. One other pattern is worthy of attention. As table 3 demonstrates, those respondents whose actual age falls into the first half of a decade (i.e. 50-54, 60-64, 70-74) consistently demonstrate a lesser youth bias than do those whose ages fall into the latter half of a decade. Deeper analysis, however, revealed that these differences are not significant.

Turning to the individual components of cognitive age, Table 4 shows that on average our respondents felt 11.5 years younger than their actual age, they act as though they are almost 13 years younger, and their interests are more like those of a person more than 12.5 years younger. This is despite their admittance that they look less than 5 years younger than their age. This result is of course consistent with American findings, in that the look dimension is closest to actual age than any of the other cognitive age dimensions.

Table 4: Individual Components of Cognitive Age

	Feel Age	Look Age	Do Age	Interests Age
Mean (Years)	48.7	55.5	47.4	47.6
Age Bias (Years)	11.5	4.7	12.8	12.6

Finally, *t*-Tests were conducted in order to ascertain gender differences. There was no significant difference between the cognitive ages of males and females. This was true both for cognitive age overall, and for all its component parts. While this result is consistent with a large body of American research, it is contrary to the findings of the other UK study (Szmigin and Carrigan, 2000).

Discussion

Clearly, the ‘young at heart’ philosophy is as true for older consumers in this country as it is across the Atlantic. Indeed, our results mirror those of American research in almost every way. We found little agreement between self-perceived and chronological age, with a strong youth bias. While we did not find this youthful bias to become more pronounced with advancing chronological age, we noted an interesting pattern in that those whose actual age falls into the first half of a decade consistently demonstrate a lesser age differential than do those whose ages fall into the latter half of the same decade. Perhaps those who are approaching the end of a particular decade resist ageing to a greater extent than those who have more recently experienced a landmark birthday. The tendency for older people to report younger

self-perceived ages has been viewed as a form of denial in the United States, where it has long been noted that “to get older, to move into middle and especially old age, means to move into a less highly regarded age group” (Kuhlen, 1959, p.863). Such an ideology is not limited to American culture: British writing provides overwhelming support for the contention that in this country old age is associated with negative characteristics. One empirical study into the changing significance of leisure in the period around retirement noted, “there appears to be a strong feeling among today’s elderly that, being retired, they are treated like second class citizens” (Long, 1987, p.39).

The familiar pattern of the look age dimension being closer to actual age than the other dimensions did emerge. This has led to the observation that although the mirror seems to act as a reminder that one is getting older, the realities of chronological age and physical signs of ageing are not fully manifested in the way a person feels inside (Clark, Long and Schiffman, 1999).

Finally, an overwhelming amount of self-perceived age research demonstrates the absence of gender differences, and our study adds support to this finding. This result may at first glance be counter-intuitive, given society’s ‘double standard’ of ageing (Bell, 1970; Sontag, 1972) which suggests that ageing enhances a man but progressively destroys a woman (manifested in various unfair ways, for example, grey hair on a man is distinguished; ‘mutton dressed as lamb’ is applicable only to women). However, a deeper analysis of the gerontological literature suggests that age may actually act as a leveller (Chappell and Havens, 1980; Keith, 1990) in various ways, including less longevity for males, sex-role reversals (Guttman, 1979), and an increasing freedom from family responsibilities for the older woman. Thus, while the antecedents of self-perceived age may differ between genders, the overall outcome does not.

Implications For Marketing Practice

These results have important implications for a range of marketing activities, including targeting, segmentation, positioning, and promotional activities. Marketing has been accused of ageism in the extreme (Kreitzman, 1994; Flatters, 1994; Hobman,

1990; Gabriel, 1990; Higham 1999), and despite the importance of this market, many UK firms are still not specifically targeting older consumers (Ahmad, 2003). Indeed, on average less than 10% of all marketing expenditure is aimed at the over 50s (Blackett, 2002). More organisations need to ask if they can afford to risk alienating such a large and relatively healthy, wealthy, active and youthful-feeling sector for much longer.

Segmentation practice, too, needs attention. Perhaps it is time to consider cognitive age instead of automatically defining segments in terms of the number of years a person has lived. After all, the fact that a group of people have lived the same number of years does not mean that they are alike in respect to their life conditions (Terpstra et al., 1989) and outlook. Cognitive age may therefore be a better segmentation variable, or at least be useful when used in conjunction with chronological age (Stephens, 1991).

