Brand image and Loyalty

Jenni Romaniuk (B.Bus (Marketing) M.Bus (Research))

Supervisor: Byron Sharp

May 2000

Marketing Science Centre - University of South Australia

This thesis contains no material which has been accepted for the award of any other degree or diploma and to the best of my knowledge this thesis contains no material previously published or written by any other person, except when due reference is made in the text of this thesis.



Jenni Romaniuk

I'd like to thank my supervisor, Byron for his comments and feedback. I'd also like to thank my friends and colleagues at the Marketing Science Centre for their support.

Abstract

I investigated the relationship between the responses that customers give to brand image questions and their loyalty. This is of importance to researchers and practitioners as the belief that brand perceptions strongly influence buying behaviour is widespread. This belief underpins many commercial image studies and models of consumer behaviour (eg Fishbein 1967; Engel, Blackwell et al. 1993). Brand/corporate image is a popular area of measurement and monitoring for managers and market researchers alike, with most large organisations, both private and government, undertaking a regular program of image tracking. Managers look to image studies to explain current marketplace performance, eg numbers of units sold and price gained, based on assumptions about a causal link between consumers holding certain beliefs and consumer behaviour.

Prior research

The popularity and widespread acceptance of the direction of causality has meant that fundamental research to test these assumptions has been very sparse. The majority of the more recent research has focussed on identifying different ways of conceptualising and measuring brand image (eg Keller 1993; Sampson 1993; Coulter and Zaltman 1994; Steenkamp, Van Trijp et al. 1994) without asking the fundamental question of why measurement is necessary and/or useful managerially. The little empirical research that has been conducted to date (Woodside and Trappey 1992) has employed a cross sectional design and contains limited testing of competing hypotheses. Hence little is known about the relationship between company/brand image and future customer behaviour.

In addition, there is a substantial body of evidence that suggests that causality is in the other direction. That is, brand usage influences the likelihood of giving a response to a question on brand image. Current users have been found to be more likely to give an image response than non-users or even past users (Bird and Ehrenberg 1966; Bird, Channon et al. 1970; Barwise and Ehrenberg 1985). The mismatch between the widespread assumptions and (particularly) this stream of empirical evidence means that testing the common assumption that brand image has an influence on customer behaviour is an important research question.

The approach

I started by testing three competing hypotheses about brand image and subsequent behaviour towards that brand. Competing hypotheses are an important factor in reducing confirmation bias, which is the tendency of a researcher to interpret results in a manner that supports the hypotheses they have developed (Greenwald, Pratkanis et al. 1986; Wright and Kearns 1998). I replicated the analysis in 3 subscription markets (where consumers typically ascribe 100% of their share of category requirements to one brand (Sharp and Wright 1999)) to test of the generalisability of the results. In these types of markets, loyalty is conceptualised as the likelihood of defecting from the brand at a future point in time (Sharp, Rundle-Thiele et al. 1997). The loyalty measure used here was a self-reported 11 point probabilistic estimate of switching from the current brand used which has been found to be an accurate predictor of future behaviour (Juster 1966; Danenberg 1998). In all cases actual future behaviour (either self-reported or from company records) was used to verify results. The results were then extended to customers' mentioning a competitor brand (ie a brand not currently used by the customer) and behaviour towards that competitor. Again this analysis was performed across the three studies using future behaviour as the dependent variable.

Brand response level: Key findings

1. Mention of a brand for a non-negative attribute was positively related to customer loyalty. However, there was little consistent evidence to suggest that there are specific attributes or positions that have a greater/stronger relationship with customer loyalty than any other. There were, however some attributes that appeared to have no relationship with customer loyalty.

2. There is a consistent positive (apparently[1]) linear relationship between the level of brand response (based on the number of times a customer mentions a brand across the range of (non-negative) image attributes) and the self-reported probability of switching. The rate of change was about 1 to 2 percentage point decrease in the subjective probabilistic switching rate for each additional mention of the brand.

3. The relationship was further verified using actual switching behaviour. In this instance the rate of change was a 0.5 to 1 percentage point decrease for each additional mention of the brand.

4. These findings extended across three markets, residential and business customers, data collection by mail or telephone, different market share structures, prompted or unprompted collection of brand names and regardless of how the attributes were chosen.

[1] Further model fitting is required before a linear relationship can be confidently asserted.

Implications of these findings

The more frequently that customers mention a brand in a free choice image survey the less likely it is that they will switch from that brand. One of the most important contributions of this thesis to marketing knowledge is that this simple, generalisable and quantifiable pattern was uncovered in all three subscription markets tested. This is important because generalisable knowledge is one of the keys to scientific progress. In this thesis, I have identified a generalisable pattern in consumer response that is related to customer behaviour – something that has been lacking in previous brand image research.

Competitor response: Key findings

The key findings in this area were as follows:

1. The level of competitor image response for a specific competitor brand was related to a customer switching to that competitor. This relationship was more apparent when knowledge of to which brand the customer had switched was available. That is, the level of competitor response to the brand to which they switched was higher than the level of competitor responses to other competitor brands in the marketplace.

2. Overall number of competitor mentions was not directly related to customer switching.

3. These findings are also generalisable across all three markets and conditions previously specified.

Implications of these findings

A customer is more likely to switch when they are eliciting a high level of response for a specific competitor. The relationship between usage and image responses first identified by Bird et al (1970) means that it is expected that customers of a brand will be more likely to mention that brand than non-customers are and (correspondingly) that these customers are less likely to mention competitor brands. In this thesis I was able to show that is not simply the level of brand response that is related customer switching, but the level of competitor response (for a specific competitor) *relative* to brand response. That is, consumers have a propensity to give a certain level of brand response. This varies between consumers based presumably on all sorts of factors such as length of time with the brand, level of involvement with the product category and or brand, frequency of exposure to brand information and the like. For some customers, for some reason, a competitor approaches/reaches a level of response that is near their 'natural propensity' for a brand response. That is, their image responses for a competitor brand reaches a level where they begin to look like a user of that competitor brand, even though (behaviourally) they are not. For these customers, the usual survey responses patterns of high response of current brand,

lower response level for competitor brands changes to one which also reflects their possible future behaviour to that competitor brand. That is, high response level for the current brand, approaching equivalent response level for a specific competitor, low response for other competitor brands.

When this happens, these customers are more likely to become a user of the competitor brand in the future (ie their behaviour is likely to fall in line with their prior competitor response levels). If they switch brands, then their (previous) competitor responses will increase to the 'natural' level that was apparent for the original brand they were using.

Managerial implications

Given the prevalence of brand image studies in market research, the findings of this thesis are of considerable direct benefit to marketing and research managers. It provides a mechanism for classifying/identifying vulnerable customers before they switch suppliers. It therefore provides something that has been considerably lacking in brand image research, a *reason* to measure the image of a brand. The accuracy levels are similar to that from direct probabilistic measures, however, the image response measures do have clear advantages over the direct probabilistic measures, namely:

- Image measures are already included in the majority of tracking studies for large companies. Therefore, rather than asking an additional question to determine 'vulnerable customers', similar information can be extracted from existing image questions.

- Managers might intuitively prefer to ask their customers image questions rather than questions directly prompting for the probability of switching (for fear it will 'put ideas' into customers minds)

- Image measures may actually provide some explanatory power as to why people switch brands (although how, and the degree to which marketers can influence this is still not known). Probabilistic measures can be used to tell us what customers are likely to do, but they offer little by way of explaining why customers are likely to behave in that way. Therefore managerially, they offer little to help managers know what to do once vulnerable customers are identified.

In addition it provides guidelines for knowing what information from brand image monitors are useful benchmarks. Managers do not need to concentrate on interpreting scores of individual attributes and trying to reach specific locations on perceptual maps, but can look instead to brand response levels as indicators of brand strength. In a world of increasing information, providing guidelines that decrease the amount of information that needs to be monitored is of considerable value.

Key limitations

The main limitations of this thesis are as follows:

The scope of the markets - The analysis for this thesis was conducted in a particular type of market, referred to as a subscription market. This type of market has specific peculiarities (such as generally 100% share of category requirements with one brand) which may mean that the differential between brand response and competitor response is important. This might not be the case in repertoire markets where consumers are using multiple brands.

Image measures - This thesis focussed on one form of brand image measurement. Therefore it is important to determine if the findings hold under for alternative brand image measures, particularly forced choice measures such as ranking and rating to see if they measure the same underlying concept.

As the attributes were provided to respondents, it does not include other attribute links that may be present in consumer memory (and influence behaviour) but were not included in the attribute list.

Testing individual variation - This thesis focussed predominantly on aggregate level analysis and comparisons between groups. Therefore a limitation of this thesis is that it does not explore areas of differentiation between customers such as levels of involvement, importance of attributes, or length of time with the brand. This may change the nature of the empirical relationship for certain subgroups.

Table of Contents

Brand image and Loyalty 1
Abstract 3
Prior research 3
The approach 4
Brand response level: Key findings 4
Implications of these findings 5
Competitor response: Key findings 5
Implications of these findings 5
Managerial implications 6
Key limitations 7
Table of Contents 8
Chapter 1: Introduction 12
The topic of the research and purpose 12
Why this research question is important 12
Prior research 12
The approach taken in this thesis 13
Thesis outline 13
Consolidating a diverse research stream 18
Consumer Memory 19
Associative network theories of memory 20
The search and retrieval process 21
The Influence of the retrieval cue 22
Retrieval history 22
Limited Activation Level 23
Summary: Influences on retrieval 24
Brand attributes 26
The Role of Brand Attributes in Consumer Decision Making 27
Identification of brands for consideration 28
Consideration sets as categories 28
Stable consideration set 29
Consideration set as a changeable entity 30
Non Consideration 30
Influencing through cue variation 31
Influencing consideration sets through priming 31
Conclusion: Brand consideration 32
Evaluation stage 33
The role of attributes in decision making 33
Overall conclusion: Consideration and evaluation 34
Single attribute positioning 35

Determinant attributes 36
Importance of specific attributes 38
Multiple attribute positioning 39
Overall discussion: Single and multiple attribute positioning 41
Influence of usage on image response 42
Instability of individual responses 43
Frequency and number of attribute effects 43
Automatic processing of frequency effects 44
Frequency of attributes and brand choice 44
Relationship between number of attributes and brand equity 47
Summary 47
Approach Quantitative Analysis 50
Technical Aspects and notation 51
Chapter 6: Brand image and probability of switching 52
Telecommunications - Study 1 52
Subscription markets and implications for measuring usage 52
Approach to measuring customer switching 53
Descriptive or evaluative attributes 54
Measurement of Brand image 54
Extensions from prior research 55
Note on interpreting results 55
Analysis procedure 56
Results 57
Results 61
Aggregate regression 64
Overall Discussion – Study 1 65
Study 2: Banking 67
Descriptive versus evaluative attributes 68
Study specifics 70
Probability Scale 71
Results 72
Overall summary – Study 1 and 2 73
Conclusion and comparison of results with Study 1 76
Aggregate Regression 78
Comparison of Study 1 and Study 2 on Hypothesis 3 79
Study 3: Insurance 79
Extension from prior research 79
Comparisons between studies 83
Chapter 7: Brand image and switching behaviour 85
Study 4: Telecommunications 85
Overall Discussion: Study 4 90
Study 5: Banking 92
Extension from prior research 93
The stability of brand response level at individual level 98
Testing for Stability over time 98
Overall discussion: Study 5 99

Study 6: Insurance 100
Stability testing 103
Overall discussion: Study 6 103
Overall discussion – Studies 1-6 104
Chapter 8: Competitor response and customer switching 106
Influence of usage on image responses 106
The competitive nature of the retrieval process 107
The fan effect 107
Competitor brand inhibition effects 108
Competitor advertising effects 109
Frequency effects for competitor brands 109
Discussion 110
The studies used in this analysis 111
Study 7: Telecommunications 111
Descriptive versus evaluative attributes 111
Results: Telecommunications 112
Study 8: Insurance 113
Unprompted data collection 113
Results 113
Further analysis of individual competitor response level 114
Study 9: Banking 116
Descriptive versus evaluative attributes 117
Overall number of competitor mentions 118
Overall Summary 118
The implications of individual rather than overall competitor response level 119
What happens to brand and competitor response level after opportunity to switch? 119
Results 120
Overall Discussion – Competitor response level and customer behaviour 124
Chapter 9: Combining brand and competitor response information 126
Correlation between brand and competitor response level 127
Interaction between brand and competitor response levels 128
Study 10: Telecommunications 129
Discussion: Study 10 130
Study 11: Insurance 131
Discussion: Study 11 133
Overall models 134
Study 12: Telecommunications market 134
Study 13: Insurance market 135
Overall Discussion: Studies 12 and 13 136
Are these good results? 137
Telecommunications market: 4 point likelihood scale 138
Insurance market: Comparing with Verbal Probability Scale 139
Discussion: Comparison between measures 140
Chapter 10: Discussion 141
Discussion of the research findings 141
Brand image response and customer behaviour 141

Implications of these findings 142
Competitor response and customer behaviour 143
Implications of these findings 143
Managerial implications 144
Limitations and future research 146
Future research agenda 147
References 150

Chapter 1: Introduction

The topic of the research and purpose

This thesis investigates the relationship how customers perceive a brand and their loyalty. It addresses the following question:

Does a customer's perceived image of a brand influence their future buying behaviour towards that brand?

It seeks to determine if and how a customer uses brand information in their choice processes.

Why this research question is important

The belief that a brand's image strongly influences buying behaviour is widespread. This theory underpins many commercial image studies and models of consumer behaviour (eg Fishbein 1967; Engel, Blackwell et al. 1993). Brand image is a popular area of measurement and monitoring for managers and market researchers alike, with most large organisations undertaking a regular program of image tracking. Managers look to image studies to explain current marketplace performance, eg numbers of units sold and price gained. It is very common for a specific brand image to be chosen as desirable in the belief that it is better than any other alternatives. This then leads to marketing communications/strategy objectives to "reposition" the brand as having that 'new' image (Ries and Trout 1981; Aaker and Shansby 1982). These image objectives are based on assumptions about a causal link between perceptions of the brand and customer behaviour.

However, not only is there little empirical evidence that supports this conjecture, there is a substantial body of evidence that suggests that causality may be in the other direction. That is, usage influences the likelihood of giving an image response rather than giving an image response influences usage (Bird and Ehrenberg 1966; Bird, Channon et al. 1970; Barwise and Ehrenberg 1985). So further research is needed.

Prior research

The popularity and widespread acceptance of the direction of causality (ie image drives behaviour) has meant that fundamental research to test these assumptions has been very sparse. The majority of the more recent research has focussed on identifying different ways of conceptualising and measuring brand image (eg Sampson 1993; Coulter and Zaltman 1994;

Steenkamp, Van Trijp et al. 1994) without asking the fundamental question of why measurement is necessary/useful managerially. The little empirical research conducted to date that examines the relationship between brand image and customer behaviour (eg Woodside and Trappey 1992) has employed a cross sectional design and contains limited testing of competing hypotheses. Hence, little is known about the relationship between brand image and customer behaviour.

The approach taken in this thesis

In this thesis I start by testing three competing hypotheses about the relationship between brand image and behaviour towards that brand. Competing hypotheses can lead to richer findings and are an important factor in reducing confirmation bias (Greenwald, Pratkanis et al. 1986; Wright and Kearns 1998). The analysis is then replicated in 2 other markets to test the generalisability of the results. This was then verified using data on actual future behaviour[2]. The results were then extended to customers mentioning a competitor brand (ie a brand not currently used by the customer) and behaviour towards that competitor. Again, this analysis was performed across the three studies using future behaviour as the dependent variable. It is important to note that the markets covered in this thesis are all subscription markets (Sharp and Wright 1999), which means they share some characteristics that differentiate them from other markets (commonly known as repertoire markets). One characteristic that is key to this thesis is that a customer typically assigns a large proportion of their share of category requirements to one brand and use of another brand is a 'defection' from the original brand (rather than simply cycling through a repertoire). This influences how loyalty is operationalised and enhances the ability to test the (image of) competitor hypotheses developed in this thesis.

Thesis outline

Chapter 2 examines the origins of brand image as a concept and the role of Associative Network Theories of Memory (ANT) in shaping how marketing researchers conceptualise and operationalise the image of a brand. In this chapter, the key areas that have an impact on retrieval of information from memory for use are also discussed.

Chapter 3 specifically examines conceptualisations of brand image under ANT and explores the role of links between brand attributes and the brand name in two main stages of consumer decision making. The first is during the formation of the consideration set, which is the subset of brands in the market which are further considered for purchase. The second is during brand evaluation, where the brands in the consideration set are evaluated and a choice made. This chapter also discusses the literature on the relationship between brand image and brand choice and the rationale/empirical evidence for the presence of specific important brand/attribute links that influence consumer behaviour is discussed. This is split into two

[2] Either self-reported or from company records

broad sections. The first that examines the literature on single attribute positions and the second that investigates multiple attribute positioning.

Chapter 4 looks at literature that questions the importance of specific brand/attribute links and suggests that, independent of importance or valence of specific attributes, it is the number of attributes elicited that drives consumer behaviour (eg Alba and Marmorstein 1987). That is, all brand/attribute links are equal in their role in driving consumer behaviour. *Chapter 5* details the initial hypotheses to be tested in Chapters 6 and 7. It also discusses the approach to analysis and some technical aspects.

The first series of analyses are reported in *Chapter 6*. These test the competing hypotheses developed in *Chapter 5* using self reported probabilistic estimates of switching (ie the Juster scale or the Verbal Probability scale (Juster 1966; Brennan, Hini et al. 1994)). This was conducted over three markets of telecommunications, banking and insurance. The results were relatively consistent across all three studies.

Hypothesis 1 was tested on 9 brands in three markets and across 129 different brand/attribute combinations. The linking of the brand with an individual attribute generally coincided with a lower switching rate. However, it was very hard to determine a specific cut off point where some attributes could be considered as 'determinant' and others not in the sense of Alpert (1971). There was not much really separating the difference in switching rates for the majority of brands on the majority of attributes. There were, however, a few attributes for which there was no difference in the switching rates of those who mentioned the brand versus customers who did not. Thus, the overall conclusion is that while there are attributes that have no relationship with customer loyalty, *of those that do* (and for one brand there were 18 such attributes), *there is not much difference between them*. It is also important to note that the attributes for which no relationship would be apparent are not immediately obvious in that there were no identifiable common characteristics that would distinguish them from other attributes. So the possibility that the results are simply due to sampling variation should not also be precluded.

Hypothesis 2 was tested across 8 brands in 2 markets over 49 different position/brand combinations. In general, perceiving a brand to be in a specific position was associated with a lower switching rate. There was mixed evidence as to whether this difference in the switching rate was greater or the same as the difference for individual attributes. On balance, however, positioning/linking a brand to multiple attributes does appear to have a greater differential in the switching rate.

Hypothesis 3 was tested across 9 brands in 3 markets. There was a clear relationship between the brand response level (operationalised at the number of brand attributes for which a brand is mentioned) and the switching rate of customers. The higher the brand response level, the lower the switching rate (ie the higher the loyalty). This relationship was the same qualitatively and semi-quantitatively – with the B values in the regression across the different brands in the order of 1 to 2 percentage points decrease in switching rate for each increase in the brand response level.

Chapter 7 takes these same hypotheses, but this time tests them using actual behaviour as the dependent variable. Actual behaviour was collected either by re-interview or ascertained via company records. These analyses were conducted in the same three markets, but with samples varying from those which participated in the data collected for *Chapter 6*. Generally the results for these analyses further supported that which was found in *Chapter 6*.

The overall conclusion from the analyses conducted in Chapters 6 and 7 is that it is Hypothesis 3 that has the clearest, most consistent results across all brands in all studies. That is, the brand response level is positively related to customer loyalty, independent of the individual attributes linked to the brand.

In *Chapter 8*, a different perspective on factors that influence retrieval of brand information from memory is introduced – that of links with competitor brands. This chapter starts with a discussion on the literature and expected effects of competitor image responses on customer behaviour. It then tests two versions of Hypothesis 3 adapted for the expected competitor response level effects. The first of which focuses on the overall number of competitors response level (ie regardless of the distribution amongst competitor brands). The second tests the response level of a specific competitor. In these analyses, actual behaviour was used as the dependent variable.

The results show clear support for the individual competitor hypothesis. This is replicated over all three studies. The findings are further substantiated through the following:

- The higher the number of mentions of a particular competitor the more likely a customer was to switch to that competitor at a later point in time; and
- After switching brands, the response level for the brand to which that competitor the customer switched rose, such that the customer continued to provide brand image responses as would be expected from a user of that brand.