It is possible that cognitive age has the potential to explain several past marketing mistakes, such as the failure of several products positioned as suitable for 'older' people (see Schewe, 1991, for an excellent discussion of these). As Wolfe (1990) suggests, unlike adolescents, older consumers may not appreciate reference to age, and are likely to recoil from symbols that suggest they are old. This has further implications for the promotional strategies used to communicate with seniors. It is not just about the age of the model to be used in an advertisement: a 55 year old whose cognitive age is 43 is unlikely to identify with any age-related message claims. Senior promotions and discounts, too, may need to be creatively designed in order to appeal to the specific needs of this market without alienating the young at heart.

Limitations and Implications for Further Research

This paper has several limitations. A convenience sample was used, and while there was an appropriate spread across age groups, results cannot be assumed to be representative of the older UK market. The research needs to be replicated using a representative sample. It is also limited in the number of variables included. Studies conducted outside the UK have correlated self-perceived age with a host of demographic, biological, social, psychological, and marketing variables, and a major

research study is already underway by the authors to address these and other issues. Nevertheless, this paper provides details of one of the very few empirically based studies of older UK consumers. In addition, it adds to the small body of knowledge regarding subjective age in this country (Thompson, Itzin and Abendstern, 1990; Szmigin and Carrigan, 2000, 2001), and lends support for the validity of the cognitive age scale.

Finally, while the very concept of cognitive age is not without its critics (Catterall and Maclaran, 2001) a recent study (Alreck, 2000) revealed *no* significant change in age role norms and adherence to these since 1980, contradicting suggestions that cognitive age may no longer give useful insights into behaviour. Indeed, we argue that research into cognitive age in this country is merely at the beginning of what could provide a major breakthrough into a better understanding of this important older consumer market.

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Quality in Ageing

Policy, practice and research

- **Subjective age perceptions in the UK**
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- **Supporting carers in paid employment**
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Charles Patmore



Subjective age perceptions in the UK:

An empirical study

Lynn Sudbury

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ABSTRACT

The number of years a person has lived is a poor indicator of their self-perceptions, attitudes and behaviours. For these reasons, gerontologists have looked to alternative measures of age, including self-perceived or subjective age. While American researchers have built up a body of knowledge pertaining to self-perceived age for more than half a century, little is known about the concept in the UK. This paper presents the findings of an empirical study into the self-perceived age of a group of UK citizens ($n = 356$) aged 50–79 (mean age 60.2 years). Using the cognitive age scale, respondents were asked how old they perceived themselves to be on the dimensions of feel, look, act and interests. Overall, respondents indicated a self-perceived age of more than 10 years younger than their chronological age. These results suggest that the phenomenon is at least as extensive as in the US, where it is frequently argued that youth is valued over age. Policy and practice implications are discussed.

KEY WORDS

cognitive age
youthfulness

self-perceived age
young at heart

subjective age
alternative age

INTRODUCTION

Gerontologists have long been aware of the limitations of chronological age (Adams, 1971; Heron & Chown, 1967; Neugarten & Garron, 1959; Rose, 1972). Because ageing does not perfectly coincide with chronological

age (Bell, 1972) the number of years lived is a poor indicator of a person's attitudes and behaviour (Chua, Cote & Leong, 1990; Van Auken, Barry & Anderson, 1993). Such observations led Maddox and Campbell (1985) to predict that chronological age will progressively have less and less utility as a research variable.

One alternative to chronological age is the concept of functional age: that is, what a person is capable of doing relative to others in society (Birren & Renner, 1977). Indeed, in worldwide terms the most common way of measuring age is by functionality (Keith, 1985). Thus, it is commonplace to hear descriptions of a child being 'advanced for his age' or an older woman being 'good for her age'.

A second alternative to chronological age is based on the adage 'you're as old as you feel'. The concept ascertains the age an individual perceives him or herself to be, rather than how many years that person has lived. As such, an individual's self-perceived age might give a better insight into their likely behaviour, attitudes and functionality than chronological age alone. For this reason, the phenomenon of self-perceived age has been of interest to American researchers and practitioners for over half a century. However, the concept has to date been given little attention in this country. The present study therefore aims to fill a gap in knowledge by measuring the self-perceived ages of a sample of older Britons.