Both of these findings provide additional support to the hypothesis that the level of individual competitor responses are related to switching to that competitor at a future point in time. There was no relationship found between overall competitor response level and customer switching. This lack of a relationship was also replicated across the three studies.

Chapter 9 then combines the results from the previous two chapters to investigate how the two opposing influences of brand response level and competitor response level interact to influence consumer behaviour. It then examines the results in comparison with that achieved for some more traditional predictors of future behaviour, a verbally anchored likelihood scale and the adaptation of the Juster scale, the Verbal Probability Scale.

The findings suggest that customers are much more likely to switch brands when they begin to look like a user of a particular competitor brand, even though, behaviourally, they are not. That is, their competitor response levels are approaching their response levels for the brand they are currently using. This relative measure is important, because customers vary

considerably on their brand response levels. Thus while concentrating only on customers with a low brand response level does identify a higher proportion of vulnerable customers, this is actually misleading as it is the relativity of the competitor response level that is the signal for vulnerability. It is simply easier for competitors to reach that threshold in customers with a low brand response level.

The accuracy levels achieved were similar to direct probabilistic measures of future switching. However image measures have an advantage in that managers might feel more comfortable with indirect measure of customer switching and the measures used in this thesis already commonly occur in a number of tracking studies. Finally *Chapter 10* contains a discussion of the implications of the key findings, the key limitations of the thesis and a future research agenda.

Chapter 2: Brand image developments

This chapter discusses the origins of brand image in the literature and attempts to find common ground in what developed into a diverse research area. It also introduces and discusses the Associative Network Theories of memory and the influences on retrieval of information from memory under this perspective.

Research that focuses on the perceptions and knowledge that consumers have about the brand is commonly referred to as 'brand image' research. From a historical perspective, the early mention of brand image as a concept was in the 1950's by Gardner and Levy (Gardner and Levy 1955; Levy 1958). This was where the idea of a brand having a 'meaning' that was separate from the product to which it was attached was first fully acknowledged.

Gardner and Levy's conceptualisation of brand image drew on the idea of the overall 'meaning' of the brand. Their concern was that research at the time was too rational in its approach and the responses researchers were getting about what drives customer choice were simply permutations on the single theme of 'effective'. This was leading researchers to focus on minute differences in product functional quality under the mistaken belief that this is what was driving consumer choice between brands (eg focussing on how laundry detergent can make clothes whiter). Gardner and Levy argued that this ignored a depth of meaning and the underlying complexity of consumer motives.

This article made the particularly important contribution of highlighting that a brand's image is not something that the company has or produces, but is something that resides in the consumer. For example increasing the pack size with no price increase may appear to have the clear 'take out' of *better value for money* for a consumer. However, if that increased pack size is not noticed by consumers then there will be no effect on the image of the brand. Alternatively, if perceived by the consumer to cause problems with storage then the consumer 'take out' from that activity will not be that the brand is *better value for money* but rather *more problems with storage.* Thus the brand's image is not about what the company does, but about how customers perceive those actions.

Since that seminal research, brand image articles have taken on a number of guises and forms and diverse streams of research have been spawned. These streams have further explored the concept of how the brand is perceived and the implications of this to consumer behaviour (eg Joyce 1971; Hirschman 1980; Bullmore 1984; Park, Jaworski et al. 1986; Sheth, Newman et al. 1991; Biel 1992), as well as a plethora of associated techniques on how to measure the image of a brand (eg Bolger 1959; Joyce 1963; Fry and Claxton 1971; Keon 1983; Biel 1991; Sampson 1993; Steenkamp, Van Trijp et al. 1994).

Drawing from psychology literature, there have been forays into the personality both of the users and of the brand itself (eg Fry 1971; Durgee 1988; Aaker 1997), and the role of congruence between self perception, advertising perceptions and brand perceptions (eg Birdwell 1968; Dolich 1969; Riquier and Sharp 1997). Through investigating empirical patterns from brand image data, the influence of usage on brand image responses has also been examined (Bird and Channon 1969; Bird, Channon et al. 1970; Barwise and Ehrenberg 1985). Alongside this there have also been streams of research focussing on specific aspects of a brand's image such as quality perceptions (Garvin 1984; Jacoby and Mazursky 1985; Lichtenstein and Burton 1989), or the effect of country of origin perceptions (Johansson, Douglas et al. 1985; Hooley, Shipley et al. 1988; Han 1989; Ettenson and Gaeth 1991).

Consolidating the diverse research streams

Dobni and Zinkham (1990), in a review of academic literature to bring together what was, in their own words an *'academic mutiformity'* and unify the many conceptualisations of brand image, found that the following consistent themes emerged:

- Brand images are subjective;
- Brand images consist of more than the functional qualities of the product; and
- Brand images reside in consumer memory.

Interestingly, this conclusion is not that far removed from that which was originally proposed by Gardner and Levy 35 years earlier. However, what has developed further is the greater application of theories of consumer memory to provide frameworks for interpreting, understanding and measuring the impact of brand image on consumer behaviour. An explanation of the memory theory most commonly applied to brand image research now follows.

Consumer Memory

Memory is an abstract concept used to explain why people have the ability to recall and further use information to which they have previously been exposed. It is also used to explain why what goes in to memory (namely what is experienced) is not necessarily what comes out of memory (what is retrieved).

There are three basic processes of memory (Bootzin, Loftus et al. 1991):

- Acquisition - whereby encountered information is encoded into a form for the memory system;
- Retention - where the information is rehearsed and then stored; and
- Retrieval - when information is accessed from storage for use.

Theories exist about how each of these processes take place. This thesis is focussing on how brand image information is retrieved and used in decision making. Therefore this discussion will focus on how retrieval takes place. Information is 'retrieved' when it becomes accessible in what is commonly referred to as 'working memory'. This 'working memory' is thought to be where the outside world meets the inner self – it is where the rehearsal of ideas and conscious analytical thought takes place (Franzen and Bouwman 2000).

The next section provides a broad description of one of the most widely accepted theories of memory, Associative Network Theory. Although not the only theory of human memory, this theory has had the most prevalent integration into brand image research.

Associative network theories of memory

The Associative Network Theories (herein referred to as ANT) of memory (eg Anderson and Bower 1979) are one of the most commonly accepted theories of memory[3]. In simple terms, this theory postulates memory as consisting of nodes that hold information about concepts. If two pieces of information are associated, connections or links are conceptualised between them. These links are formed to connect newly encountered information with the information already contained in memory. The resultant structure is analogous to a network of information. Associative theory has its roots as far back as Aristotles, who observed that people worked systematically through concepts to arrive at their subsequent conclusion/answer[4].

The basic structure of human memory under ANT can be broadly summarised in four points:

- Concepts are stored in memory as nodes.
- When a person encounters two concepts together, they can be then 'linked' together in memory[5]. These links provide context for newly encountered information and thus differentiate associated knowledge from non-associated knowledge.
- These links are bi-directional and these links have specific properties in each direction. That is, the link from A to B is not necessarily the same as the link from B to A. The bi-directionality of the nodes means that either of two linked concepts can be used as a cue to retrieve the other.
- When these links are accessed via a cue, information jumps from long term storage into working memory and thus becomes accessible for use.

---

[3] There are actually a myriad of permutations of this theory under the ANT banner, for detail on specific aspects see Raaijmakers, J. G. W. and R. M. Shiffrin (1992). "Models for Recall and Recognition." Annual Review of Psychology 43: 205-234.. As this thesis is not about debating different memory theories, the discussion will focus on the broad aspects that underlie all theories under this umbrella.

[4] This theory was later employed by behaviourists such as Skinner, as its suggestion of a 'probe' to retrieve items from memory bore a great resemblance to the 'stimulus-response' paradigm that they espoused for explaining human behaviour. Behaviourism, however, differs from associatism in that it does not include the theoretical concept of ' a memory' in its explanation for human responses to stimulus.

[5] Subject to sufficient processing

These four fundamental qualities form the basis of how memory is conceptualised under this theory. The next step is to examine how memory is used. This is discussed in the following section that examines how the search and retrieval process takes place.

The search and retrieval process

The search process focuses on how information is accessed and retrieved from long term memory for use in working memory. While there are some differences in the mathematical specifications of particular search models, there are many consistent underlying elements[6]. These will be the focus of this discussion. These models suggest how people search their memory and access information.

The basic process is that a concept in memory is stimulated, becomes what is known as a 'cue' (or starting point) and contains activation. This 'activation' travels to concepts linked to that initial cue. If there is sufficient activation, this results in the transition of that newly activated information from long term memory store to working memory where it can be consciously processed. This new information is then considered to:

(1) satisfy the retrieval requirement and search is terminated; or

(2) is rejected and substituted for other information associated to the initial cue; or

(3) acts as a new cue to retrieve additional information.

Retrieval is thought to stop when either sufficient information is retrieved to satisfy the query or the level of activation is not sufficient to reach the required threshold to access the next linked concepts. The latter point is important in that it highlights that activation is limited and can be exhausted before all possible information is retrieved (Collins and Loftus 1975)[7].

---

[6] For specific examples of search models see Collins Collins, A. M. and E. F. Loftus (1975). "A Spreading Activation Theory of Semantic Processing." Psychological Review 82(6): 407-428. for 'Spreading Activation Theory', Raaijmakers and Shiffrin Raaijmakers, J. G. W. and R. M. Shiffrin (1981). "Search of Associative Memory." Ibid. 88(No. 2, March): 93-134. for 'Search of Associative Memory (SAM)' or Anderson Anderson, J. R. and G. H. Bower (1979). Human Associative Memory. Hillsdale N.J., Lawrence Erlbaum. for the Adaptive Character of Thought (ACT) model.

[7] This is further discussed on pg 23

The key elements where a concept in memory can have an influence on its own ability to be retrieved are through:

- Being linked to the cue used for retrieval of information; and
- Having previously been recently and frequently retrieved with that cue.

These two aspects are now discussed[8].

The Influence of the retrieval cue

Information that is used to stimulate the retrieval of other information from memory is referred to as a retrieval cue[9]. Retrieval cues can be externally or internally generated (Holden 1993). When retrieving brand names, an example of an external cue could be the purchase situation (eg there is a soft drink machine), where as an internal cue could consist of the previous consumption situation, or a motive (eg. thirst). Cues can also consist of single concepts (single cues), or combinations of several concepts (multiple cues), depending of the information and stimuli available.

The cue used to access memory defines what is retrieved, as a cue can only retrieve information to which it is linked. Information that is not retrieved can still be present in memory and accessible under a different cue (Tulving and Pearlstone 1966; Raaijmakers and Shiffrin 1981). A concept that is not directly linked may eventually be retrieved via another concept, subject to sufficient activation reaching it, but having a direct link to a retrieval cue is the most assured way of being retrieved when that cue is activated.

Retrieval history

The previous point discussed the benefits of having a link present. However, the accessibility of a concept is thought to depend on the retrieval history of the links. That is, how frequently and/or recently a person thinks about or uses a concept. The more often and/or more recently an item is retrieved from long term memory, the more accessible it will be in the future (eg Collins and Loftus 1975). This is because the act of retrieval provides a strong feedback into the system that increases the likelihood of future retrieval. The internal act of retrieval has been found to have a greater effect on future retrieval than the external act of presentation of an item (Bjork and Vanhuele 1992).

---

[8] Additionally the other 'competing' links have an influence on retrieval, this is discussed separately in Chapter 8.

[9] Also known as a prime or probe

The effects of recency and frequency provide some explanation why users are more likely to mention a brand than are non-users[10] and relationships have been found between brand image responses and past usage (eg Bird, Channon et al. 1970; Barwise and Ehrenberg 1985). The act of using a brand stimulates the retrieval and processing of brand information from memory which provides a strong reinforcer for future retrieval. Non-users very rarely have a reason to think about the brand, and therefore, given that their establishment and reinforcement of any established links is virtually non-existent, their likelihood of accessing that information in the future is low.

Limited Activation Level

At any retrieval occasion generally only a limited amount of the total potential information is retrieved. Reasons for this limitation are the capacity of working memory and the amount of activation (Miller 1956; Franzen and Bouwman 2000). This has been supported empirically through observations of consumer behaviour when, for example, choosing between brands in a supermarket setting. Here, consumers typically spend only a limited amount of time retrieving information about brands before choosing between alternatives (eg Hoyer 1984; Dickson and Sawyer 1990). This has also been incorporated into many consumer search models. Based on an accumulation of empirical evidence, researchers questioned the assumption that consumers are motivated to maximise the utility they gained from any purchasing behaviour. This was replaced by the idea of 'satisficing', which was introduced by Herbert Simon in 1957. As quoted by Johnson (1987,), Simon distinguishes between the two in the following way:

> *"economic man is a satisficing animal whose problem solving is based on a search activity to meet certain aspiration levels rather than a maximising animal whose problem solving involves finding the best alternatives in terms of specified criteria"*

This notion of a satisficing animal provided a (timely) reminder that consumers will generally try to short cut the amount of thinking they are required to make before purchasing. This led to the exploration of heuristics or decision rules that consumers use to short cut this process (eg the cheapest brand, the most convenient). Therefore, when accessing information for brand choice, consumers are not motivated to nor do they generally retrieve everything they know about the product category and brands in it before they choose - just enough information to make a decision that will be satisfactory (Lynch and Srull 1982). Therefore, it is not enough for information to be present in memory (ie available); it must also be retrieved (ie accessible) when the decision is being made. Indeed, it has been proposed that consumers, because of the limitation of working memory, would not be able to process all information about all brands, even if they wanted to (Miller,

[10] Particularly when these non-users are still aware of the brand

1956). Thus while all attributes have the potential to act as a retrieval cue and thus influence consideration or be used as factors for evaluation, in reality not all (in fact very little) of it will.

Summary: Influences on retrieval

There are two ways in which a concept can influence its own ability to be retrieved. These are being linked to the retrieval cues used to access information from long term memory and via the recency and frequency with which an item has previously been used. Being linked ensures the item has some probability of retrieval, but the more recent and/or more frequent an item is used, the higher that probability of retrieval will be. It should also be noted that over-riding both of these is the fact that consumers have limited ability and inclination to process information. If information is immediately accessible, consumers will generally not try and supplement this through exerting more cognitive or physical effort.

Chapter 3: Brand image under ANT

This chapter discusses conceptualisations of brand image that come from the ANT perspective and the composition of associated brand attributes. It then examines the role of links to brand attributes in decision making and literature discussing the importance of certain brand/attribute links over other brand/attribute links.

The influence of the ANT in brand image has become more apparent in the last decade through growth in the number of conceptualisations of brand image that have ANT as their epistemological base (eg Meyers-Levy 1989; Holden and Lutz 1992). For example the following quote from Keller (1993) directly takes the general conceptualisation of concepts in memory and restates it specifically in a brand image context. He describes brand image conceptually as:

> *"perceptions about the brand as reflected by the brand associations held in consumer memory" (Keller, 1993, pg 3)*

The brand is generally represented semantically in memory as the brand name[11]. Any information that is encountered in conjunction with the brand can, if processed by the consumer, form links to the brand in consumer memory. All of the linked information is then thought to form a network or schema of brand information in consumer memory, the entirety of which (ie the brand name and the linked attributes) is commonly referred to as the 'brand image'.

Therefore a brand image is based on the attributes that exist in consumer memory that are linked to the brand name and to which the brand name is linked. The linkages between the brand name, its attributes, and other brands in the marketplace mean that associated attributes can be unique to the consumer, unique to the brand, or shared with other brands (Meyers-Levy 1989). Thus there is potential for the development of any number of consumer -unique association sets. However, due to the shared experiences of consumers in terms of their usage and exposure to advertising of the brand, a large number of attributes are consistent between the majority of consumers and thus are worth investigating for the market/consumer base as a whole[12].

---

[11] although alternative representations such as shape or colour of packaging can exist in line with Rossiter, J. R. and L. Percy (1987). Advertising and Promotion Management. Singapore, McGraw-Hill..

[12] As totally individual association sets would make aggregate analysis redundant.

Brand attributes

From an ANT perspective, brand attributes can take the form of anything that is experienced in the same context of the brand. These attributes come from a variety of sources, including consumer experiences, marketing communications, or word of mouth (Krishnan 1996). Attributes can consist of descriptive information (eg comes in a red can), benefits (tastes good) and usage situations (can be used at the beach) (Joyce 1963; Holden and Lutz 1992). That is, anything that is encountered with the brand can, if sufficiently processed, become linked to the brand name in memory and thus become part of that brand's image.

For example, Table 1 illustrates some of the brand attributes that I associate with the 'Qantas' brand (an Australian Airline).

Table 1: Examples of linked attributes I have for the brand 'Qantas'

Unique to the consumer	Unique to the brand	Shared with other brands
• Returning to Australia after a year overseas • Airline used by my mother	• Part of 'Oneworld' alliance • Australian • The song 'I still call Australia home'	• Airline • Frequent flyer program • Flight attendants • Flies to Sydney

Brand attribute classifications schemas are many and varied. For example, de Chernatony (1993) classifies brand attributes on two dimensions of functional or representational, while Biel (1991) refers to the implicit and explicit aspects of brand image. However, I am going to draw on two main categorisations of brand image attributes. The first, proposed by Holden and Lutz (1992) is based on the semantic information or *meaning* which the attribute is capturing. The second, by Barwise and Ehrenberg (1985) distinguishes between attributes which are generally only mentioned by users of a brand (referred to as evaluative) and attributes which are mentioned by both users and non-users (referred to as descriptive)[13]. These two categorisations provide some sense of the range of sources of image attributes and the patterns of responses that would be expected from consumers in a market.

[13] This categorisation has not been without it critics. See Rossiter, J. R. (1986). Comments on "Consumer beliefs and brand usage" and on Ehrenberg's ATR model. Broadway, NSW, NSW Institute of Technology. and

Rossiter, J. R. (1987). "Comments on "Consumer Beliefs and Brand Usage" and on Ehrenberg's ATR Model." Journal of the Market Research Society 29(No. 1): 83-93. for further discussion.

Therefore, brand attributes/associations can be classified into the following groups (as per Barwise and Ehrenberg 1985; Holden and Lutz 1992):

Product category and other brands – these attributes provide the taxonomic context/framework through which the brand is interpreted. Both non-users and users can usually respond to this type of attribute. An example of this is *snack foods.*

Functional Attributes - these are descriptive qualities of the brand, in that they describe what the brand has or doesn't have. Both non-users and users of a brand can perceive these attributes. Examples of this type of association are *is Australian*[14] and *has 4 wheels.*

Benefits and attitudes – these are the evaluative aspects of the brand and consist of knowledge that is developed during usage and/or reflects any 'feeling' about the brand. Examples include *provides good quality service* and *a brand I like.* Non-users rarely respond to this type of attribute as they can generally only be assessed via usage.

Purchase and consumption situations – These types of attributes are those which reflect the context in which the brand is bought or consumed. Examples of this type of attributes consist of *at the beach* and *on a hot day.* Again these attributes are much more likely to be elicited by users of the brand.

The attributes that are linked to the brand name have been referred to as the 'association set' (Meyers-Levy 1989).

The Role of Brand Attributes in Consumer Decision Making

For the purpose of this thesis, the decision making process of consumers will be discussed as a two stage process of when the brands to be considered are generated and when those brands are evaluated (as per Nedungadi 1990). While more complex theories of consumer decision making and information use exist – in this thesis I am primarily concerned about when brand attributes are used either as retrieval cues or as the information to be retrieved. A simple two-stage model is sufficient for this purpose[15].

---

[14] In here I am including Country of Origin (CoI) perceptions. Although there is considerable literature that treats CoI perceptions as unique from other brand image attributes this distinction is not relevant under the ANT framework where CoI is simply another image attribute in the whole brand image 'schema'.

[15] Two stage models of consumer decision making are relatively common in marketing and economics, for further examples see Kahneman, D. and Tversky (1979). "Prospect Theory: An Analysis of Decision Under Risk." Econometric **47**(2): 263-291. and Thaler, R. (1983). "Transcation Utility Theory." Advances in Consumer Research **10**: 229-232..

Identification of brands for consideration

The process when the consumer identifies potential brands and develops what is often referred to as the *consideration set*[16]. This set may consist of a single brand up to as many brands as are in the market, although the consideration set is, by convention, smaller than the total number of brands in the market[17]. The basis of this first stage is that consumers want to reduce the amount of cognitive effort it takes to make a choice. Therefore, rather than processing all brands in the marketplace, efforts are made to limit the number of brands actually considered.

Consideration sets as categories

A consideration set can be thought of as a list of items that fit a specific criterion. In categorical structure research, distinction has been made between taxonomic categories and ad hoc categories. Taxonomic categories are lists that comprise of items that fit a specific fixed criterion. An example of a taxonomic category is 'dogs'. These categories have the characteristics of being fixed in composition and form, and having an established graded typicality structure. Its members are also highly accessible due to frequent processing of the link between the category name and the item and the stability of the structure (Barsalou 1983).

In contrast, ad hoc categories are those groups that are created for a specific purpose or goal. These categories tend to be much less fixed and can consist of items from any number of taxonomic categories. An example of an ad hoc category would be 'things to take sailing'.

The key differences between ad-hoc categories and taxonomic categories are as follows (Barsalou 1983).

- The first is that as ad hoc categories draw from a wide range of taxonomic categories, they don't tend to have the clusters of correlated properties that are evident in taxonomic categories (Rosch and Mervis 1975). For example the category of 'dogs' have members that share common qualities such as tails, type and length of coat, tricks learnt etc. While 'things to take sailing' could consist of food, safety equipment, and games – all of which are unrelated other than their ability to be taken sailing.

- Secondly, is that ad hoc categories are generally more difficult to access. This is because the less frequent use and lack of clear structure results in less frequent reinforcement of the same links. Thus this information is not as accessible as the information contained in taxonomic categories.

---

[16] Also referred to as the evoked set

[17] Otherwise there would be no reduction in cognitive effort

- Finally ad hoc categories, because the links and categorical properties are less established, are much more easily changeable by external activities such as priming.

Discussions of the consideration set come from two perspectives, the first (more historical) which perceived the consideration set as a relatively fixed set of brands. The second (more currently accepted) where the consideration set is perceived as a context driven changeable set. (Roberts and Nedungadi 1995).

Stable consideration set

There are two approaches under this banner, the cost benefit approach and the learning theory approach. The cost benefit approach is based on maximisation utility theory (Johnson and Puto 1987), where consumers balance the effort required to evaluate a brand for consideration and the benefits of having other/fewer brands to consider. The consumer is thought to take into account search costs, and engage in specific deliberate processing of the options. The composition of the consideration set is, under this theory, relatively stable unless something alters the cost benefit equation.

The learning theory approach is based on the notion of the *evoked set* which was thought to be a list of preferred brands which are stored and brought out when decisions need to be made (Howard and Sheth 1969). This concept of an 'evoked set' is distinct from the idea of and 'awareness set' which is all the brands a consumer is aware of. To be member of the evoked set, the brand must be *considered* for purchase[18]. Evoked sets can be updated (with brands added or dropped) via a learning mechanism after exposure to marketing activity or consumption. However, in general the consideration set is thought to be stable, with variation in choice occurring at the evaluation stage. That is the consideration set is made up of Brands A, B & C but A is chosen when price is important, while B is chosen in hot weather.

The product category cue was thought to be the primary cue mechanism for consumers to access brands. Thus the consideration set generated would resemble a fixed taxonomic category (Howard and Sheth 1969). Hence the view that consideration could not change that much as taxonomic categories are very fixed in structure and less prone to priming effects. Therefore, brand/attribute links have the greatest importance in the evaluations stage and (occasionally) to update this fixed list of brands to be considered.

---

[18] Brands of which a consumer is aware but do not consider have been referred to as inept Narayana, C. L. and R. T. Markin (1975). "Consumer Behavior and Product Performance: An Alternative Conceptualization." Journal of Marketing 39(October): 1-6.

Consideration set as a changeable entity

The information processing approach is differs from the previous approach as the consideration set is perceived to be a fluid entity that is substantively influenced by the context in which it is evoked. Influenced strongly by theories such as ANT, in this approach, brand/attribute links have a crucial role in the consideration process. Consumers take the cues from the context in which they are in and this affects the information they can/do access from memory as only brands linked to the attributes which represent those cues will be retrieved (Alba and Chattopadhyay 1985; Holden and Lutz 1992). That is, in one context, Brand A, B & C will be considered, however in another context Brand A, C & D will be considered (and B will not even be thought of). This variation is choice is based on the probability of being considered as well as the merits of the brand at evaluation.

The shift in perspective of the type of category of the consideration set was preceded by the acknowledgment of the change in the types of cues consumers use to evoke brands. Pulling together category research and the ANT approach, Holden and Lutz (1992) suggest that consideration sets are actually ad hoc categories that are a function of the cues present at retrieval time.

Non Consideration

The reason for non-consideration under this approach is due to the consumer not accessing the brand as a potential alternative. In ANT terms this lack of accessibility is most likely due to it not being linked to the specific cue(s) used in that instance for retrieval. This process can occur in most choice situations as even when the products are present (eg in supermarket setting), consumers still rely on retrieving information from memory to make decisions (Lynch and Srull 1982; Dickson and Sawyer 1986; Nedungadi and Kanetkar 1992).

Therefore, rather than trying to think about all brands in the marketplace, only a few brands make it to the consideration set stage and these few brands vary from instance to instance according to the cues used in the retrieval process. Focusing only on those brands which are accessible and the removal of unacceptable alternatives are two techniques for narrowing down the list for further scrutiny and thus reducing overall cognitive effort (Stigler 1961).

The next section of discussion examines how brand/attribute links stimulate variation in the brands considered.

Influencing through cue variation

Roth and Shoben (1983) examined the general effect of contextual differences (eg items elicited for the cue 'bird' versus the cue 'bird flying overhead') on retrieval and found the items identified varied with the contextual cues used. In a marketing context, the same variation has been found in the brands retrieved for a number of categories including snack foods, drinks and restaurants (Ratneshwar and Shocker 1988; Ratneshwar and Shocker 1991; Holden 1993). Specifically Holden (1993) examined the nature of attributes, evoked sets, and the influence of the attribute used as the retrieval cue on the evoked sets. In the specific research on the latter point, participants were asked to name the brands that came to mind from a list of 5 brand attributes. Chi-squared analysis revealed there were significant differences in the brands associated with each cue.

Therefore, under certain cues some brands are just simply not accessed. In memory theory, this is referred to as the difference between availability (ie presence in memory) and accessibility (ie ability to be retrieved (Tulving and Pearlstone 1966). In marketing research, Alba and Chattopadhyay (1985) refer to this as absolute and situational awareness, whereby absolute awareness refers to all the brands known to the consumer[19], and situation awareness refers to the brands that are retrieved at any particular point in time[20].

As well as the variability in the items retrieved from the same product category, Holden and Lutz (1992) found that complements were also evoked, with other factors such as time or money placing constraints on choice. This latter finding is further evidence that the 'consideration set' resembles fluid ad hoc categories rather than fixed taxonomic categories.

Influencing consideration sets through priming

With the spotlight on the consideration stage came the idea that marketers could influence the probability of their brand being chosen via influencing the probability of consideration. Nedungadi (1990) hypothesised that increasing in consideration could increase the likelihood of choice, independently of any subsequent change in evaluation. In the experiments he conducted, the target brands were first primed to see if this increased the probability of consideration. Subjects were then explicitly asked which brand they would chose and then which other brands, if any, they had considered while making their choice. After this subjects were given a full list of brands in the product category and asked to rate their likelihood of purchase on a 9 point scale.

The results for the 'prime' groups were compared to a control group, which, although going through the same activities, were not primed for any brand in the target product category. Nedungadi also hypothesised that the carry over from

[19] Ie the taxonomic category

[20] Ie an ad hoc category

consideration to choice would only occur when a more preferred brand was not in the same consideration set. His preference measure seems to be related to brand size (as he reports in both markets, big brands were preferred over smaller brands). Therefore, his results suggest that priming a less preferred (small) brand will lead to increase in consideration but not increase in choice. Priming a more preferred (big) brand is less likely to lead to increase in probability of consideration but when it does, this increase flows on to an increased likelihood of choice. Thus he provides some evidence that marketers can influence choice by influencing the probability of being considered. The use of the product class in the cue used for priming may have influenced the size of the priming effect and why it was not always evident. It is possible that the respondents were accessing a taxonomic category (which is less subject to priming effects) than an ad hoc category for that situation (where priming effects are expected to be more noticeable).

Additional support for the influence of priming on the consideration set has been found by Mitra and Lynch (1995). Reminder advertising kept 'marginal' brands in the consideration set, while differentiating advertising for those same brands strengthened the preference for existing brands. Presumably by reinforcing the 'difference' between brands, the 'marginal' brands no longer were considered appropriate for that context.

Conclusion: Brand consideration

In the first stage of consumer decision making the set of alternatives that are going to be assessed is formed. In order for a brand to be chosen, it first has to be at least considered. Although traditionally thought to be a stable entity that is updated infrequently, under ANT this set is now generally thought to be a fluid, changeable, ad hoc category. Its components are determined by the cues used at retrieval and may be influenced by past usage and priming. Whether a brand is included in the set of brands considered (which can be anything from 1 brand upwards) or not depends on the compatibility of its links to the cue(s) that are salient to the consumer when the set is being formed. Thus certain brand/attribute links should be able to have a substantive positive effect in the probability of being considered, and therefore can carry through to effect the probability of being chosen.

Evaluation stage

This is the stage where consumers choose the brand from the set determined in the consideration stage. This is generally undertaken using some sort of decision criteria (which can be anything from a heuristic of 'the cheapest brand' to an extensive multi-attribute evaluation and trade off analysis). This stage can be short cut if the consideration set generated in the first stage consists of only one brand[21]. However, should more than one brand be considered, then there are a variety of ways that consumers are thought to use information for decision making. The process of evaluation, however, is thought to only take place of the brands that are considered (Hauser 1978; Holden 1993).

There are models that purport to normative ways in which decision-making can occur (eg maximum utility theory or planned behaviour theory) and there are models which are based on descriptions of how consumers are observed to behave. It is in these descriptive models where ideas like satisficing and decision rules are more acceptable explanations than models which suggest consumers aim to maximise the utility of each decision (Johnson and Puto 1987; East 1990). In this thesis I am focussing on the descriptive models rather than the normative ones, as I am interesting in predicting how consumers behave, not how they *should* behave.

The role of attributes in decision making

The focus of this thesis is on the role of brand attribute information in choice. Therefore I am concentrating the discussion on this area, and not focussing on research that examines the role of overall evaluations on choice. There are three main types of decision processes that consumers can undertake that involve an interaction between the brand, competitor brands and the attributes of both (Biehal and Chakravarti 1986; Johnson and Puto 1987)[22]. These are:

Attribute processing – This is where brands are compared on a specific attribute. For example all brands in the market might be assessed on their convenience, and the most convenient brands chosen for further assessment, with the less convenient brands disregarded.

Paired comparisons – This is when two brands are compared to each other on a specific criterion and one is rejected. For example Brand A and Brand B might be compared on their value for money. The customer may

[21] Although, of course even in this situation a consumer still has to decide whether to make a purchase at all

[22] In addition a wholistic evaluation can be employed, where overall assessments of brands are compared without reference to specific attributes.

decide that Brand B is better value for money and thus rejects Brand A. They may then go on to pit Brand B against another brand, while brand A is no longer processed.

Brand processing – This involves the analysis one brand with respect to a number of attributes. That is a customer may look at Brand A and decide they like its colour and size, but don't like its shape.

Consumers in a choice situation can call upon any or all of these techniques to evaluate brands. Thus, in each case both the brand and the attribute have to be present, linked and accessible for any sort of evaluation to take place. It is generally thought that even when overall evaluations are present, attribute information is still recalled and used in decision-making (Hastie, Park et al. 1984). Lynch et al (1988) showed that when attribute information was accessible it was used in decision-making regardless of the memory of any overall evaluation. It has also been shown that attribute information is remembered more if consumers are processing information without specific intent to make a choice (Lichtenstein and Srull 1985). Therefore consumer choice is based on there being a link between the brand name and the attributes that are relevant in the market. However, in any one choice any number of brand/attribute links may be accessed in order to make a choice.

Overall conclusion: Consideration and evaluation

The theory presented so far highlights the importance that individual brand/attribute links can have on the probability of being chosen. This can occur directly during brand evaluation or indirectly by influencing the probability of being considered. The empirical evidence that there are specific attributes that have an important influence on brand choice is now discussed.

Single attribute positioning

The first area of marketing research to identify the potential role of a single[23] attribute link in brand choice was via the product category cue. Although not central to this thesis, as I am focussing on attributes other than the product category, this discussion is important to contextualise a great deal of brand image research that has been extended. The literature cited here is frequently used to justify research approaches using attributes other than the product category cue.

Levels of consciousness

One of the first (and commonly cited) researchers to examine the influence of the product category as a single attribute on both repurchase and brand switching was Cohen (1966). He focussed on the following two questions[24]:

- What brands do you know? Any others?
- If you were to switch your brand, to what would you switch?

His theoretical rationale for this approach is attitudinally based. He postulates that brand attitudes range from very positive to indifferent to negative, and that order of recall reflects this attitude continuum. Brands recalled can be divided into three groups according to their order of recall. These three groups are called *levels of consciousness*. Cohen then states that brands that produce favourable action (which he describes as *regularly used and with a high switch to potential*[25]) will be recalled in the first level of consciousness (in the first 2 or 3 brands mentioned)

The first finding he states is that in both markets, the first brands recalled were *most often* the usual brand used by the respondent and the brand to which they said they were most likely to switch. Given the relationships between usage and recall/mention of the brand (eg Bird, Channon et al. 1970) and the influence of recency on future retrieval (Raaijmakers and Shiffrin 1981) this is not surprising. He does not, however, go further and suggest that this finding is perhaps an indicator that usage drives brand awareness. This is presumably because of the belief of the causal effect of attitude he clearly states as his theoretical rationale.

---

[23] The term 'single' is used here however it is acknowledged that these 'single' bits of information can be in themselves complex concepts. For the purpose of retrieval however, these are generally used as a single cue.

[24] These two questions were separated in the survey by 15 questions to avoid priming effects

[25] Pg 143

However, the conclusions about the 'brands they would switch to' should be taken cautiously as 43% in market 1 (which had a total sample of 44) and 30% in Market 2 (which had a total sample of 77) could not name the brand to which they would switch. These respondents were potentially able to mention more than one brand but appear to be treated as missing values in the 'brand switch to' analysis. If these respondents had been included as cases whereby the second brand recalled was *not* 'the brand most likely to switch to', the high proportion in this category would have negatively effected the results. The market is described as an 'automotive product'. This makes it difficult to assess if the market is one where people use a repertoire of brands or a subscription market (Sharp and Wright 1999). Cohen does however, at the end of the article, discuss the generalisability of this finding to markets of alcoholic beverages and industrial goods. Thereby asserting that this idea of the role of *level of consciousness* of the brand is extendable to all markets.

His findings were generally supported by Axelrod (1968). In a study to examine the sensitivity, stability and predictive power of measures he found that knowing the first brand mentioned did provide improved ability to predict which, out of customers who switched, were more likely to switch to the brand. That is, 22% of those who switched and mentioned the brand switched to the brand they mentioned first, compared to only 4% of those who switched, didn't mention the brand but still switched to that brand[26]. It was also able to improve the ability to predict those who were likely to repurchase the brand. Mention of the brand at all with the product category as the retrieval cue was rejected at the first predictive power stage as those who did not mention the brand were just as likely to purchase the brand as those who did.

Determinant attributes

The previous research findings have been extended to attributes beyond the product category cue. Alpert (1971) in his paper entitled "Identification of Determinant Attributes, A Comparison of Methods" referred to the idea of *determinant* attributes as the:

> *'The attributes projected by the product's image which lead to choice' pg 184*

This was one of the first studies to extend beyond the product category cue to include other attributes. It drew on 37 specific attributes in the 'pen' market. These are categorised into four groups:

- Objective or 'rational' attributes (eg writing lifespan, comfortable to hold)

[26] Although this description is somewhat confusing it represents the results as shown by Axelrod.

Then three groups of what are referred to as 'subjective attributes':

- descriptive (eg old-fashioned, light)
- Related to personality of user (eg careless, tense)
- Likely occupational group of user (eg banker, housewife)

This research focuses on the techniques for identifying determinant attributes and uses the following methods:

1. Direct single questioning of brands on attributes;

2. Direct dual questioning - Ratings of importance of attributes and perceived difference between brands;

3 & 4 Indirect single and dual questioning – the same as above but replacement with third person

The label of 'determinant attribute' was assigned to those that were statistically significantly in their explanation of variance in preference when used in a multiple linear regression. The correlation coefficients show that the results obtained via all four methods and types of attributes were very similar (with coefficient rarely below 0.80). The correlations between simple direct questioning (just getting ratings on individual attributes) and the relevant other models are shown in Table 2.

Table 2: Partial reproduction of Alpert (1971) Table 3 pg 188

Model	Correlation with simple direct	Model	Correlation with simple direct
All attributes	0.87	Subjective attributes only	0.67
Direct Dual questioning	0.95	Objective attributes only	0.94
Indirect Dual questioning	0.98	Overall preference	0.83

Therefore it appears that it is not necessary to ask about the importance of individual attributes, perceptions of difference between brands or to use indirect techniques – the rating of the individual attribute is sufficient for identifying determinant attributes. There may be some variation in the type of attributes used, with Alpert's objective attributes being more highly correlated than the subjective ones. These objective attributes appear to be predominantly what Barwise and Ehrenberg would refer to as evaluative attributes (for example *comfortable to hold* and *durability*), while subjective attributes appear to be those more 'psychological' ones such as personality of brand and occupation of user.

What is also apparent is the number of determinant attributes he identifies in the different models. Out of the 37 tested, the techniques identified between 4 and 8 'determinant attributes', which is about 10-20% of attributes tested. This provides

some guidelines for what can be expected as the number of determinant attributes. Unfortunately there is no clear reference to the B-values from the regressions to allow me to gain some idea of the expected magnitude of effect.

Importance of specific attributes

Woodside and Trappey (1992) studied the relationship between mention of a brand for an image attribute and usage of that brand in their study aimed at identifying primary supermarket choice. Their basic hypothesis is that the first brand retrieved when certain image attributes come to mind is the one that will be that person's primary store. Their theoretical rationale draws on two aspects. First is the work of Fazio (1990) where attitude is perceived to comprise of beliefs about the brand (hence the extension beyond the product category cue), and that the accessibility of the attribute determines whether the attitude will influence behaviour (hence the focus on first brand mentioned). The second is the previously mentioned desire of the consumer to limit cognitive processing (reinforcing the focus on first brand mentioned).

They used 7 possible determinant attributes, which were gathered from previous research in the area and rotated questions to control for order effects. All attributes[27] were considered to be evaluative (in line with Barwise and Ehrenberg 1985) as they were judgements about the brand (eg lowest overall prices, most convenient location). At the end of the questionnaire, respondents were asked "Which one supermarket do you shop most often?" the answers to which were used as the dependent variable. Other research has shown that supermarket shopping is a repertoire market but with high first brand loyalty (Uncles and Hammond 1995).

They found that the relationship between mention of a supermarket for an attribute and having that supermarket as the main store was positive and statistically significant. Additionally, the strengths of the relationship between attributes and main brand did not vary much either between attributes or between primary stores. In total 3 to 5 out of the 14 attributes (7 positive and 7 negative) were found to make individual contributions to overall main supermarket choice, but it should be noted that the majority of these significant attributes were positive. This translates to about 20-30% of attributes tested.

While the correlation is a useful finding, the main limitation of this study is that it provides no insight into the direction of the effect. The dependent variable is one of past behaviour; therefore it is difficult to know if past behaviour is influencing top of mind recall or if top of mind recall influences future behaviour. Given the relationship between top of mind awareness and past usage a relationship is to be expected – but it is not an indicator of future behaviour (particularly if trying to

[27] Woodside and Trappey did include the negative version of each attribute. These results are not the focus of this thesis and so are not included in this discussion.

predict/influence change in future behaviour[28]). This study does however, show that the idea of single attribute links being related to buyer behaviour can extend beyond the product category cue to other brand attributes. It also provides further insight into both the number of determinant attributes and the relative effects between attributes classed as 'determinant'.

A limitation of both of the studies cited here was that they were conducted on the presumption that there are specific attributes that drive choice. Neither study considered the possibility that the 'specific' attributes they found were simply artefacts of their research design, sample size, colinearity effects and the use of statistical significant tests as indicators. Particularly noticeable is the use of multivariate regression analysis to determine which attributes where more important in choice. This makes it even more likely the results were prone to colinearity effects. Woodside and Trappey undertook the only mention of tests undertaken to see how 'unique' the determinant attributes were. They found that substituting different attributes in their models for individual supermarkets did not have a substantive effect on the results. This suggests that attributes were generally substitutable, a finding that seems at odds with the notion of determinant or important attributes.