SELF-PERCEIVED AGE

Measures of self-perceived age fall into two loose categories. First, age identity measures are concerned with the age category with which people most closely identify. Early measures asked people to classify themselves into age categories such as young, middle-aged, elderly, or old (Cavan *et al.*, 1949; Busse, Jeffers & Obrist, 1957; Shanas, 1950). While this basic technique has since been modified and in some cases become more sophisticated (see, for example, George, Mutran & Pennybacker, 1980; Mutran & Burke, 1979a & b; Guptill, 1969), all are concerned with age categories rather than a quantified self-perceived age. These techniques give an indication of how a person conceptualises themselves in relation to the rest of society, as well as providing an indication of how a person positions themselves in their own life cycle (Guptill, 1969). These methods became the most popular for measuring self-perceived age and have been used extensively for many years (for

example, Bengston, Cuellar & Ragan, 1977; Carp & Carp, 1981; Markides & Bolt, 1983).

In contrast to age identity measures, the second group of techniques enable an individual's self-perceived age to be quantified. Irving Zola introduced the concept of 'feel age', which simply measures self-perceived age by asking respondents how old they feel, and elicits a numerical response (Zola, 1962). Thus, it is a more precise measure of self-perceived age than the age identity method, and it allows for the calculation of any difference between a person's chronological and self-perceived age.

Ten years later, Kastenbaum *et al.* (1972) conducted a pioneering study that aimed to ascertain whether self-perceived age was '*adequately represented as a unitary construct*' (1972: 201). Based on the widely accepted assertion that ageing is multidimensional (Birren, 1968; Moody, 1988; Moschis, 1994; Riley, 1992), and the argument that biological, psychological and social age would be necessary to describe an individual's age (Fozard, 1972), these researchers developed an instrument termed 'The Ages of Me'. The Kastenbaum *et al.* instrument comprises a set of four functional age questions that request respondents to specify an absolute age in response to the following:

I feel as though I were about age ...
I look as though I were about age ...
I do most things as though I were about age ...
My interests are mostly those of a person about age ...

Therefore, this scale successfully introduced the concept of self-perceived ages, measured along the dimensions of feel (psychological/emotional), look (biological/physical), act (social) and think (cognitive, intellectual interests).

Later, Barak and his colleagues (Barak, 1979; 1987; Barak & Schiffman, 1981; Barak & Gould, 1985; Barak & Stern, 1986) simplified the 'Ages of Me' instrument by asking respondents to identify with age decades, as shown in *Figure 1* (over). Responses to each question are assigned a midpoint value (for example, a response of '50s' is recorded as 55) and by averaging the midpoint values for the four age dimensions, an overall composite age, known as cognitive age, is computed for each respondent. The

Figure 1: Cognitive Age Scale

	teens	20s	30s	40s	50s	60s	70s	80s
I FEEL as though I am in my ...	—	—	—	—	—	—	—	—
I LOOK as though I am in my ...	—	—	—	—	—	—	—	—
I DO most things as though I were in my ...	—	—	—	—	—	—	—	—
My INTERESTS are mostly those of a person in his/her ...	—	—	—	—	—	—	—	—

Source: Barak and Schiffman, 1981

cognitive age scale has since been used extensively in America (Clark, Long & Schiffman, 1999; Gwinner & Stephens, 2001; Johnson, 1995, 1996; Ross, 1981; Sherman, Schiffman & Dillon, 1988; Smith, Moschis & Moore, 1984; Stephens, 1991; Van Auken, Barry & Anderson, 1993; Van Auken & Barry, 1995; Wilkes, 1992).

PREVIOUS FINDINGS

The overwhelming finding from studies of age identity is that the vast majority of older Americans do not identify with the age categories 'elderly' or 'old', preferring instead to consider themselves 'middle-aged'. This finding holds true even for people past retirement age (when, arguably, they are deemed old by society), and it is not until people are well into their seventies that more and more begin to admit to an old age status (Blau, 1956; Busse, Jeffers & Obrist, 1957; Tuckman & Lorge, 1954). The only known British study of age identity (Thompson, Itzin & Abendstern, 1990) asked 43 persons aged 58–86 years if they felt old. Only 2 people admitted to being old, while 36 replied to the question with a categorical 'No', regardless of their actual age.