Multiple attribute positioning

The effects of the accessibility of a single cue have been extended to multiple cue situations. This section draws on three concepts in ANT for maximising the likelihood of retrieval from multiple links over single links:

- Increasing the number of links and the idea of multi cued retrieval. Thus if any of the attributes which make up the position are used as the retrieval cue then the brand name is likely to be accessible. This was previously discussed on page 22.

- Creating a greater match between the stimuli and the concept in memory. This increases the likelihood the concept will be retrieved over other concepts that are linked to some of the relevant attributes. While a brand that has a strong link with '*good quality*' is likely to be retrieved when '*good quality* and *convenient*' are the retrieval cues, a brand that is linked to **both** *good quality* and *convenient* is even more likely to be retrieved (Raaijmakers and Shiffrin 1992).

- Multiple cues have also been shown to potentially inhibit retrieval of competitive information from memory (Alba and Chattopadhyay 1985). Indeed, it has also been shown that there is a positive interaction between the inhibition level and the number of cues provided (Brown 1981).

[28] If predicting continuation of current behaviour is the objective then past behaviour is often the best predictor Axelrod, J. N. (1968). "Attitude Measures That Predict Purchase." Journal of Advertising Research 8(No. 1): 3-17..

A brand's 'position' is described as how it is perceived in the minds of consumers, relative to competitor brands (Stanton (1978) as cited in Sarel 1980). Positioning basically refers to the idea that, in order to be successful, a brand must have a 'value proposition' to offer customers. This idea of a value proposition differs from the literature previously covered as a value proposition can consist of several attributes at the same time. These attributes can be a variant of a single theme, that is a customer service value proposition can consist of attributes such as *has friendly staff, provides prompt service* and *staff can answer my questions*. Alternatively (and perhaps ideally) they can be a multifaceted approach, drawing together from a range of concepts. For example, it would be difficult to not aspire to have a brand that was considered to be *good value for money, provide excellent customer service* and *the highest quality in the market*. Again, the specific value proposition is chosen with the idea that it will drive customer choice. In ANT terms, however, positioning/developing a value proposition is just another way of describing the link between a brand name and a subset of attributes (as opposed to a single link like the product category cue).

As a consequence of the assumption that there are specific positions that are more 'valuable' or 'better', managers have sought the 'best' position for their brand. A substantial amount of money is spent in developing that position (whether for a new brand or as part of a 're-positioning ' exercise) and then tracking that position over time, using techniques such as the many forms of perceptual mapping, which graphically display these relative 'positions'. One of the commonly cited motivations behind such behaviour is the belief that customer loyalty[29] will be the reward for the 'right' or 'best' positioning (eg DiMingo 1988; Sampson 1993). The success of a positioning strategy is generally determined via sales figures (for examples see Ries and Trout 1981). Typical quotes include:

> *Positioning helps customers know the real differences among competing products so that they can chose the one that is of most value to them.* (Sarel 1980).

and

> *A common marketing strategy is to identify the perceptual dimensions that define a market and then 'position' the product against these dimensions so that the product is likely to be preferred over competitive products by a target group of consumers* (Hauser and Simmie 1981)

There are some suggestions for typology's of potential positions. Examples include product benefits, price quality, use/application, or with a competitor as a reference point (Aaker and Myers 1987). These are simply reiterations of lists of the different types of attributes to which the brand can be linked (which are discussed on page 26).

[29] Specifically repeat purchase

After identifying the possibilities for brand attributes, managers then examine graphical displays (such as perceptual maps) and choose a desirable point, based on the location of the attributes they wish to have clustered around the brand. Thus, the position itself is defined in attributes terms as a specific combination of desirable attributes. This is the technique that is drawn upon to identify different positions for testing in the thesis.

In terms of conventional wisdom/recommendations of appropriate positions it is generally recommended that the position be different to that of competitors in the market. The rationale being that having a different position means that it is less likely that marketing activities will be confused with that of competitors and thus, the brand will be more memorable, which will translate into greater market share/customer loyalty (Ries and Trout 1981). However, the evidence that specific positions lead to customer loyalty is sparse, if not non-existent. Most of the focus of positioning research has been about developing and testing different techniques for displaying these positions (for some examples see Doyle 1975; Keon 1983; Kohli and Leuthesser 1993). Evidence of the apparent success of any positioning strategy is often anecdotal and (frequently) post hoc (for excellent examples of this see Ries and Trout 1981). '

Potential support for this hypothesis has also been found from research which suggests that exposure to a variety of information (ie two ads for the same product with different brand information) facilitates retrieval of the brand name more than reinforcement of a single piece of information (Unnava and Sirdeshmukh 1994). This suggests that links to multiple different cues can increase the probability of retrieval and therefore consideration, more than a single brand/attribute link does. However, there was no test to see if this increase in accessibility carries through to effect purchase behaviour.

Overall discussion: Single and multiple attribute positioning

The literature presented makes a quite strong theoretical (with a somewhat weaker empirical) case for the presence of determinant single attributes or multiple attribute positions. However, these studies and theories were conducted on the premise that determinant attributes and positions exist; you just need to identify them from other 'non-determinant' attributes/positions. None of the studies considered the literature which questions the role that single bits of information can play in influencing behaviour, or another stream of literature which suggests that the information in specific attributes is not as important as the number of attributes to which the brand is associated. These two areas of literature are discussed in the next chapter.

Chapter 4: Counter arguments and an alternative perspective

This chapter discusses some of the research that questions the ability of any specific attributes or information to be predictors of future behaviour. It also discusses another stream of literature that looks at the role of frequency effects in consumer choice.

Initially, this section I discuss two areas of research, which question the ability of specific attributes to be more important in their influence on future behaviour than other attributes. The first discusses research that suggests that generally image responses can be explained by the past usage of the respondent. The second is a series of studies that examine the individual level instability of brand responses over time.

Influence of usage on image response

A major influence on whether a consumer gives a response to an image attribute is that of recency of usage. Current users are much more likely to give an image response for a brand than former users or those who have never tried the brand (Bird, Channon et al. 1970). In this instance former users were those who had not bought the brand in the past 4 weeks.

This pattern is systematic and can be described by the following equation:

$$(1-A_c)=F\log(1-A_f)=N\log(1-A_n)$$

Where:

A_c = % of current users expressing a brand for an attribute

A_f = % of former users expressing a brand for an attribute

A_n = % of never tried expressing a brand for an attribute

N = Never trieds coefficient

F = former users co-efficient

F and N are the same for all attributes within a brand, and all brands within the same product field. This relationship has been found to hold, even when former users are those who have actively rejected the brand (Romaniuk 2000 (forthcoming)).

This suggests that any relationships found between image responses and behaviour are more likely to be due to a relationship between past behaviour and future behaviour. Indeed, without control for past usage this is an acceptable explanation for many of the results achieved (particularly with top of mind measures). It also suggests that the hypothesis that individual attributes can be related to behaviour should be tested using future behaviour and/or controlling for past behaviour, otherwise effects may be inappropriately attributed to brand image responses.

Instability of individual responses

Another empirical generalisation that is counter to the assertion that a response to any individual attribute can have an influence on future behaviour is that regardless of stability at the aggregate level, individual responses have been found to be quite fickle (Castleberry, Barnard et al. 1994; Dall'Olmo Riley, Ehrenberg et al. 1997; Dall'Olmo Riley, Ehrenberg et al. 1998). The typical repeat rate for brand mentions at individual level is 50%. That is, only 50% of those who said the brand for a particular attribute at Time A will say that brand again for that attribute at Time B.

This high level of individual variability makes it difficult to see how the response to any single attribute can be a driver of choice. If these responses are fluctuating on their own, without any accompanying behaviour change it is unlikely that a change in behaviour will be able to be traced back to a change in specific image responses. This finding has been observed to hold for periods ranging from one month to 18 months and appears to be independent of the scale type or size used to measure the attitudinal response. (Dall'Olmo Riley, Ehrenberg et al. 1997). Additionally this pattern has also been found for top of mind responses (Mitchell 1982) and responses for brands not currently used by consumers in subscription markets (Sharp and Romaniuk 2000 (forthcoming)) suggesting it is a generalised pattern rather than an artefact of any specific research design.

Frequency and number of attribute effects

The previous literature discussed focussed on the idea that there were some attributes that were somehow more important than other attributes. The empirical evidence for this has been presented as well. However, the tests used to determine which of the image attributes were more important/determinant seem to be quite arbitrary and driven more by research design and analysis than any great understanding of how image is related to behaviour.

Counter to this view is a stream of research that has examined the role of the number of attributes to which the brand is linked as a facillitator of buyer behaviour. That is, the specific attributes do not really matter, but the more attributes to which a brand is associated the more likely a consumer will purchase the brand. Thus the 'value' of each brand/attribute link is the same as any other brand/attribute link.

This section focuses on a specific aspect of brand image responses, that is the frequency of attribute mention and discusses literature that suggests brand image responses can be related to future behaviour but that all brand/attribute links are generally equal in importance.

Automatic processing of frequency effects

It has been suggested that there is an automatic awareness of the number of times we are exposed to something and that information is retained independently of the content of the information to which we are exposed. This occurs regardless of whether there is no intention to keep track or count the number of events and is something that is generalisable to all people regardless of differentiating characteristics. For example tests for factors such as age, intelligence and knowledge level, education, social class and culture of origin as differentiating features have been undertaken and no support has been found (Hasher and Zacks 1984). Complimentary to this is the research by Zajonc (1968) which shows the positive effect that *mere exposure* can have on the evaluation of an item. The more times people were exposed to a 'nonsense[30]' item the more they liked it.

Frequency effects have also been suggested as the source of subjective probabilities for the occurrence of a future event. In experiments, subjects were asked to assess the outcome of a poll where information about two candidates was provided. In one instance the probability of winning was higher, but the frequency of winning was lower. The other was the opposite, in that the probability of winning was lower, but the frequency of winning was higher. In this case, the latter was chosen more frequently as the likely 'winner' (Estes 1976; Estes 1976). This suggests that frequency is driving the assessment of the likelihood of the future event happening.

Research has shown that respondents are able to accurately articulate their future behaviour in general (Juster 1966) and brand loyalty behaviour in particular (Danenberg 1998) as a subjective probability. Therefore if brand image as a concept is driving consumer behaviour, it could be suggested that the more attributes that a person associates with their brand, the higher their probability of purchasing that brand. That these subjective probabilities can then be related to future behaviour then suggests that frequency effects should also be related to future behaviour.

Frequency of attributes and brand choice

In advertising research it has been suggested that the persuasiveness of a message be based on the number of claims in the ad, rather than the quality of those claims {Petty, 1983 #5491}. This research was extended to brand choice by Alba and

[30] The experiments used words that made no sense and unfamiliar characters and pictures.

Marmorstein (1987) who focused on the effect of the exposure to more (and more frequent) information, independent of the content or importance of that information. Thus it separates exposure from the semantic details – a position which is counter to that which is advocated by those espousing determinant attribute or positioning ideas. They also hypothesised that this effect would be prevalent when the decision making involved low involvement processing, and therefore there is little incentive for consumers to try to access any other information.

In this study three brands were presented to participants. They varied in the number and rated importance[31] of the attributes associated with each brand. A series of 6 experiments were conducted with sample sizes ranging from 42 to 60. The first five experiments are relevant to this thesis and are discussed here.

In Experiment 1 they found that the number of attributes drove choice much more frequently in low involvement situations[32], than high involvement situations[33]. This quantitative finding was also backed up qualitatively when the researchers examined the verbal rationale from participants for their choices.

For Experiment 2 the time and availability of information for evaluating the brands and the attributes varied. In this instance it was found that the more time and the more available information was, the more likely participants were to not use number of attributes as the choice criterion. That is, the more the situation allowed participants to act as 'rational beings' the more likely they were to[34].

In Experiment 3 the number of positive attributes and negative attributes were related to overall evaluations of the brand. It was found that while participants, as expected, rated the brand with attributes that had no rating better than the brand with negative attributes this was not reflected in the number of attributes recalled. This supports that found by Hasher and Zacks (1984) and suggests the influence of the number of attributes encountered is independent of the specific bits of information in those attributes. To quote Alba and Marmorstein (1986):

> *In the end, the most salient information available about the brand may be related to frequency, which then may exert a disproportionately large influence on decision making. (pg18)*

---

[31] Important ratings for items were explicitly given to respondents

[32] When participants were not aware that they would have to make a choice at a later point in time

[33] Where participants were told they would have to make a subsequent choice

[34] Given the general idea of limited activation level discussed on pg 23, this finding should caution against the extension of experimental findings to 'real world' situations.

Experiment 4, although not directly relevant to this thesis as it focuses on negative attributes provides some interesting insight into the role of number of attributes when participants would not have known that the attributes are negative. In this instance the novices (who were deliberately chosen because they would not know the attributes presented were undesirable) rated the brands in increasing order according to the number attributes they were given. The figures presented in the article are shown in Table 3.

Table 3: Desirability rating of bicycles by expertise level (P<0.01)

	Novices	Experts[35]
Brand A – only standard equipment	4.4	5.8
Brand B – standard equipment and 4 other technical specifications	7.4	3.9
Brand C – same as Brand B but with 4 additional technical specifications	9.2	2.1

It also is apparent that experts are using a number of attributes heuristic, however in a negative direction, as they are aware that the additional characteristics in Brand C do not improve the overall quality of the brand. Thus, when consumers are in any doubt over if a characteristic is negative, then they seem to give it 'the benefit of the doubt' and treat it as an additional benefit. Of course experimental conditions may have had an effect here, whereby subjects assumed that because they were given the information it was positive. It may be that in non-experimental conditions, neutral/unknown attributes are simply disregarded in the decision making process.

In Experiment 5 the difference between the brands was manipulated quantitatively. In shopping lists for stores, participants were presented with two stores with a shopping basket of equivalent cost. However, Store C had more items discounted, while Store B had fewer items, but with bigger discounts. A total of 75% judged Store C to be less expensive that Store B. Even when the overall value was changed such that Store C was $5.00 more expensive, nearly 1/2 or respondents still rated it as less expensive. This suggests that participants were looking at the number of items that were cheaper rather than the size or content of the discounts. This suggests that when brands are compared, the frequency effects are independent of the difference between brands.

[35] The experts worked in the industry.

Relationship between number of attributes and brand equity

Another associated piece of research examined the relationship between number of attributes associated with the brand and the equity rating of that brand. Krishnan (1996) tested the relationship between the number of attributes that people elicited and the equity rating of the brand (using external sources such as the Landor index). Participants were given the brand name as a cue and asked to write down everything they associated with this, and to code each of the attributes as having a positive or negative valence, or as neutral. This technique is commonly used in advertising testing, where subjects' cognitive responses have been measured by means of a retrospective thought-listing procedure where subjects were instructed to write down all their thoughts about the brand and the ad (Krugman 1966-67; Chattopadhyay and Kurnal 1990). The coding of the elicited cognitive responses generally involves some sort of categorisation typically undertaken by independent judges or the respondents themselves (Greenwald 1968; Dillon and Mulani 1984).

The research findings led Krishnan to conclude that higher equity is associated with a greater number of linked attributes elicited. Indeed the bigger brands do have a greater total number of attributes elicited for them. However, the relationship does not quite carry through to net valence differences. This suggests that perhaps the relationship between number of associations and brand equity is independent of the valence of the associations. This should extend to brand choice as brand equity is generally correlated with brand size (Ambler 1993; Ehrenberg 1993) – therefore the greater the number of attributes, the more likely that the consumer will chose that brand.

Summary

The research by both Alba and Marmonstien (1987) and Krishnan (1996) suggests that number of attributes may have an important influence on decision making independent of the valence, perceived importance or relative size of those attributes.

Additionally, Alba and Marmonstien showed that people take notice of the number of attributes they are exposed to for a brand. This appears to influence their choice regardless of the importance, valence or differential of the attribute. This is particularly evident when processing time is limited and people are absorbing information without consciously thinking they are going to use this information in choice, two conditions which resemble the typical information processing and choice situation in which consumers find themselves. In brand choice situations, consumers use a variety of cues at different points in time. Therefore it is reasonable to hypothesise that the greater the number of attributes associated with a brand, the higher the probability that the brand will be chosen as there would be more potential pathways for retrieving the brand (Krishnan 1996). This is particularly relevant in an environment where the specific cues that consumers use are numerous and/or difficult to detect.

However, a limitation of these studies is that they did not test the idea of determinant attributes or positions at the same time. Thus there is no test that compares number of attribute effects with the effect of specific attributes or positions on consumer choice. This is therefore tested in this thesis.

Chapter 5: Specific Hypotheses and Approach to Analysis

Based on the literature presented and discussed here, three hypotheses have been developed.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with a higher customer loyalty to that brand than other attributes.*

Previous research suggests that these will typically be about 20% of attributes tested.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

In line with both hypotheses 1 & 2 there are two ways these winning attributes or positions could be evident:

Ideal position Hypothesis: The attributes/positions are the same for each brand; or

This would suggest that in each market, there are 'ideal' attributes that all brands should aim for, and that brands are essentially 'fighting' for the same concept links. It would also suggest that a brand should not aim to be different from other brands in the market, as association with any attributes other than the 'determinant' ones would not be beneficial for the company. This hypothesis has the greatest empirical support at this stage with both Woodside and Trappey (1992) and Alpert (1971) suggesting that the attributes will be the same across brands in the marketplace.

Differentiation Hypothesis: There are specific (ie different) attributes/positions for each brand in the marketplace

That is, the attributes(s) for which drive loyalty for Brand A would not be the same as the attributes(s) that drive loyalty for Brand B. This would imply differentiation between brands, and would mean that each brand manager has to identify their brands' own specific loyalty driving image attributes. It would also means that brands would not need to compete directly for the same subset of 'winning' attributes. This hypothesis is advocated by Ries and Trout (1981). To date, however, there is a greater conceptual rationale than empirical evidence to support this conjecture.

Hypothesis3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

Thus it does not matter which specific attributes the brand is linked to, or how different they are from competitors. The important factor is how many attributes customers associate with the brand. That is each brand/attribute link has the same effect on loyalty/switching.

Approach Quantitative Analysis

This thesis draws on two main sources for its analysis approach. The first is Ehrenberg (2000) which advocates a many sets of data (MSOD) approach to discovery and verification of empirical patterns. The objective is to find results that apply across many sets of data, with the view to developing models that can be generalised to other situations, time frames and conditions. This is also described by Raaijmakers and Shiffrin (1992) as a three stage process of generalisable models:

Stage 1 - Qualitative generalisability

This is where the relationship in the same direction is found. This allows us to describe the relationship between variables verbally. For example, mentioning that a brand *offers value for money* is positively related to loyalty.

Stage 2: Semi Quantitative generalisability

This is where the relationships are found in the same direction and of the same magnitude. This allows us to describe the relationship verbally, but also to understand relative effects. For example mentioning that a brand *offers value for money* is related to a small increase in loyalty. This stage is essential before progressing to the third stage. If the magnitude of effects is not similar, there is little point in trying to describe the relationship mathematically until further understanding of what influences the size of the effect is achieved.

Stage 3 – Quantitative generalisability

This is where a relationship can be described mathematically across data sets. This allows us to understand the price effect that different levels of one variable will have on the other variable. For example mentioning that a brand *offers value for money* is related to a 10% increase in loyalty.

Technical Aspects and notation

Rounding

To improve the clarity of the tables the following rounding has been undertaken throughout this thesis:

- Proportions/percentages are rounded to the nearest whole number following convention (13.5% is presented as 14% and 13.3% is presented as 13%).
- Means are rounded to 1 decimal place, again according to convention.

The purpose of this is to enable comparisons within and between tables to be made more simply and easily (Ehrenberg 2000).

Statistical significance

Statistical significance results are generally presented at the beginning of each series of analysis, or the first study. After this, for the subsequent replications, statistical significance tests are only used when illustrating a difference from the original findings or when particularly relevant to the discussion. As the purpose of this thesis is generalisability, statistical significance is of less importance when there is another study to use as a benchmark for findings. This is because statistical power rather than the empirical finding often drive statistical significance[36].

[36] Which is the reason why cross study comparisons of results based solely on statistical significance is fruitless

Chapter 6: Brand image and probability of switching

In this chapter is the first series of analyses to test the three hypotheses developed in Chapter 4. This section uses cross-sectional data, with both brand image and probability of switching information collected at the same point in time. It covers three markets, telecommunications, banking and insurance.

Telecommunications - Study 1

The first study used in the data analysis was conducted in the Australian telecommunications industry.

Table 4: Specifics for telecommunications study 1

	Study 1
Year conducted	1998
No of brands	3
Sample size	4000, 900 and 300 respectively for each brand
Data collection method	Telephone
Respondents	Business decision makers
Image measure	Pick any table
No of attributes	17
Country	Australia
Loyalty/switching measure	Verbal probability scale
Purchase cycle	Continuous
Selection of attributes	Ad agency and client
Structure of market	Former monopoly as dominant brand, next player at about 25%

Subscription markets and implications for measuring usage

The studies used in this thesis were conducted in subscription markets where customers typically ascribe a large proportion of their share of category requirements to one brand. This is a differentiating characteristic from the other studies that have been published in the area, which appear to be concentrated in repertoire markets. Repertoire markets refer to those where customers buy from a portfolio of brands (typically 3 or 4). The key difference between the two markets is that in a

subscription market, using another brand is an act of defection. That is, customers cease using the previous brand and their future purchase probability for that brand is decreased. In repertoire markets consumers can switch between brands without affecting their future purchase probability of the previous brands the have used (Sharp and Wright 1999).

In a subscription market, people who do not use the brand at a specific point in time are generally not using the brand at all[37]. There may be some 'split' of purchases, but to isolate the main effects, customers were generally asked to self classify their own 'main' brand and were then asked the probability of switching from that brand. Past research has indicated that this concept of main brand is easily understood by consumers and most commonly linked to the level of expenditure with the brand relative to expenditure with other brands (Romaniuk, Sharp et al. 1997). Thus throughout this analysis customers are linked to a single brand, that is a person is classed as a customer of one brand only.

Prior consumer research has focussed on repertoire markets and either next brand purchase (Cohen 1966; Axelrod 1968) or estimation of main brand (Woodside and Trappey 1992). Experimental studies have generally controlled for usage as an external factor rather than incorporating it explicitly in the research design (Alba and Marmorstein 1987; Krishnan 1996). In this thesis, I take those who are customers of a brand in a subscriptions market, and test if knowledge of brand/attribute links can be used to determine likely future behaviour toward that brand and other brands in the marketplace.

Approach to measuring customer switching

In this research the focus is on the act of defecting/not defecting from supplier. Customer loyalty is therefore measured as the subjective probability of switching suppliers (also known as differentiation loyalty (Rundle-Thiele, Dawes et al. 1998)). In brand loyalty research, subjective probabilistic techniques have been developed and tested by researchers and have shown to be accurate measure of future customer defection in subscription markets (Danenberg 1998; Rungie and Danenberg 1998). In addition, subjective probabilistic measures have been subject to years of use and testing of their psychometric properties. This has occurred in their written form (Juster 1960; Juster 1966; Juster and Wachtel 1972; Seymour, Brennan et al. 1994) and also as modified versions for application over the telephone (Gendall, Esslemont et al. 1991; Brennan, Esslemont et al. 1994; Brennan 1995)[38].

[37] Again in contrast to a repertoire market where non-use of a brand at a single point in time may not mean the customer does not use the brand at all.

[38] Both of these forms are used in this thesis.

Descriptive or evaluative attributes

The 18 attributes used in this study are all positive and evaluative (in line with Barwise and Ehrenberg 1985), in that they are characteristics that are desirable for a brand to have and had a higher proportion of users mentioning the brand than non-users. That is, none of them simply describe functional aspects of the brand, nor are they equally likely to be mentioned by users and non-users (which are characteristics of the other class of attributes discussed - descriptive attributes). However, the empirical distinction between descriptive and evaluative attributes would not be evident in this research anyway as the key difference between the groups related to non-users mention for descriptive attributes. Neither non-users nor descriptive attributes are included in this research which centres on users of the brand and evaluative attributes.

The sponsor and the ad agency, based on their experience in the market, chose the attributes. These were the attributes that they felt drove consumer behaviour, however there was no specific qualitative research to chose the attributes. As a researcher I had no input into the initial list and only a little influence on the final 18 attributes. This is important because it reduces the risk of researcher confirmation bias of the research through any selection of specific attributes.

Measurement of Brand image

Brand image was collected using a free choice, pick any format where both brands and perceptions are provided to respondents (eg see Holbrook, Moore et al. 1982). That is, respondents were presented with an image attribute (eg "tastes good") and asked which, if any, of the listed brands they associated with this attribute. This has been found to be a valid and reliable method of collecting perceptual data (Barnard and Ehrenberg 1990) and is a technique commonly used in both commercial market research and research in marketing (eg Brown 1985). Alternative brand image measures include forced choice measures such as ranking and rating of brands on a series of attributes. However, the seminal research in the area has shown that forced choice methods while reducing non response levels, result in overly positive responses being generated (Joyce 1963).

An advantage of this measure is that it is the measurement technique used by Bird et al (1970) and Castleberry et al (1994). This makes it a more difficult test to see the effects of brand image responses on future behaviour. Additionally, with only users of a brand in a continuous service market examined, the effects of both usage in general and recency of purchase are controlled for. It also reduces the past usage effect by taking all responses, not just top of mind. The average number of brands mentioned for each attribute was around 2-3. This coincides with Cohen (1966)'s first level of consciousness which contained brands currently used and brands most likely to be switched to.

Extensions from prior research

This study extends past research in the following ways:

- It is conducted in a continuous use subscription market (telecommunications), where consumers typically use only one brand and are continuously supplied by that brand until they make a decision to terminate the arrangement. This is an extension from the previous research conducted in repertoire markets and means that a clearer link with future behaviour can be established as I am focussing on the likelihood of changing the established purchase pattern. Thus I would expect it to be more difficult to find any relationship between image responses and probability of switching.

- The respondents are people making decisions for the business they work for. The decision of which supplier to use for an essential utility for the business is one which will impact on their livelihood (as they could potentially lose their jobs if there are problems). Therefore this could be considered a 'real' high involvement situation – rather than one generated via experimental design. Thus I would expect that the specific information in the attributes to be of more importance rather than frequency effects as research to date has shown that frequency effects are much more prevalent in low involvement situations (Alba and Marmorstein 1987).

- It also examines the brand responses that are elicited, rather than controlling the information to which the consumer is exposed. This means the results are based on real responses from consumers, rather than manipulations that may or may not exist in the 'real world'.

- It uses a measure of future behaviour as the dependent variable (as opposed to prior studies that have focussed on past behaviour, preferences or choice in an experimental situation). This increases the likelihood that the results will translate into actual behaviour in the marketplace.

- This study also tests and compares the three hypotheses. To this date, while there have been studies that have in some form tested each, no study has compared the results of all three possible relationships between brand image responses and behaviour.

Note on interpreting results

It has been shown that the mean probabilistic loyalty scores can be directly interpreted as the proportion of the sample likely to switch suppliers (Day, Gan et al. 1991; Danenberg 1998). Therefore, the differences reported directly refer to the difference in switching rates between the group who mention the brand for the attribute, and those who do not. In this study the precise wording of the Verbal Probability Scale, the adaptation of the Juster scale for application over the telephone was used (Brennan, Esslemont et al. 1995).

The question read out to respondents was as follows:

> *How probable is it that your business will switch telecommunications suppliers from <insert main brand> in the next six months? I would like you to answer on a scale of zero to 10. If you are certain or practically certain that you will switch from <brand> you will choose the answer 10. If you think that there is no chance, or almost no chance the best answer would be zero. If you are uncertain about the chances choose another answer as close to zero or 10 as you think it should be.*
> *You can think of the numbers as chances out of 10, for example 3 would mean 3 chances out of 10 that you will switch from <brand>, while a 7 would mean 7 chances out of 10 and so on. So your answer out of 10 would be...*

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

Analysis procedure

For each image attribute for each brand, customers of the brand were divided into two groups, those who mentioned the brand for a specific attribute and those who did not. The difference switching rates of the two groups was calculated via the following equation:

Switching difference = Switching rate(mention brand) – Switching rate (no mention)

ANOVA tests were used to determine if the differences in the switching rates between the two groups were statistically significant.

Results

Table 5 shows the results across all brands. The attributes in the table have been ordered by the size of the difference for Brand 1. The figures can be interpreted as: *Customers who mentioned Brand 1 for the attribute good value for money had a switching rate which was 11 percentage points lower than those who did not mention Brand 1 as good value for money.*

Table 5: Switching rates by attribute mention for Study 1

	Brand 1 (N=4000)		Brand 2 (n=900)		Brand 3 (n=300)	
	Difference	P value	Difference	P value	Difference	P value
Good value for money	-11	<0.001	-8	<0.001	-11	<0.001
Easy to do business with	-10	<0.001	-8	<0.001	-4	ns
Willing to listen	-10	<0.001	-7	<0.01	-9	<0.01
Business partner	-8	<0.001	-4	ns	-5	ns
Competitive prices	-8	<0.001	-8	<0.001	-10	<0.01
Excellent customer service	-8	<0.001	-7	<0.01	-14	<0.001
Expert	-8	<0.001	-7	<0.01	-6	<0.05
Flexible	-8	<0.001	-4	ns	-2	ns
Innovative technologies	-8	<0.001	-7	<0.01	-10	<0.01
Pro-active	-8	<0.001	-4	<0.05	-7	<0.01
Responsive	-8	<0.001	-4	<0.05	-4	ns
Trustworthy	-8	<0.001	-6	<0.01	-8	<0.01
Demonstrates value	-7	<0.001	-1	ns	-2	ns
Informed	-7	<0.001	-4	<0.05	-4	ns
Provides insights	-6	<0.001	-4	ns	0	ns
Solutions	-6	<0.001	-6	<0.05	-5	ns
Committed to helping	-5	<0.001	-7	<0.01	-5	ns
Leader	-4	<0.001	-5	<0.01	-3	ns
Average	**-8**		**-6**		**-6**	

Discussion of Table 5

The first immediate finding is that generally, when customers mention a brand for an image attribute it coincides with a lower switching rate. This is what was expected under Hypothesis 1. However, respondents who hold any one particular image perception do not appear to have a markedly different switching rate from those who hold a different image perception. The fact that all of the attributes were evaluative may have contributed to the homogeneity in results, but in previous studies[39], the use of evaluative attributes resulted in fewer than 30% of attributes being identified as 'key'. However, as those authors do not clearly show the results of non statistically significant attributes it may be that the differences for the non key attributes was not that substantively different and failure to pass statistical tests was simply lack of statistical power, rather than there not being a relationship.

There are 5 attributes that were in the top 9 for all three brands, these are *provides excellent customer service, good value for money, innovative technologies, competitive prices*, and *is willing to listen*. This is what would have been expected given the results from Woodside and Trappey (1992) and Alpert (1971). The problem with this cross brand comparisons/multivariate analysis is that it does ignore the fact that for each brand, while there are 5 attributes consistent with other brands, there are another 8 or so attributes which are performing comparatively well for one or more of the other brands. This makes the distinction between determinant and non-determinant attributes quite arbitrary.

The average for Brand 1 is slightly systematically higher than the other brands (8 cf 6 percentage points). This may be due following reasons:

- Brand 1 being the biggest brand and there is an interaction with brand size; or
- This was the brand that sponsored the research, therefore the composition of the attributes may have been biased to those that would have an effect on that brand in particular; or
- It could be just a statistical aberration.

It is, however, something that can be monitored in further replications. *Namely, is the differential in switching rates systematically higher for bigger brands and/or the brand commissioning the research?*

There is only one difference that appears to be a substantive deviation, that being *provides excellent customer service* for Brand 3. Given that this is the only such deviation and it is for the smallest brand in the market it suggests that either 'special loyalty' attributes are extremely rare (only 1 out of a possible 54) or the result is simply a statistical aberration. It is

[39] Particularly Woodside and Trappey (1992) but there was also a high proportion of evaluative attributes in Alpert, (1971)

surprising that the other two (bigger brands) do not have any special loyalty attributes. Particularly given that the staff of Brand 1 (the sponsor) chose the attributes (which would make the attributes more likely as biased to that brand) and this was the brand with the greatest market share.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

As mentioned on pg 39, the choosing of a position is frequently undertaken by looking at a perceptual map and choosing the cluster of attributes which are desirable to have close to the brand. Therefore, to test this hypothesis a series of 'positions' (combinations of up to 4 attributes) were examined. If there is a relationship between having a particular 'position' and loyalty, there would be evident a substantive difference in the switching rates if a customer perceives a brand in this 'position' (ie has all of these attributes) than if not. The series of positions were generated based on two broad concepts. The first is having a single consistent theme running through the attributes (eg pricing or expertise). The second is a combination of attributes from different themes (some pricing, expert, service aspects), which could be thought to represent something of an 'ideal' brand.

Table 6: Study 1 positions tested

Position	Attributes included	
Pricing	• Good value for money	• Competitive prices
Service based	• Excellent customer service • Flexible	• Easy to do business with • Is responsive to customer needs
Expertise based	• Expert • Provides insights	• Demonstrates the value of its products and services • Leader
Information	• Known for innovative technologies • Pro-active	• Focussed on effective solutions • Provides insights
Relationship based	• A business partner • Trustworthy	• Committed to understanding and helping business • Is willing to listen
Combination 1	• Good value for money • Excellent customer service	• Expert • Is willing to listen
Combination 2	• Competitive prices • Easy to do business with	• Pro-active • A business partner
Combination 3	• Is responsive to customer needs • Demonstrates the value of its products and services	• Committed to understanding and helping business • Focussed on effective solutions

Of course this does not test all possible combinations of attributes. However, it tests with reasonable scope such that if there were no relationships apparent across the three brands for these 8 positions (24 possible options), it would seem unlikely that the relationship would hold for any alternative positions.

Results

Table 7 shows the difference in switching rates for all brands, ordered by the size of the difference for Brand 1. The figures in the table can be interpreted as follows: *For Combination 2 position the absolute difference in percentage points between the those who mentioned the brand for all attributes in the position and those who did not mention the brand for any attributes within the position is 19 percentage points.*

Table 7: Switching rates by position for Study 1

	Brand 1 Difference in percentage points	Brand 2 Difference in percentage points	Brand 3 Difference in percentage points
Combination 2	-19	-12	-7
Combination 1	-18	-17	-21
Combination 3	-17	-14	-15
Service	-17	-12	-17
Relationship	-16	-12	-10
Information	-15	-10	-11
Expertise	-14	-17	-10
Pricing	-13	-11	-14
Average	**-16**	**-13**	**-13**

Discussion of Table 7

If any of the brands are perceived to be in any of the positions tested then the switching rate will be lower. This difference in switching rates is generally greater than that which was evident for individual attributes, suggesting there are benefits in being linked to a subset of attributes, rather than simply a single attribute.

The difference in the switching rates between the two groups is greater for Brand 1, which was the biggest brand and had the lowest switching rates. This is most likely a confounding effect from the higher average for individual attributes. Additionally

for Brand 3 (where the second highest position was a single themed position), the two positions that were the top ranked[40] both had the attribute *excellent customer service*. This was the attribute that had clearly the highest differential of any single attribute (for any of the three brands). This suggests that the substantively greater difference for these two positions is a confounding effect of the single attribute in the mix.

Looking across the three brands, Combination 1 is the most consistent performer. This provides some evidence that certain combination positions may be better than single-themed positions. This combination consisted of the following attributes:

- Good value for money
- Excellent customer service
- Expert
- Willing to listen

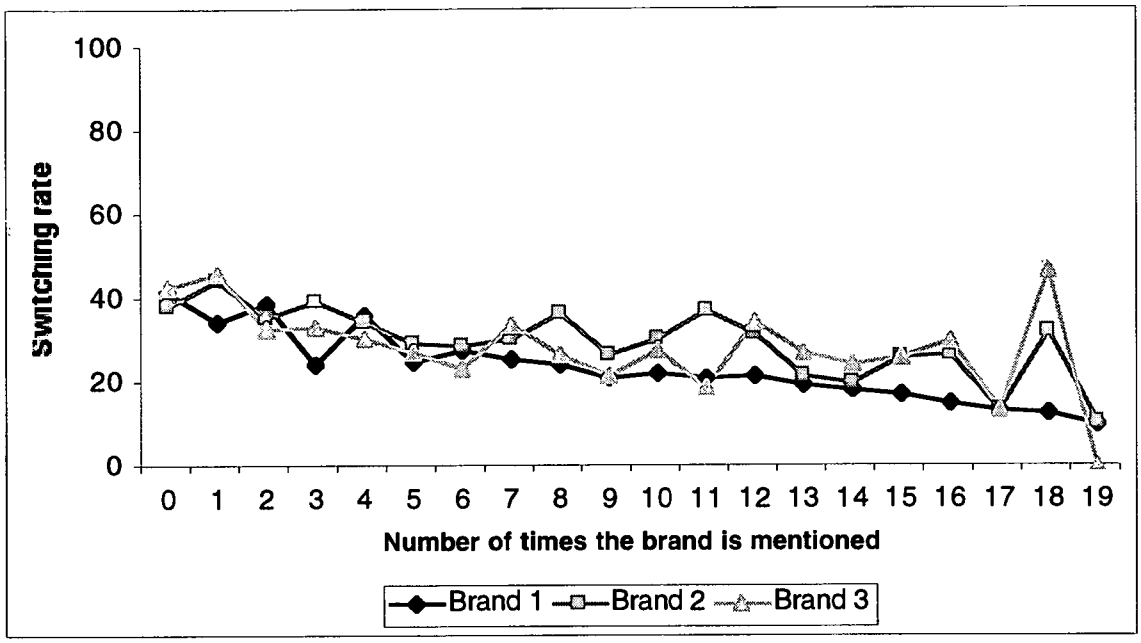
However, in general it is difficult to pick the 'better' option out of the combination or specific positions, with for each brand both types of positions rating highly.

[40] One of which was a combination position (Combination 1), the other a single themed one (Service)

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

To test Hypothesis 3, the number of times the brand was mentioned across all of the perceptions was calculated. The range was from 0 times mentioning the brand up to 18 times. The number of times the brand is mentioned is referred to as the *brand response level.* Figure 1 shows the relationship between the number of times that a brand was mentioned (X-axis) and switching rate of customers at that number of mentions (Y-axis)[41].

Figure 1: Brand response level and customer switching rate



Discussion of Figure 1

This graph shows a clear relationship between the brand response level and the switching rate, supporting hypothesis 3. This relationship is consistent for all 3 brands and appears to be linear.

That is, the higher the response level, the higher the loyalty to that brand. There is more variability evident for Brand 3, but this is most likely due to smaller sample sizes at each of the points[42].

[41] The distribution of respondents across all numbers of mention follows a bell shaped curve (particularly for Brands 2 and 3). Thus at either extreme there are fewer respondents than in the middle. Therefore there are higher levels of variation at these extremes as they are more prone to variation driven by individual outliers.

[42] n=300 cf n=900 for Brand 2 and n=4000 for Brand 1

Aggregate regression

To quantify the relationship between the two variables and establish if there is a similar quantitative relationship across brands [43], regression at the aggregate level was undertaken. The results are as follows:

Table 8: Linear regression results for Study 1 on Hypothesis 3

	No of obser.	Adj r-squared	b-value	Constant
Brand 1	18	0.87	-1%	37
Brand 2	18	0.59	-1%	40
Brand 3	16[44]	0.39	-1%	37

Discussion of Table 8

This shows a very consistent relationship between the brand response level and the switching rate. The baseline switching rate is approximately 40%. Each time the response level increases, the switching rate decreases by about 1 percentage point from the previous group. Given the overall switching rate is about 20-25% - this suggests a 4-5% change in switching rates with each additional mention. This is regardless of the attributes for which the brand is mentioned. That is people who mention the brand for 6 attributes (regardless of which six attributes) will have a higher probability of switching than those who mention the brand for 10 attributes, regardless of which 10 attributes.

[43] As per Raaijmakers, J. G. W. and R. M. Shiffrin (1992). "Models for Recall and Recognition." Annual Review of Psychology 43: 205-234.