Those American studies that have utilised the multidimensional scales to measure the self-perceived age of older people (for example, Barak, 1998; Barak & Schiffman, 1981; Barak & Gould, 1985; Barak & Rahtz, 1990; 1999; Barak, Stern & Gould, 1988; Clark, Long & Schiffman, 1999; Goldsmith &

Heiens, 1992; Johnson, 1995; 1996; Kastenbaum *et al.* 1972; Mathur, Sherman & Schiffman, 1998; Wilkes, 1992) have found a strong degree of consistency, in that:

- there is little agreement between self-perceived age and chronological age, although the two correlate
- there is a strong bias towards a more youthful self-perceived age in comparison to chronological age
- this youthful bias becomes more pronounced with advancing chronological age
- the look age dimension is closest to actual age than any of the other self-perceived age dimensions.

The American studies cited above that report the difference between actual and self-perceived age reveal that on the whole older Americans perceive themselves to be about 10 years younger than their chronological age. However, the extent of this phenomenon is not universal. For example, a study conducted in Finland (Uotinen, 1998) found that people aged 55–69 felt less than 3 years younger than their actual age, despite expectations that more similarities than differences would exist between Finnish and American respondents.

Szmigin and Carrigan (2000) conducted the only known British study that has utilised a multidimensional scale (the Cognitive Age Scale) to measure self-perceived age among older adults. However, this study was not primarily concerned with self-perceived age *per se*, thus much of the potentially valuable data regarding cognitive age was not reported.

Further, although there was a youthful self-perceived age bias found in the study, this bias was not found to be progressively greater with advancing chronological age. This, however, may be due to the small numbers of respondents in the oldest age groups, as only 5 people were above the age of 71.

THE STUDY

The cognitive age scale (see *Figure 1*) was the instrument used to measure self-perceived age in the current study. The scale is superior to other available instruments on the basis that it is easy to administer, easily understood by respondents, is multidimensional and has been used extensively in prior American studies. Furthermore, in-depth scrutiny by American researchers has shown the cognitive age scale to be a valid instrument (Van Auken, Barry & Anderson, 1993; Van Auken & Barry, 1995).

The instrument was administered in the form of a self-completion questionnaire to a convenience sample of older men and women mainly in shopping centres around Merseyside. Judgement was used by the distributors in an attempt to ensure an appropriate spread across age groups. Instructions to respondents were

'older' people. The upper age parameter of 79 was chosen purely on the basis that only a small number of respondents were aged 80 or over. Thus while results cannot be assumed to be representative of the older UK generation, this study does overcome one of the main limitations of the only other British study into cognitive age. The process resulted in the collection of 356 usable questionnaires (mean age 60.2 years, standard deviation 7.71). The characteristics of the sample are shown in *Table 1*.

Table 1: Sample characteristics

Age group	N	Mean age
50-59	188	54
60-69	117	64
70-79	51	74
Total sample	356	60.2

RESULTS

Table 2 presents the percentage of respondents who expressed a cognitive age that falls into the same decade as their actual age. There is little agreement between chronological and cognitive ages in that the highest level of

Table 2: Percentage of respondents expressing agreement between chronological and cognitive ages

Chronological age decade	Feel age	Look age	Do age	Interests age
50s	17	41	17	21
60s	14	40	15	13
70s	18	25	10	12

adapted from the original studies (Barak, 1979; Barak & Schiffman, 1981), to read, *'Most people seem to have other "ages" besides their official or "date of birth" age. The questions that follow have been developed to find out about your "unofficial age". Please specify which age decade you FEEL you really belong to.'* The questionnaire also requested respondents to specify their actual chronological age.

Completed questionnaires received from people below the age of 50 and above the age of 79 were discarded. The lower age parameter of 50 was chosen on the basis that this is the starting point for many special services (for example, SAGA, Age Concern) offered to

agreement reaches only 41% ('look age' at chronological 50s) and in the majority of cases the agreement levels are less than 20%.