[44] Final two points removed due to small sample sizes

Overall Discussion – Study 1

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

In this market I tested 18 positive evaluative attributes across three brands for Hypothesis 1 to see if there were any attributes that could be considered particularly 'determinant' in customer choice. I found that mention of the brand for a positive evaluative attribute did coincide with a lower switching rate from the brand. However, out of the 54 possible combinations, there was only one attribute/brand relationship that I would consider as 'differential' to the general positive relationship I found. While it could be argued that, its presence in itself, shows that determinant attributes exist, it is surprising that the only brand for which this is evident is the smallest brand tested. None of the bigger brands (one of whom was the sponsor of the research and so had input into questionnaire design and attribute choice) had clear 'determinant' attributes. The most striking conclusion is that in most cases either most positive evaluative attributes are 'determinant' (a conclusion that seems at odds with the idea of 'determinant') or each attribute is 'worth' about the same as any other attribute. That is, while generally the mention of a brand was related to lower switching, it did not appear to matter for which attribute the brand was mentioned.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

For Hypothesis 2 I tested 8 potential brand positions across the three brands. These positions consisted of five single themed positions and three combination positions. On average the difference in switching rates between those who perceived the brand to be in a particular position and those that did not was greater than for those who simply mentioned the brand for a single attribute versus those that did not mention the brand (Hypothesis 1). This extends the findings of Unnava and Sirdeshmukh (1994) from multiple attributes increasing recall of the brand name to links with multiple attributes having a greater effect on future behaviour.

However, the relationship was relatively consistent across positions, with the only 'differential' difference being a confounding effect from the single attribute that had a larger effect for Hypothesis 1. There was some evidence that a specific combination of attributes performed slightly better than other combinations or single themes again this distinction seems at best marginal.

These findings do not support that found by Alpert (1971) and Woodside and Trappey (1992) potentially for two reasons. The first is that the relationships they found have been with prior behaviour which may not be related to changing behaviour. The second is that the results they obtained are artefacts of the sample sizes and the multivariate analysis used.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

For the final hypothesis the relationship between the brand response level and switching was tested. The results show a simple, consistent relationship between the *number of* image attributes respondents associate the brand with, and their loyalty to that brand. This finding was consistent whereby each additional time a brand was associated with a non-negative attribute, the switching rate from the brand decreased by around 1 percentage point. Thus the relationship between the two constructs does not appear to be attribute or brand specific. This result extends the research by previous research into a 'real world' setting. It shows that brand response level can be related to the likelihood of changing past/current behaviour. Additionally, this study extends that finding further to quantify the effect of customer mention of the brand for image attributes and the sub-segment's switching rate. It also suggests that the influence of frequency effects suggested by Hasher and Zacks (1984) may be evident in the number of times a customer mentions a brand, or its response level.

The fact that the substance of the attribute or its 'content' may be unimportant means that marketing managers and researchers may not need to be so concerned about trying to pick the 'right' image, or the 'right' attributes to develop. Each attribute/position is generally as good as any other. The brand building objective this suggests is to develop and increase the brand response level. However before this can be clearly advocated as an appropriate strategy, further replication of this relationship and testing on future behaviour needs to be undertaken.

Study 2: Banking

The first replication was undertaken in another subscription market using similar measures. Thus it can be considered to be a close replication. This is usual in that all replication involves some differences from the original study, if they did not then they would be guaranteed to produce identical findings and would thus be of no value (Stern and Ehrenberg 1997). The attributes used in this study were developed in early 1997 (that is, it preceding the initial study) and I was not involved in the formulation of the questionnaire or the data collection process. Therefore, this data was collected independently of this research. This aids in the reduction of researcher confirmation bias.

This sample consisted of two pools of respondents (from two cross sectional studies conducted in 1997 and 1998) who were asked the same brand attributes and their probability of switching from their main brand in this market in the next 6 months. Given the relatively smaller sample size for each of the brands (ranging from 255 to 135[45]), it would be expected that there would be greater variation in results (as sampling error potential is greater). This does not reduce the usefulness of this data set as the aim is to see if it is possible to replicate the results obtained in Study 1. If this is possible, even given the smaller sample sizes, this provides strong evidence as to the substantiality of the findings[46].

In this instance, the attributes were chosen prior to my participation in the study by other researchers. This again reduces the risk of any biases in the attributes chosen towards any specific hypotheses. The attributes were chosen based on a series of qualitative work with customers to determine which attributes were important in brand choice – thus although not specifically designed to test these hypotheses, there is some validity the expectation is that these attributes will be related to brand choice. This study uses the same image measurement approach (with adaptation for mail rather than telephone) and also involved business users of a subscription service.

The key areas of extension from Study 1 are that this study incorporated descriptive as well as evaluative attributes and that it was a mail survey. These are now discussed.

[45] Note these sample sizes are in the range of previous published studies

[46] If the findings are not replicated then further work need to be undertaken to understand if there is really a difference, or if the lack of replication is a function of the smaller sample sizes.

Descriptive versus evaluative attributes

The difference between the response levels of users and non-users is shown in Table 9. The table can be interpreted as: *there was 34 percentage point difference between the proportion of users who mentioned Brand 1 for the attribute responds quickly to our needs and non users who mentioned Brand 1 for that attribute.* The table is ordered by the average for all brands.

Table 9: Difference between the response levels of users and non-users

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5	Average
Responds quickly to our needs	34	26	24	36	26	**29**
Has conveniently located branches	32	33	28	35	15	**29**
Business minded	27	18	20	29	26	**24**
Competent in financial management	29	16	16	37	16	**23**
A safe bank	26	**9**	25	30	17	**21**
A responsible bank	27	**9**	22	32	16	**21**
High level of expertise	24	13	16	31	15	**20**
A business partner	19	10	10	18	11	**14**
Good interest rates	10	5	6	**16**	10	**9**
Appropriate fees and charges	10	6	8	13	6	**9**
Helps SA economy	8	8	7	8	10	**8**
Helps SA rural community	7	13	6	10	5	**8**
Is South Australian	4	**21**	2	0	0	**5**
Guaranteed investment growth	3	2	5	6	7	**5**

Discussion of Table 9

There are generally consistent results in the differences across brands for each attribute. The attributes that could be classes as descriptive, based on a higher level of agreement between users and non users are as follows[47]:

- Good interest rates
- Helps SA economy
- Is South Australian
- Appropriate fees and charges
- Helps SA rural community
- Guaranteed investment growth

[47] The cut off point used here is 10 percentage point difference – it is an arbitrary one as there does not appear to be a 'standard' cut off point in the literature.

There are two consistent patterns in the attributes that fit the descriptive pattern. That is, they consist of the attributes that were 'parochial' (ie with *South Australian* in them) and pricing (interest rates, fees and charges, return on investment). This inclusion of both descriptive and evaluative attributes is an additional extension from Study 1. I would expect descriptive attributes to be less likely to be related to behaviour as they are characteristics that describe functional aspects about the brand and there are substantive numbers of non-users who do not use the brand even though they are aware it has this quality.

Deviations from overall patterns

Brand 2 has 3 of the major deviations (highlighted in bold). Further exploring the figures reveals that the deviations for *safe* and *responsible* are due to a lower number of users responding than for the other brands (while the response levels for non users was comparable). The deviation for *South Australian* is due to a higher proportion of users mentioning the brand than was evident for other brands. The only other deviation that seems to be of note is good interest rates for Brand 4, which is due to a higher proportion of users mentioning this for this brand than was evident for other brands.

Mail survey

The use of a mail survey means respondents fill in the survey in their own time and have more time to contemplate each attribute than is available when interviews are conducted via telephone. Thus respondents are less prone to giving 'automatic responses' and means I would expect individual attribute links to have a greater effect on behaviour. That is, respondents can respond like more rational consumers, which should dampen the frequency effects (Alba and Marmorstein 1987).

Study specifics

Table 10 details the specifics of the banking study.

Table 10: Study specifics for Banking

	Study 2
Year conducted	1997-8
No of brands	5
Sample size	Respectively 255, 231, 214, 203 and 135
Data collection method	Mail
Respondents	Business decision makers
Image measure	Pick any table
No of attributes	14
Country	Australia
Loyalty measure	Juster scale (written form)
Purchase cycle	Continuous
Selection of attributes	Other researchers and client
Structure of market	Brand shares ranging from 30% to 14%

As the data was collected via mail - the switching measure used in this research was the Juster scale (Juster 1966) in its written form. The following is the scale and general instructions provided to respondents.

Probability Scale

Use this scale when the questionnaire asks you to refer to the probability scale.
Write the number corresponding to your answer in the box provided on the questionnaire.

10	Certain, practically certain (99 chances in 100)
9	Almost sure (9 chances in 10)
8	Very probable (8 chances in 10)
7	Probable (7 chances in 10)
6	Good possibility (6 chances in 10)
5	Fairly good possibility (5 chances in 10)
4	Fair possibility (4 chances in 10)
3	Some possibility (3 chances in 10)
2	Slight possibility (2 chances in 10)
1	Very slight possibility (1 chance in 10)
0	No chance, almost no chance (1 chance in 100)

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

Results

Table 11 shows the results for all brands, ordered by the size of the difference for Brand 1[48]. The table can be interpreted as *'the difference between customers who mentioned that Brand 1 has appropriate fees and charges and those that did not mention that Brand 1 had appropriate fees and charges was 12 percentage points.*

Table 11: Switching rates by attribute for Study 2

	Brand 1 Difference (n=255)	Brand 2 Difference (n=231)	Brand 3 Difference (n=214)	Brand 4 Difference (n=203	Brand 5 Difference (n=135)
Responds quickly to our needs	-13	-8	-13	-12	-14
Appropriate fees and charges	-12	-10	-9	-10	-13
A business partner	-11	0	-6	-3	-11
A safe bank	-7	-5	-3	-6	1
Competent in financial management	-7	-9	-9	-8	-12
Good interest rates	-7	-7	-6	-9	-9
Guaranteed investment growth	-6	-9	-11	-7	-5
Supports the business community	-6	-2	-6	-7	-10
A responsible bank	-5	-8	-4	-8	-12
Business minded	-4	-6	-8	-7	-9
Helps SA rural community	-4	-2	-7	-3	-17
Has conveniently located branches	-3	-1	-5	-1	-8
Helps SA economy	-1	-4	-6	0	-10
Is South Australian	-1	0	5	-7	-7
Average	**-6**	**-5**	**-6**	**-6**	**-10**

[48] To simplify presentation, statistical significance results have not been included in the table. The results were as expected, with the larger the difference, the more likely the result was statistically significant. As the purpose is to replicate the findings from Study 1, the relevance of significance tests decreases.

Discussion of Table 11

For the majority of attributes, mention of the brand coincided with a lower switching rate. This was consistent across all brands and replicated what was evident for Study 1, both qualitatively and in the general magnitude of the difference in switching rates.

In this study there were more attributes that appeared to have little or no differentiation in the switching rates. These were also relatively consistent across brands and were ones with a 'parochial' element in them, *conveniently located branches* and/or *a business partner*. The parochial attributes have response patterns that suggest they are descriptive, while the latter two were considered 'evaluative' attributes. Therefore both evaluative and descriptive attributes can have little or no effect on consumer switching.

There does also appear to be some consistency in the top ranking couple of attributes across all brands. The attributes *appropriate fees and charges*, *responds quickly to our needs*, *guaranteed investment growth* and *good interest rates* have a high differential in switching rates across multiple brands. Again this is a mix of attributes that could be considered descriptive and evaluative.

There is perhaps some evidence that *helps SA rural community* is a determinant attribute specifically for Brand 5. Interestingly, this finding replicated that for Study 1 where there was one attribute for the smallest brand that had a differential difference in the switching rates. This suggests that either special loyalty attributes are only evident for small brands in the market, or that these differences may be simply sampling variation. This brand does have a strong rural presence, but so does Brand 2 (where this relationship was not evident).

Overall summary – Study 1 and 2

The results from Study 2 generally support the findings from Study 1. Namely that there is a positive relationship between mentioning a brand for a non-negative attribute and loyalty to that brand, but that this relationship is generally the same for most attributes. The distinction between determinant and non-determinant attributes seems quite arbitrary.

This is consistent with the Study 1, which found only one deviation for one brand on one attribute out of all possible combinations. Given that this now means a total of 124 combinations have been tested to find potentially 2 'winning' attributes this suggests that should they exist, winning attributes are exceedingly rare. It seems intuitively illogical that over the 8 brands (some of which are very successful) only two would have 'winning' attributes. The most likely explanation for these two deviations is sampling variation, particularly as there is not even a post hoc explanation for the results.

There was also no distinct difference in the results for descriptive versus evaluative attributes.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

Hypothesis 2 sought to identify if there were any particular positions (represented by combinations of attributes) that were more highly associated with loyalty than other positions. To test this hypothesis, 5 image 'positions' were developed. Similar to what was undertaken in Study 1, 3 of the positions developed were based on a common theme and two were based on combinations of different attributes. Table 12 details the attributes contained within each position.

Table 12: Positions tested in Study 2

Position	Attributes included
Business orientated	Supports business community Business minded A business partner
Pricing	Good interest rates Appropriate fees and charges Guaranteed investment growth
Good management	Competent in financial management Guaranteed investment growth A safe bank
Combination 1	Helps local economy Business minded Competent in financial management
Combination 2	Conveniently located branches Good interest rates Responds quickly to our needs

Results

Table 13 shows the results across all brands. The figures can be interpreted in the following way. *The absolute difference in the switching rate of those who mentioned Brand 1 for all attributes in the 'business 'position and those who did not mention the brand for any attributes in the 'business' position is 14 percentage points.*

Table 13: Difference in switching rates by positions

	Brand 1 Difference in percentage points	Brand 2 Difference in percentage points	Brand 3 Difference in percentage points	Brand 4 Difference in percentage points	Brand 5 Difference in percentage points
Business	-14	-4	-10	-11	-15
Pricing	-13	-15	-16	-17	-16
Good Management	-13	-6	-13	-3	-24
Combination 1	-8	-6	-9	-10	-22
Combination 2	13[49]	-1	-4	-15	-18
Average	**-12**[50]	**-6**	**-10**	**-11**	**-19**

Discussion of Table 13

In general perceiving the brand to be in a specific position coincided with a lower switching rate. However there was mixed evidence as to whether this is greater or the same in magnitude as was evident for individual attributes.

When examining the difference in switching rates, the single themed positions appeared to perform better than the combination positions. Of the single themed positions, pricing performed the best – having the highest difference in switching rates for three brands and second for a fourth.

[49] This is the correct figure, but probably due to sampling variation as there were less than 10 respondents who mentioned the brand for all attributes in this position

[50] This mean is calculated without the +13 figure

Conclusion and comparison of results with Study 1

Consistent with Study 1 was the finding that generally if any of the brands are perceived to be in any of the positions tested then the switching rate will be lower. However, there is mixed evidence as to whether this difference in switching rates is generally greater than was evident for individual attributes.

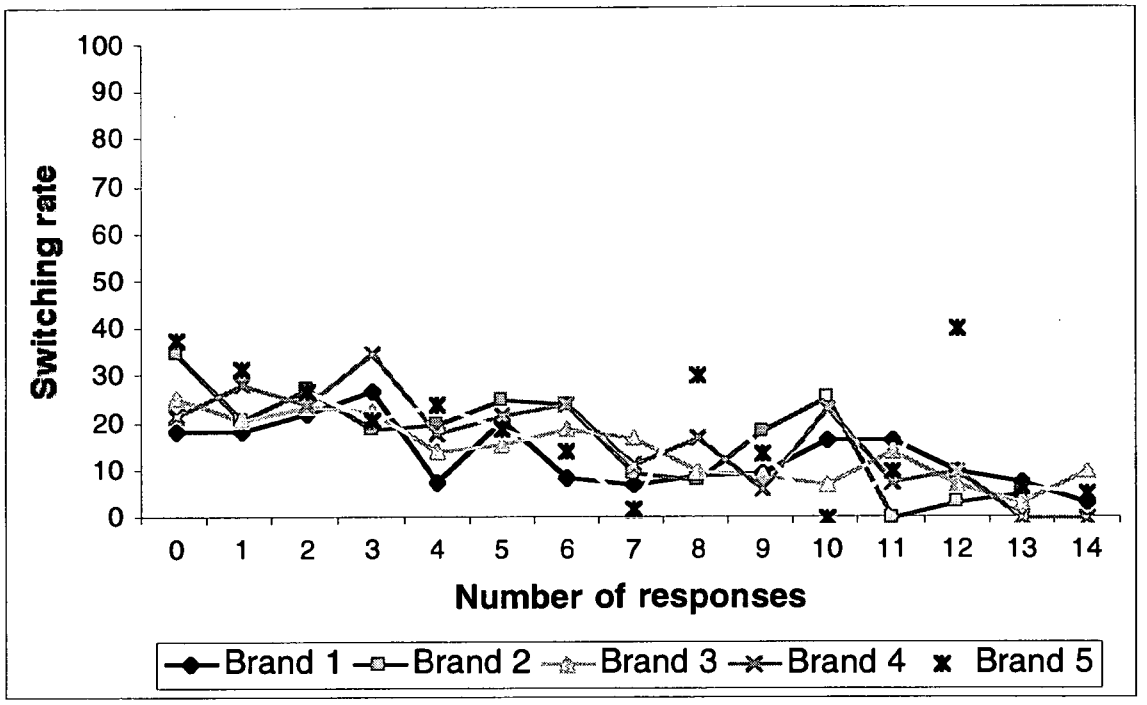
For this study the brands with the largest difference in switching rates were the 'smaller' brands, however the market share size differences is not as great in this industry, with the largest brand being 30% and the smallest brand being 14%. This may mean any share effects would be harder to detect.

For this study the single themed positions performed somewhat better. Although, in balance, looking over the two studies, it is difficult to clearly recommend any one strategy (let alone a single position) for positioning. All positions tested generally had a positive relationship with customer switching – regardless of their composition, suggesting that when being associated with a cluster of attributes is beneficial, the actual attributes themselves are (somewhat) irrelevant.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

To test hypothesis 3 a variable was created that represented the brand response level. For example at '6' are all the customers who mentioned the brand for 6 attributes, regardless of for which 6 attributes. Figure 2 shows the relationship between the switching rate and each level of brand response.

Figure 2: Brand response level and switching rate for Study 2



Discussion of Figure 2

Figure 2 shows a clear (apparently linear) relationship between the brand response level and customer switching rates. This is apparent for all 5 brands in the market. There is considerably more variation for Brand 5, but this is probably attributable to sampling variation. Particularly as it appears to be random rather than systematic[51].

[51] Systematic variation would suggest that there was a different relationship for this brand and would then lead to further investigation as to potential reasons for this.

Aggregate Regression

To further explore this relationship and compare it to Study 1, linear regressions were undertaken for each of the brands[52]. The aim (as advocated by Raaijmakers and Shiffrin 1992; Ehrenberg 1994) is to determine if there is a quantitative relationship of a similar magnitude. That is, does the rate of change of switching rate to loyalty appear to be similar to the -1 percentage point found in Study 1.

Once this is evident in several studies, it can be considered worthwhile to start building a generalised model. However, at this stage, I am reporting individual linear regression results.

Table 14: Linear regression results for Study 2 on Hypothesis 3

	No of points	Adj. R-square	B value	Constant	P-value
Brand 1	15	0.39	-1%	21	0.01
Brand 2	14	0.57	-2%	31	<0.01
Brand 3	13	0.77	-1%	26	<0.01
Brand 4	13	0.49	-2%	30	0.01
Brand 5	12	0.58	-2.5%	35	<0.01

Discussion of Table 14

The results show a positive relationship between the brand response level and loyalty. Additionally B values from the aggregate regressions suggest that the magnitude of the relationship is similar to what was found for Study 1 (see Table 8). The greater levels of random variation due to smaller sample sizes probably cause the lower R-squares. The apparent steeper slope of Brand 5 appears to be due to the lower mean at the lower brand response levels. I will not focus on this 'difference', as this is the brand with the smallest sample size out of the 8 tested at this stage and as such could be simply due to sampling variation. Thus, when a generalised model is developed, I will look for patterns in the residual to see if this brand is really 'different'.

[52] Points with fewer than 5 respondents have been omitted from the regression analysis

Comparison of Study 1 and Study 2 on Hypothesis 3

Study 2 is the first attempt to replicate the findings from Study 1. The objective was to look for two findings:

- do the same qualitative findings hold and if so,
- are the relationships of the same quantitative magnitude as was evident in Study 1.

The findings from Study 2 clearly replicate that which was evident in Study 1, both qualitatively and semi-quantitatively. This provides strong evidence that the findings in Study 1 are of substance, and not an artefact of that specific research.

Study 3: Insurance

This study was conducted in the Australian insurance market. A total of 5 attributes were examined. Four of the attributes were clearly evaluative, however one attribute *has products that provide complete cover* may be considered to be descriptive[53]. In this instance I chose the attributes based on past research for the sponsor conducted by other researchers and myself (separately). These attributes had been found to be appropriate for this market.

The switching measure is the Verbal Probability Scale that was used in Study 1. In this case customers were asked the likelihood of switching from their current provider for that product at the next renewal. The customers were located via company lists and were only customers that were renewing their insurance in the next month.

Extension from prior research

This study extends the previous two studies in that it is conducted in a market where consumers have a fixed point in time where they make a decision to renew or switch to another supplier. They are also sent renewal notices to remind them of this decision. This is different from the continuous service markets in Studies 1 & 2. I would expect that this difference should decrease the likelihood that Hypothesis 3 will be supported, as frequency effects were more noticeable when consumers were unaware that the attribute information they were exposed to was going to be used to make a decision between brands (Alba and Marmorstein 1987). In this situation consumers are aware that there is a renewal time and so are potentially processing information with this in mind.

---

[53] As this sample only consists of users of a single brand it is not possible to verify this classification empirically, however it is reasonable to assume that most people in the market would be aware of the product range of an insurance supplier

Having to recall the brand name from memory should not have any substantive effect, as this is the brand these customers currently use. It would be expected that this would be one of the first, if not the first brands recalled for all customers in the market (Cohen 1966). Thus it is not likely that consumers would 'forget' to mention their current brand.

The details of Study 3 are shown in Table 15.

Table 15: Study 3 specifics

	Study 2
Year conducted	1998
No of brands	1
Sample size	457
Data collection method	Telephone
Respondents	Residential end users
Image measure	Unprompted for brand
No of attributes	5
Country	Australia
Loyalty measure	Verbal probability scale
Purchase cycle	Renewal on an annual basis
Selection of attributes	Researcher
Structure of market	The dominant brand in the market

Due to there only being 5 attributes, hypothesis 2 (testing positions) is not included in this analysis.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand.*

Table 16 shows the switching rates for those who mentioned the brand for that attribute and those that did not and the difference in percentage points between the two groups.

Table 16: Hypothesis 1 results for Study 3

	Switching rate (mention)	Switching rate (no mention)	Difference
Has simple, easy to understand policies.	21	30	-9
Is competitive on price.	21	28	-7
Has a fair attitude to paying claims.	21	28	-7
Has products that provide complete cover	23	26	-3
Has conveniently located branches	25	24	-1

Discussion of Table 16

Table 16 shows that the difference in the switching rates between those who mentioned the brand and those that did not is similar to that which was evident in Studies 1 and 2, where there was generally under 10 percentage point difference.

Interestingly, a further similarity between the results is found in the lack of difference in the switching rates for the attribute *conveniently located branches*. This same attribute was used in Study 2 and Study 3. In both cases it had a non-significant (both statistically and interpretively) relationship with switching rates. This is a surprising result, as I would have expected this attribute, as a positive evaluative attribute, to have a positive relationship with loyalty. This finding reinforces the conclusion that the attributes with no relationship with loyalty may not be, at this stage, predetermined.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

Table 17 shows the switching rates at each of the number of times the brand is mentioned (ranging from 0 to 5). It can be interpreted as: *Those who did not mention the brand for any of the attributes had a switching rate of 30% while those who mentioned the brand for all 5 attributes had a switching rate of 18%.*

Table 17: Hypothesis 3 results for Study 1.3

Brand salience	Switching rate
0 times mentioning the brand	30
1 times mentioning the brand	31
2 times mentioning the brand	29
3 times mentioning the brand	30
4 times mentioning the brand	23
5 times mentioning the brand	18
P value	**0.004**

Discussion of Table 17

The relationship between the number of times the brand is mentioned and the switching ate found in Studies 1 and 2 is also somewhat evident in Study 3, whereby the more responses obtained by the brand, the lower the switching rate. In this instance the greatest differences in switching rates are from the 3 mentions to 5 mentions.

This is a further replication of the initial findings and extends them to a different market with an unprompted brand name collection technique. For the purpose of comparison with the other studies the B value from a linear regression is -2 percentage points and the r-square value is 0.75.

Comparisons between studies

The following section discusses the results across the three hypotheses for all three studies.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

This hypothesis was tested on 9 brands in three markets and across 129 different brand/attribute combinations. The linking of the brand with an individual attribute generally coincided with a lower switching rate. However, it was very hard to determine a specific cut off point where some attributes could be considered as 'determinant' in the sense of Alpert (1971). Using the same decision rule of statistical significance as the other studies results in all 18 attributes tested being considered determinant for Study 1. This is not particularly useful from a research or a management view in terms of understanding which are the specific brand attributes (if there are any) that drive consumer behaviour.

In the first two studies there were two attribute/brand relationships that appeared to be distinct in their relationship with loyalty. However, it is difficult to place much emphasis on these, as they were only 2 out of 124 different combinations tested, and both were evident for the smallest brand in the market. This rarity is unexpected rarity and the smallest brands are the ones most prone to sampling variation, particularly in the absence of even a post-hoc explanation for this.

There was not much really separating the difference in switching rates for the majority of brands on the majority of attributes, however there were some attributes for which there was no difference in the switching rates of those who mentioned the brand versus customers who did not. Thus, the overall conclusion is that while there are attributes that have no relationship with customer loyalty, of those that do, there is not much difference between them. It is also important to note that the attribute for which no relationship would be apparent is not immediately obvious. Attributes with a greater or lesser relationship with switching were not solely evaluative or descriptive in nature.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

Hypothesis 2 was tested across 8 brands in 2 markets over 49 different position/brand combinations. Of these 30 were single themed positions and 19 were combination positions. In general perceiving a brand to be in a specific position was associated with a lower switching rate. There was mixed evidence as to whether this difference in the switching rate was greater or the same as the difference for individual attributes. On balance it did appear to be better, particularly for the top ranked positions. This extends the findings previously stated by Unnava and Sirdeshmukh (1994) from increasing recall of

the brand name to having a greater effect on future behaviour. That is linking a brand to different attributes appears to have a greater effect than reinforcement of any single attribute.

There was no clear evidence as to whether single themed or combination perceptions were more effective. In Study 1 the Combination positions in general had a greater difference in the switching rates, where as in Study 2 it was the single themed positions, particularly the pricing position.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

Hypothesis 3 was tested across 9 brands in 3 markets. There appears to be a relationship between the number of brand attributes for which a brand is mentioned and the switching rate of those customer groups towards the brand. The more attributes for which the brand was mentioned, the lower the switching rate (ie the higher the loyalty). This relationship was the same qualitatively and semi-quantitatively – with the B values in the regression across the different brands in the order of 1 to 2 percentage points decrease in switching rate for each increase in the number of attributes mentioned.

The findings of Studies 2 and 3 replicate and extend Study 1 and suggest that the findings have substance (ie are not an artefact of the initial research) and are generalisable across the following key characteristics:

- Three different subscription markets;
- Residential and business customers;
- Data collection by mail or telephone;
- Markets with a fixed renewal time versus markets where customers can switch at any time.
- Prompted or unprompted collection of brand names.

This suggests that, when a brand/attribute link has a positive relationship with loyalty, it will generally be the same as any other attributes. There appears to be relatively few attributes that are not related to switching/loyalty (with 2 clearly evident in this research) – but there does into appear to be a distinct explanation why. This however, does not appear to have a substantive effect on the overall brand response level relationship.

Chapter 7: Brand image and switching behaviour

Chapter 6 explored the relationship between brand image responses and self-reported customer predictions of their own future loyalty. In this chapter I take the analysis one step further and look at the relationship between non-negative brand image responses and actual future behaviour (rather than probabilistic estimates). In this research future behaviour was collected either via internal records or re-survey of the customer.

Study 4: Telecommunications

This study was conducted in the Australian telecommunications market, the same market as Study 1. This sample is different to that used for Study 1 in that the focus is on customers of Brand 1 only. The total sample size in this analysis is 3805 business customers. The attributes are positive, evaluative and almost identical to that previously covered in Study 1. The exception is the attribute *leader* was omitted.

The research extends studies 1-3 as it uses actual behaviour as the dependent variable. This is important because of the relationship between frequency effects and subjective probabilities (Estes 1976; Estes 1976) which may mean that the findings of the previous studies may be an artefact of the dependent variable and not translatable to actual behaviour. Although subjective probabilities have been shown to be related to future behaviour and number of attributes have been shown to be related to subjective probabilities, while I would expect a relationship, it is important to not assume that number of attributes will be directly related to future behaviour. This provides a test of this.

This is an important extension as to date, no studies have used actual future market behaviour to test any, let alone all of the hypotheses presented here.

Classifying 'defectors'

The method for determining if a company was to be classified as having 'switched' was a 20% decrease in revenue accompanied by a decrease in level of service offered. Where this service information was not available, a minimum of 30% decrease was required for the customer to be classified as switching. The sponsor was an active participant in the formation of this decision rule and deemed it appropriate for classifying a customer as 'defecting' in this market. This also classified a realistic number of customers as defecting in this subscription market.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

This hypothesis was tested by cross tabulating mention of the brand for the attribute with the switching classification. Statistical significance was determined via the chi-square statistic. The results are shown in Table 18. The table is ordered by the difference between the proportion of those who did not mention the brand who switched and the proportion of those that mentioned the brand and switched. It can be interpreted as follows: *8% of those who said the brand had excellent customer service switched suppliers, while 12% of those who did not mention the brand for that attribute switched suppliers.*

Table 18: Difference in switching rate between those that mentioned the brand and those that didn't (n=3805)

	% switching rate (mention)	% switching rate (no mention)	Difference	P-value
Excellent customer service	8	12	-4	<0.001
Easy to do business with	8	12	-4	0.001
Trustworthy	8	11	-3	<0.001
Willing to listen	8	11	-3	0.002
Business partner	8	11	-3	0.03
Competitive prices	8	11	-3	0.02
Responsive	9	11	-2	0.01
Demonstrates value	9	11	-2	0.01
Flexible	9	11	-2	0.03
Committed to helping	9	11	-2	0.05
Pro-active	9	11	-2	0.05
Good value for money	9	11	-2	0.05
Expert	9	11	-2	ns
Provides insights	9	10	-1	ns
Informed	9	10	-1	ns
Innovative technologies	9	10	-1	ns
Solutions	10	10	0	ns

Discussion of Table 18

The results generally indicate that those that mentioned the brand for an attribute were less likely to be considered defecting than those that did not mention the brand were. This is to be expected given the results from Study 1.

There were 6 of the 17 attributes with either 3 or 4 percentage points difference. This is somewhat higher than the 'around' 20% of attributes as suggested by Woodside and Trappey (1992) and Alpert (1971). Of this top 6, 5 of these were in the top 6 based on the probabilistic estimates for this brand[54]. Thus this may suggest there are some attributes that are 'better' than other attributes.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

As was undertaken in Chapter 5, eight different positions (based on combinations of attributes) were created. Five of these were based on a single theme, while an additional 3 were based on combinations of attributes from a range of different areas. For consistency, similar positions were used as in Study 1, except for the attribute *leader*, which was replaced with the attribute *provides information for decision making* in the Expertise Hypothesis. The difference in the switching rates between those who perceived the brand to be in that position and those that did not was tested using Analysis of Variance (ANOVA). This is shown in Table 19, which is ordered by the 'difference' column - representing the difference in the switching rates in percentage points.

Table 19: Difference in switching rates for positions in Study 4

	Switching rate for those perceiving brand in position	Switching rate for those not perceiving brand	Difference	P value
Combination 1	7	13	-6	0.002
Service	7	12	-5	0.001
Combination 2	8	13	-5	0.01
Expertise	9	14	-5	0.07
Relationship	8	12	-4	0.001
Combination 3	8	11	-3	0.10
Pricing	8	11	-3	0.03
Information	8	11	-3	ns

[54] This reinforces the accuracy of probabilistic estimates in predicting future behaviour

Discussion of Table 19

Comparing the results for each position, it is possible to see that those who perceived the brand to be in that particular position were less likely to switch than those that did not. This difference was higher than was evident for single attributes for the best performing positions.

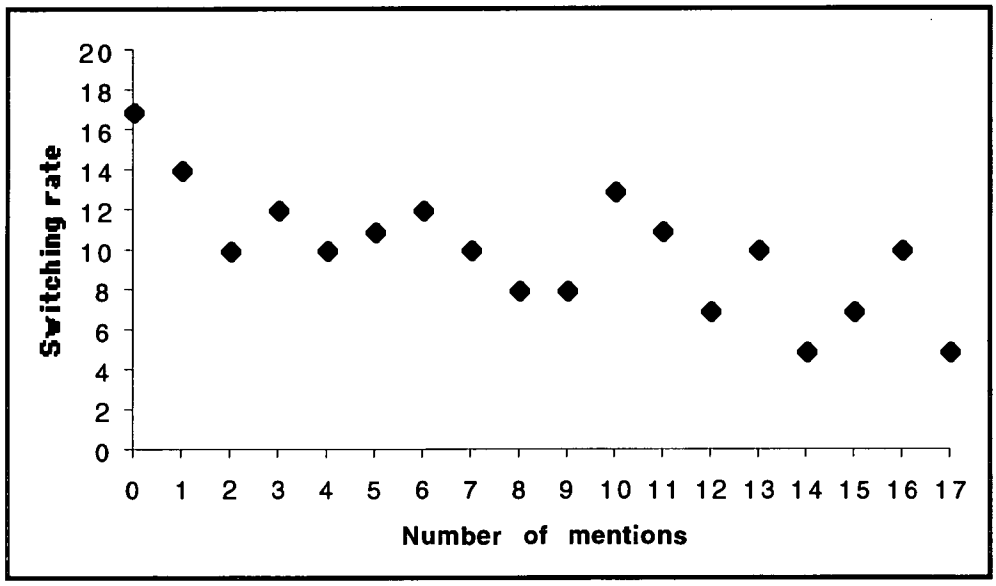
Three of the top four positions were the same as was evident for Study 1. However, the differences between the positions do not vary considerably and as such, the highest difference is only 1 percentage point from its next 3 rivals. This makes it difficult to confidently classify any specific position as better than any other position.

Additionally, those in the top four were equally from the 'single theme' and 'combination' positions. Therefore, unlike the results for probabilistic estimates, it is also not possible to differentiate based on this classification.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

To test this hypothesis, the brand response level was cross-tabulated to determine the proportion of switchers at each level of brand response. The switching rates at each of the levels are shown in Figure 3.

Figure 3: Switching rates at levels of brand response



Discussion of Figure 3

A greater proportion of customers that had a lower brand response level had switched than those customers who had a higher brand response level. As was undertaken in previous studies, a linear regression was undertaken to see if there is a similar quantitative relationship across the different data sets.

In this instance, the actual switching rate was about half that which was evidenced by the probabilistic switching estimate (10% actual cf 20% for Study 1). This may be due to the inaccuracy of the probabilistic measure and/or the effect of the decision rule to classify 'defectors'. In any event I would expect that the rate of change (B value) would be half that which was evident in Study 1. This would be a B-value of 0.5 percentage points. Fitting this model to the current data set the R-squared value is 0.5 and the intercept is 14.5%[55]. This r-square value is equivalent to the highest achievable when simply identifying the 'best fit' model for this data (in this instance the B value is –0.4 percentage points and an intercept of 13.5%).

This provides additional confidence in both the qualitative and quantitative findings for this hypothesis across all the data sets and instances tested.

[55] $P<0.001$

Overall Discussion: Study 4

This study tested the three hypotheses using actual behaviour as taken from company records. The results for each of the hypotheses are now detailed.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand.*

Hypothesis 1 was tested for a single brand across 17 attributes. The findings reinforce that which has been found for previous studies. Namely that those that mentioned the brand for an attribute were less likely to be considered defecting than those that did not mention the brand were.

There were 6 of the 17 attributes with either 3 or 4 percentage points difference. These attributes were relatively consistent with what was evident for probabilistic estimates. This suggests that perhaps there are some attributes that have a more distinct relationship with customer switching than other attributes. However, given that there are then an additional 7 attributes with 1 percentage point less in difference, making that distinction is based more on an arbitrary decision rule than any specific rationale as to why these attributes are better that those on the next tier.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

This hypothesis was tested for a single brand across 8 positions. These were the same positions that were used in Study 1 and consisted of 5 single themed positions and 3 combination positions. It was evident that those who perceived the brand to be in that particular position were less likely to switch than those that did not. This difference was higher than was evident for single attributes for the best performing positions. This reinforces what was found for Study 1.

Three of the top four positions were similar as was evident for Study 1. However, the differences between the positions were only one percentage point. This makes it difficult to confidently classify any specific position as better than any other position.

Additionally, those in the top four were equally from the 'single theme' and 'combination' positions. Therefore it is also not possible to differentiate based on this classification. This supports the findings in Study 1.

Hypothesis3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

This was tested for a single brand in the market across the range of possible mention from no mention at all to mention for all 17 attributes. It was evident that a greater proportion of customers that mentioned the brand on fewer occasions had switched than those customers who had mentioned the brand more often. This is the same qualitative relationship as has been found in previous studies.

Additionally the quantitative relationship was very similar, particularly when the difference between the estimated (Study 1) and actual switching rate (Study 4) was taken in to account. As the brand response level increases the actual switching rate decreased by 0.5 of a percentage point.

Predictive versus causal relationships

It is acknowledged at this stage there is still little known about the causal nature of the relationship. This is because other factors, such as past defection may be correlated to the brand response level at that time and may be the 'real cause' behind future defection. However, the extension of the correlations from cross-sectional data found in Studies 1-3 is a positive step forward. The next stage is to see if this predictive relationship extends to other data sets.

Study 5: Banking

In 1995 a quantitative self-completion survey was administered to decision-makers in small and commercial businesses in metropolitan and country areas. Potential respondents were telephoned and, once they had agreed and were deemed appropriate to partake in the study, they were mailed a questionnaire. The sample was randomly derived from the Electronic White Pages. The survey had to be completed by the individual and posted back to the researcher. One thousand questionnaires were sent out and 560 were returned completed and useable. Some respondents were given up to three telephone reminder calls before this sample size was achieved. The first survey had a data collection period from 6 November to 12 December, 1995.

In 1997, another quantitative self-completion survey was administered to the same sampling frame. Firstly, respondents who participated in the 1995 survey were contacted then the sample was topped up with a random selection of respondents from the White Pages. Data was collected in February 1997. 1471 questionnaires were sent out and 645 were returned completed and useable, with again up to three telephone reminder calls made. A total of 238 respondents participated in both surveys. This research focuses on these 238 for whom individual level data is available.

Of this 238, 23 were identified as having changed their main supplier[56] during this time period. They were identified through a cross-tabulation of an identical question in each phase: Who is your main supplier? This approach avoids the issue of people claiming to have switched brands when they still identify the same brand as their main supplier. This equates to an 11% switching rate over the time period of18 months.

In addition, a similar study was conducted on a smaller scale. In this study a total of 153 respondents were re-contacted and as such were available for this research. These respondents came from the same sampling frame were asked the same attributes in the same manner. Therefore they were considered suitable to add to the study. Of these respondents, 6 were identified as having switched during the time period. This equates to a 4% switching rate over the 6 month time period. This suggests that both time periods had the same rate of switching, with 4% switching every 6 months and provides further evidence of the comparability of the studies. It also suggests that any conditioning effects from the re-interview did not affect responses.

A total of 14 non-negative attributes were tested over 5 brands. Again the actual switching rate is about half that of the probabilistic estimate. The same image measure was used as previously.

[56] Main supplier was used because although typically businesses have 100% of their business with one supplier, there are opportunities to have multiple suppliers.

Extension from prior research

Apart from the extension conditions that were evident from Study 2, this study uses self-reported change of main supplier. This is designed to be a more 'rigorous' change in behaviour than was used to classify defectors in Study 4. Thus I would expect that any effects would be magnified.

The main limitation of this particular study is that, due to small sample sizes in the number of defectors for each brand, differences were examined overall rather than within brand. That is, the analysis is between mention of the main brand and switching away from that main brand, regardless of what that main brand is. Thus these analyses are looking for 'overall' winning attributes and positions.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes*

To test this hypothesis mention of each of the attributes for their main brand was cross-tabulated with whether a customer had switched from their main brand. Table 20 shows the average switching rates for each of the groups across all of the brands for each attribute.