The reporting technique used by four major American studies (Barak & Schiffman, 1981; Kastenbaum *et al.* 1972; Goldsmith & Heiens, 1992; Johnson, 1995) allows for direct comparison of results. While the majority of the percentages cited in *Table 2* are similar to the American studies, it is noteworthy that in the case of 'feel age' the present study reveals lower levels of agreement in every age category than any of the four American studies, as *Table 3* (over) highlights.

Table 3: Percentage of respondents expressing agreement between chronological and feel age: comparison of studies

Chronological age decade	Feel age				
	Present study	Kastenbaum <i>et al.</i> (1972)	Barak & Schiffman (1981)	Goldsmith & Heiens (1992)	Johnson (1995)
50s	17	20	42	29	49
60s	14	33	26	23	27
70s	18	-	35	25	22

Table 4: Percentage of respondents expressing cognitive ages younger than chronological ages

Chronological age decade	Feel age	Look age	Do age	Interests age
50s	79	53	80	78
60s	82	54	83	85
70s	80	69	86	86

Table 5: Chronological and cognitive ages by age group

Chronological age group	Mean chronological age	Mean cognitive age	Difference (years)
50-59	54	44	10
60-69	64	53	11
70-79	74	63	11
Total sample	60.2	49.8	10.4

Turning to the direction of the differential between actual and cognitive age, **Table 4** presents the percentage of respondents who expressed a cognitive age that falls into at least the decade below their actual age. More than half of the respondents perceive themselves to look younger than their age, and more than three quarters demonstrate this age bias on the other cognitive age dimensions. Moreover, with the exception of feel age, on each cognitive age dimension the percentage expressing a younger cognitive age increases with the age of respondent. As previously mentioned, this pattern is one that is typical of American findings (for example, Clark, Long & Schiffman, 1999). Similarly, the percentages found in the table are comparable with those reported by American researchers (Barak & Schiffman, 1981; Goldsmith & Heiens, 1992; Johnson, 1995). It is noteworthy, however, that a higher proportion of British persons report younger self-perceived ages on the feel age dimension than their American counterparts in the studies cited earlier.

In terms of the difference between chronological and overall cognitive age, the British respondents are again similar to their American counterparts. As expected, a significant positive correlation was found between chronological and cognitive age ($r = .676, p < 0.01$). **Table 5** shows that those aged between 50 and 59, whose average actual age was 54, had an average cognitive age of 44, a difference of 10 years. The difference is greater for those aged 60-69 and 70-79, with each of these groups perceiving themselves to be an average of 11 years younger than their actual age.

Finally, **Table 6** reveals that in terms of look age, respondents perceive themselves to be closer to their actual age than on any other cognitive age dimension. This finding holds true for every age group. Those in their 50s perceive themselves to look, on average only 4 years younger than their actual age. This figure rises to 5 and 6 years respectively for those in their 60s and 70s. In contrast, the other cognitive age dimensions all reveal differences between actual and cognitive ages ranging

from 11 to 15 years. Once again, this pattern is consistent with American findings (Barak, 1998; Clark, Long & Schiffman, 1999; Wilkes, 1992).

culture. British writing provides overwhelming support for the contention that in this country old age is associated with negative characteristics. One empirical study into the

Table 6: Dimensions of cognitive age by chronological age

Decade	Chronological age		Cognitive age (years)		
	Mean age	Feel age	Look age	Do age	Interests age
50s	54	43	50	42	43
60s	64	52	59	50	50
70s	74	63	68	61	59
Total sample	60.2	49	56	47	48

DISCUSSION AND IMPLICATIONS

Due to the paucity of previous self-perceived age studies in Britain, prior expectations regarding the likely findings of the present study were difficult to formulate. However, perhaps what is surprising is that these results reveal that the phenomenon of self-perceived age is at least as extensive in this country as in America. This is true both in terms of the numbers of people whose self-perceived age differs from their actual age, and also in terms of the degree of youth bias. Moreover, the familiar pattern of the look age dimension being closer to actual age than the other dimensions also emerged in the present study. This latter pattern has led to the observation that although the mirror seems to act as a reminder that one is getting older, the realities of chronological age and physical signs of ageing are not fully manifested in the way a person feels inside (Clark, Long & Schiffman, 1999). This, of course, has major implications for all sectors that provide care or services to the older generation.

The tendency for older people to report younger self-perceived ages has been viewed as a form of denial in the United States, where it has long been noted that *'to get older, to move into middle and especially old age, means to move into a less highly regarded age group'* (Kuhlen, 1959: 863). Indeed, numerous accounts of the myths and negative stereotypes prevalent in American culture suggest that youth is valued, while old age is demeaning in a variety of ways (Dychtwald & Flower, 1989; Guy, Rittenburg & Hawes, 1994). However, such an ideology is not limited to American

changing significance of leisure in the period around retirement noted *'... there appears to be a strong feeling among today's elderly that, being retired, they are treated like second class citizens'* (Long, 1987: 39). A variety of negative stereotypes found in British culture suggest that old age is viewed as a period of inevitable deterioration and irreversible decline (Henwood, 1990), providing a popular stereotype of an old person who is socially isolated, poor, ill, resistant to change and enjoys living in the past (Lannon, 1990; Byrne, 1994; Scrutton, 1990). Such negative stereotypes are entrenched in British culture. Greengross (1990) points to children's literature, where brave young heroes and gentle, nubile maidens triumph over wicked ageing stepmothers, and elderly witches and sorcerers. Everyday symbols in British society reinforce negative stereotypes; for example, the road sign to alert motorists to older people crossing the road depicts two stooped, walking stick dependent persons. Johnson (1990) argues that the two most dynamic old age lobby organisations in Britain, Help the Aged and Age Concern, have names which present a very downbeat image of what it is to be old.

Such negative images can lead to ageism, defined by Butler as *'...a process of systematic stereotyping of and discrimination against people because they are old, just as racism and sexism accomplish this with skin colour and gender'* (Butler, 1975: 12). The dangers associated with ageism are significant for practice and policy decisions across and within a whole spectrum of organisations. Indeed, as Bytheway (1995) notes *'...the structuring of the organisation and its activities, the development of standards and the impact of budgetary controls, all contribute to the*

creation of relationships in which ageism can flourish' (1995: 104). Among those that have been accused of ageism in this country are the press and broadcasting, civic and voluntary life, politics (Midwinter, 1992), social security policies (Walker, 1990), the workplace (Laczko & Phillipson, 1990; Donkin, 1995), and various industry sectors including product design and marketing (Kreitzman, 1994; Flatters, 1994; Hobman, 1990; Gabriel, 1990; Higham, 1999).

It is not just the eradication of ageism upon which organisations need to concentrate their efforts. Policy makers need to better understand and consider the needs of this unique generation. It has long been recognised, for example, that proper training can result in better identification of needs and provision of more help to older people (Cordingley, Hughes & Challis, 2001).

Businesses, then, need to shake up. Internally, organisations need to recognise the importance of self-perceived age not only in policies to manage ageism in the workplace, but also to manage training and retirement. Employees who provide front-line care and service to older people may need training in order to be more sensitive to the feelings of patients and customers. The timing of and preparation for retirement is also significant. Pre-retirement courses to assist in adjustment, for example, may be more important than ever before for employees who feel at least 10 years younger than their actual age and for whom the prospect of retirement is daunting. For others, retirement at a time in life when they feel, act and think young is something to relish: but these too will demand a host of leisure activities and interests.

While the potential significance of the grey consumer is well documented (for example, Chura, 2002; Leventhal, 1997; Miller & Soyoung, 1999), many UK firms are still not specifically targeting older customers (Ahmad, 2002). Even though the over 50s already account for 63 per cent of annual expenditure on leisure goods and services in this country (ONS, 1999), on average less than 10% of all marketing expenditure is aimed at the over-50s (Blackett, 2002). Perhaps organisations need to ask if they can afford to ignore the needs of such a potentially important sector for much longer.

Whether public or private sector, those organisations that will succeed are the ones that train their staff to better understand the needs and motivations of a large and growing sector of the population who appear unready to embrace the 'pipe and slipper' stereotype of yesterday's older person. This research has demonstrated that being 'young at heart' is no longer an abstract concept, but one that is reality to many older people.

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