Table 20: Average in switching rate across all brands for each attribute for Study 5

	Average switching rate (mention)	Average switching rate (no mention)	Average difference
Business partner	3	9	-6
Appropriate fees and charges	4	9	-5
Helps SA rural community	5	9	-4
Competent in financial management	5	9	-4
A responsible bank	6	9	-3
Helps SA economy	6	8	-3
Business minded	7	9	-2
Responds quickly to our needs	7	9	-2
Good interest rates	7	9	-2
A safe bank	8	8	0
Guaranteed investment growth	8	8	0
South Australian	8	8	0
Conveniently located branches	9	7	+2

Discussion of Table 20

In Table 20 the expected relationship, whereby those who mentioned the brand were less likely to defect, was evident. Although the difference in defection rates between the two groups (mention the brand, didn't mention the brand) is generally not statistically significant, the findings have value because the direction and magnitude of the difference replicates that which was evident for Study 2[57]. This is contrary to expectations that the classification of 'defector' in this study would result in a more pronounced effect.

[57] Which suggests that lack of statistical power is the reason for the non- statistical significance of results

In this instance there is also some consistency in the ranking of the attributes with that which was found for Study 2. Although aggregation makes across study comparison more difficult it is possible to see that at the bottom of the table are the two attributes *South Australian* and *convenient located branches* both have little or no relationship difference in their switching rates.

It is more difficult to see consistency in the top ranking brands, but again, aggregation maybe masking this.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

To test this hypothesis, six different 'positions' were created - using different combinations of attributes. As in Chapter 6 - two types of positions were developed. The first three were based around a central theme and the other three were combinations of attributes representing different qualities. In this instance a different set of position were tested than were used in Study 2. The reason for this is to expand the range of testing, particularly given that the aggregation performed here makes it difficult to undertake specific cross study comparisons. I now test additional combination positions to see if more consistent results are obtainable as to which is better, combination positions or single themed positions.

Table 21: Positions tested for Study 5

Position	Attributes included
Pricing	Good interest rates Appropriate fees Competent in financial management
Parochial	Helps local economy Supports business Helps local rural community
Relationship based	Responds quickly Business partner Responsible
Combination 1	Good interest rates Responds quickly Supports business
Combination 2	Competent Business partner Appropriate fees
Combination 3	Responsible Helps local rural community Responds quickly

Results: Hypothesis 2

The aggregated results for all 5 brands in the market place are shown in Table 22.

Table 22: Differences in switching rates by position for Study 5

	Switching rate for those perceiving brand in position	Switching rate for those not perceiving brand in position	Difference
Combination 3	3	9	-6
Pricing	3	9	-6
Relationship	5	9	-4
Combination 1	5	9	-4
Combination 3	5	9	-4
Parochial	5	9	-4

Discussion of Table 22

It is evident that those who perceived the brand to be in a particular position had a lower switching rate than those customers that did not. This reinforces previous findings for Studies 1,2 and 4 (which tested this hypothesis).

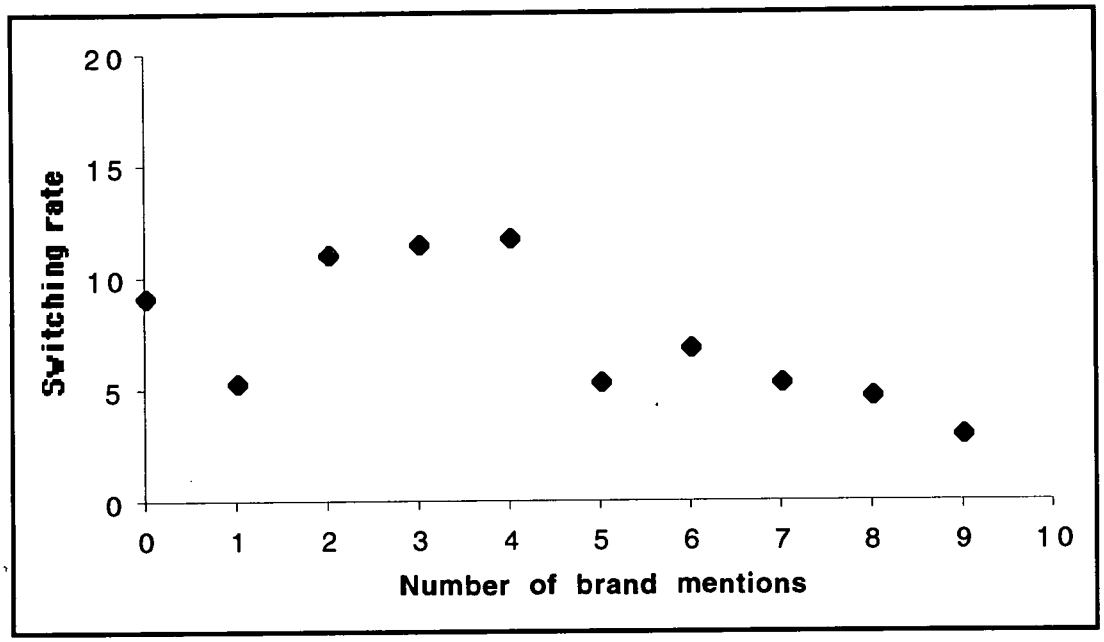
Both the combination and single themed positions performed equally well – making it difficult to distinguish between the two – although the pricing positions again was equal highest in terms of difference in switching rates.

When the difference between the actual and probabilistic switching rates are controlled for, the size and the distribution of the differences are similar to that which was evident for this hypothesis in Study 2. These findings therefore replicate that study.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

To test this hypothesis, the switching rate at each level of brand response was determined. As the points where respondents mentioned the brand greater than 9 times had 5 or less respondents, these have been merged together[58]. This is shown in Figure 4.

Figure 4: Average switching rate at each level of brand mention for Study 5



Discussion of Figure 4

The results show that as the response level for the brand increases the switching rate decreases. This replicates qualitatively what has been found in previous studies. In order to examine the quantitative nature of the relationship, again a linear regression was undertaken. In this instance the actual switching rate again half that of the probabilistic estimates. Therefore I would expect to see a B value about half that which was evident in Study 2. The Study 2 B values ranged from –1 to –2 percentage points. Therefore the expected B value is around the -0.75 percentage point level. The best-fit model has a B value of -0.7% and an r-squared value of 0.31[59]. Because of the variation in the individual versus the aggregated analysis make it difficult to determine what precisely is the best overall model to fit, I am comfortable this is a sufficiently similar quantitative results to say that the model generalises to this data set.

---

[58] This is probably a function of this being a self completion mail survey where respondents generally respond to fewer attributes than in a telephone survey when they are specifically prompted for a response for each attribute.

[59] P=0.06

The stability of brand response level at individual level

One of the identified limitations of brand image data is its lack of stability at individual level (Castleberry, Barnard et al. 1994; Dall'Olmo Riley, Ehrenberg et al. 1997). This lack of stability makes any activity that categorises people according to their individual responses problematic. Therefore, it is of little use to identify an alternative measure with (what looks like) a relationship with future customer behaviour, if it also suffers from the same limitation.

Testing for Stability over time

To test this, the number of responses for each individual, for each time period were correlated together. This was undertaken at brand level, that is the number of responses for 1995 was correlated with the number of responses for 1997. The sample size for this analysis is 238.

Table 23: Stability over time for Study 5

Brand	Correlation
Brand 1	0.92***
Brand 2	0.92***
Brand 3	0.94***
Brand 4	0.92***
Brand 5	0.94***

*** $p<0.001$

The results show high correlations for each brand between the two time periods. This suggests high stability of the number of responses. To test for the instability at individual level, the repeat -rates for each question between phases were calculated to check to see if this was simply an artefact of the research and this data set was an exception to previous recorded instabilities. The repeat rate refers to the proportion of those who mention a brand in 1995 who also did in 1997. On average, the repeat rate is 47% for respondents naming the same brand for a certain attribute across the two time periods. This finding supports the previous research pointing to an inherent instability in image responses at an individual level. It also highlights the positive finding for the stability of the number of attributes in that it is a distinct concept from the individual responses.

Overall discussion: Study 5

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand.*

The results indicated that those who mentioned the brand were less likely to defect. This is the relationship I would expect given previous results.

In this instance there is also some consistency in the ranking of the attributes at the bottom of the table where *South Australian* and *convenient located branches* both have little or no relationship difference in their switching rates. It was more difficult to see consistency in the top ranking brands, but aggregation maybe masking this. Thus it is difficult to ascertain that any single attribute is performing better than any other attributes across all brands in the marketplace.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

Customers of a brand who perceived that brand to be in a particular position had a lower switching rate than those customers that did not perceive the brand to be in that position. This reinforces previous findings for Studies 1, 2 and 4.

Both the combination and single themed positions performed equally well – making it difficult to distinguish between the two – although the pricing positions again was equal highest in terms of difference in switching rates. This is despite testing different combinations of attributes in this research.

Hypothesis 3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

The results show that as the response level for the brand increases the switching rate decreases. This replicates qualitatively what has been found in previous studies.

The linear regression result provides a best-fit model has a B value of -0.7% and an r-squared value of 0.31[60]. This replicates quantitatively what was found in Study 2, when the difference in the overall switching rates in taken into account.

In contrast to what is evident for individual attributes, this measure was also highly stable over time.

[60] P=0.06

Study 6: Insurance

Again as there are only five attributes included in this study, analysis is limited to Hypothesis 1 (individual attributes) and Hypothesis 3 (brand response level). This study focuses on a single brand in a market where customers had a fixed renewal time 1 month after the interview. A follow up interview was conducted 1 month after renewal time to determine which of the customers had switched suppliers. A total of 515 respondents were included in this research. The brand image questions only formed a small part of a larger survey, which reduces the likelihood of conditioning effects. In addition, the switching rate of customers in this survey was of the same level as other studies that have been conducted in this market, which suggests that customer behaviour was not effected by participation in the research[61].

Customer switching was obtained through a follow up survey of the same respondents after their renewal period. They were identified by asking the same question about whom was their provider in the follow up questionnaire and cross tabulating that against the responses in the initial survey. Those that gave a different answer were classified as switchers. Respondents were accurately able to say who their initial brand for this product was, therefore it is likely that they would be just as accurate with the response in the follow up phase. Additionally, the switching rates to competitor brands were in line with what could reasonably be expected in this market given the market share of competitors. At this interview, 25 respondents reported a different provider for the same service.

This study extends the previous two studies in the same way that Study 3 extended Studies 1 and 2. In terms of 'defecting' classification, this study employs a more rigorous classification, in that these defectors are no longer using the brand at all for this product. Thus I would again expect this to magnify the effect if the classification is important.

[61] Ie customers were not more or less likely to switch suppliers because of participation in the survey prior to renewal

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes*

Table 24 shows the differences between the switching rates of those who mentioned the brand and those that did not for each of the 5 attributes tested.

Table 24: Switching rates by attribute mention for Study 6

	Switching rate (mention)	Switching rate (no mention)	Difference	P-value
Has simple, easy to understand policies	3	6	-3	0.10
Fair attitude to paying claims	3	6	-3	0.15
Conveniently located branches	4	6	-2	ns
Competitive on price	3	5	-2	ns
Has products that provide complete cover	3	4	-1	ns

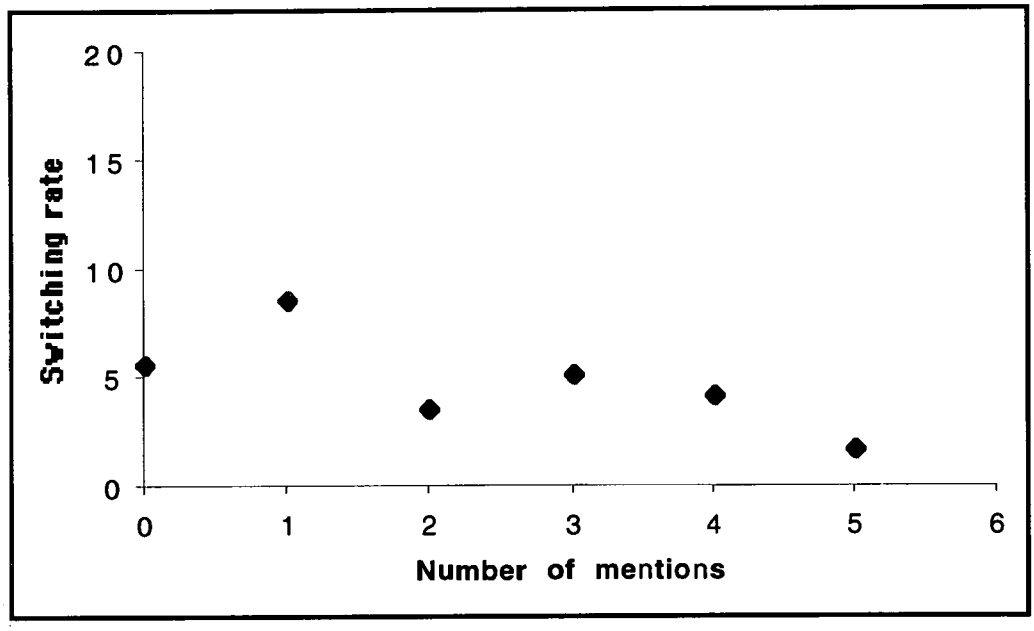
Discussion of Table 24

The switching rates are lower for those who mention the brand for each of the attributes. This is what I would expect given the results of previous studies. The attribute with the greatest difference in the switching rates is the same as for Study 3. However, given that there are only 5 attributes and the difference between this attribute and the next is minimal – it is difficult to place much importance on this.

Hypothesis3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

Again to test this hypothesis the switching rate at each level of brand mention was determined. The results are shown in Figure 5.

Figure 5: Switching rate for each brand response level for Study 6



Discussion of Figure 5

The results show that as the brand response level increases, in general the switching rate decreases. This replicates that which has been found for the previous 5 studies. To test to see if the same quantitative relationship holds again a linear regression was undertaken. Again the actual switching rate was less than half the probabilistic estimate – therefore I would expect to see a B-value less than half. The 'best-fit' model has a B value of -0.9% and an r-squared of 0.40[62]. This is in line with what could be considered a replication of the quantitative findings.

[62] P=0.11 – predominantly due to the low switching rate at the 0 mention level. This is also the point with the fewest respondents (n=19).

Stability testing

To further test the usefulness of this construct, the stability of the number of times the brand is mentioned over time was examined. The correlation between the two time periods was 0.45 ($p<0.001$). This is lower than was evident for Study 5. The average repeat-rate for individual attributes was 54%. However, it should be noted that for 76% of respondents the brand response level in the second wave was equal to or within one attribute mention (either higher or lower) than in the first phase.

Overall discussion: Study 6

The key differences in this study are that the brands were elicited unprompted and the customers had a fixed renewal time, 1 month from the date of the individual interview. The more rigorous classification of switchers was expected to increase the magnitude of any relationship between brand mention and switching.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes*

This was tested for a single brand over 5 attributes. As expected, the switching rates were lower for those who mention the brand for each of the attributes. While the attribute with the greatest difference in the switching rates is the same as for Study 3 the difference between this attribute and the next is minimal – it is difficult to place much importance on this. The more rigorous classification did not appear to have an effect on the results.

Hypothesis3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

The results replicate the previous 5 studies, namely that as the number of mentions increases, in general the switching rate decreases. The quantitative relationship was also evident with a B value of -0.9% and an r-squared of 0.40. Therefore the results for previous studies in this thesis are replicated. However, the stability over time of the number of responses was not as high as was evident in Study 5. This may be due to the number of attributes or the fact that the brand mention was collected unprompted (making it more prone to fluctuations).

Overall discussion – Studies 1-6

The previous 6 studies tested the three hypotheses developed in Chapter 5 using both probabilistic estimates of switching and actual switching behaviour. In two cases actual switching behaviour was determined via re-interview, while in Study 4 internal company records were used. In the studies where re-interviews were undertaken (ie studies 5 and 6), stability at individual level was also tested.

Hypothesis 1: *There are single attributes that, if linked by the consumer to the brand, will be associated with customer loyalty to that brand more than other attributes.*

The results for this hypothesis did suggest that mention of a brand for a non-negative attribute was generally positively related to customer loyalty. That is, customers who mentioned their brand had a lower switching rate than those that did not. This finding has been replicated across all studies.

However, it is extremely difficult to determine if there are attributes that could be considered determinant, in the sense of Alpert 1971 and Woodside and Trappey (1992) in that they specifically drive brand choice. The reason for this is:

- The lack of consistency in the highest ranked attributes across brands in a single market;
- The lack of consistency in the top ranked attributes when comparing the results for probabilistic estimates and actual behaviour; and
- The general lack of a clear difference in the difference in switching rates between attributes for an individual brand.

There were two attribute/brand switching differences that could be considered to be substantively different, which, given the number of brand/attribute combinations tested suggests that these instances are very rare. However, in both cases they were for the smallest brand in the market and thus make it more likely that the result was simply due to sampling variation.

Therefore, on balance, it seems that there is little evidence that determinant attributes exist. This would suggest that the results which said about 20% of attributes were determinant and other attributes were not because they failed statistical significance tests (or did not come up in multiple regression models) came to those conclusions based on to lack of statistical power and/or colinearity.

However, it is clear there are some attributes that have no relationship with customer switching. These were the attributes that produced the most consistent results both between brands in a study and across both probabilistic estimates and actual behaviour. These were also not necessarily attributes that could be predicted beforehand as they were both descriptive and evaluative.

Hypothesis 2: *There is a particular subset of attributes that is positively related to customer loyalty more so than other combinations.*

The conclusions about Hypothesis 2 are similar to that for Hypothesis 1. It was evident that those customers who considered a brand to be in a particular position had a lower switching rate than those customers that did not consider the brand to be in that position. It was also evident that the difference in switching rates was generally greater for positions than it was for individual attributes. However, the lack of consistency of the specific results both across and between studies means it is difficult to determine:

- If there are any specific position that have a greater difference in their switching rates;
- If single themed or combination positions are better strategies to follow.

Therefore it is difficult to say that any specific positions are better for a brand to chose than any others. It seems as though any cluster of attributes is as effective as any other cluster.

Hypothesis3: *The more attributes to which a brand is linked the more likely that brand will be (re) purchased.*

This hypothesis was the most consistently supported across the 6 studies. For each study as the brand response level increased, the switching rate decreased. This rate of change was also consistent across studies and between the probabilistic estimates and actual switching. Variations to this relationship could generally be traced to small sample sizes at that point. This relationship as also found to be relatively stable at individual level, thus overcoming one of the limitations of the individual attribute hypotheses.

Chapter 8: Competitor response and customer switching

This chapter discusses the concept of competitor response level and research into the effect of competitor efforts on brand response. It then extends the research conducted in the previous 2 chapters to test if and how competitor response level is related to customer switching.

Companies spend a great deal of time and resources working out how their brand is perceived in the minds of consumers in the marketplace. Given the strong influence of (past) usage on perceptual responses, the most dominant message that usually comes out of brand image analysis is how each brand is perceived by the consumers that currently use it (Bird, Channon et al. 1970; Bird and Ehrenberg 1970; Barwise and Ehrenberg 1985).

In previous chapters the focus of discussion was on the factors that facilitate retrieval of brand information from memory (ie the cue used and the accessibility of the links). This section discusses the influence of competitor links on retrieval of brand information from memory. It tests if the relationship between brand response level and behaviour towards that brand can be extended to competitor response level and either behaviour towards the brand currently used, or behaviour towards a competitor brand.

Influence of usage on image responses

It has been established empirically that current users of a brand are more likely to give a brand image response than past users, who in turn are more likely to respond than non-users (Bird, Channon et al. 1970; Bird and Ehrenberg 1970). There are three main ways consumers can be exposed to information about a brand: using it, word of mouth and/or through marketing communications. Current users, in addition to the usage reinforcement, are more likely to see and watch the brand's advertising (Jones 1990). Therefore, any (particularly positive) perception of a brand that a customer is not currently using is unusual (relative to users).

At a very simple level the fact that customers are aware of competitors at all should be of some concern, as awareness is the first step toward any sort of consideration and subsequent purchase (Alba, Hutchinson et al. 1991; Rossiter, Percy et al. 1991). Cohen (1966) found that the brands that were most salient in consumer memory were the brands currently used, or the ones customers said they were most likely to switch to.

The competitive nature of the retrieval process

From an Associative Network Theory of memory perspective, retrieval of information from memory is a competitive activity. That is when a concept is activated, this activation travels to the concepts that are linked to the initial node. These concepts then compete with each other for retrieval into working memory (Raaijmakers and Shiffrin 1992). The more times a competitor is mentioned is an indicator of a more extensive network in memory and a higher probability of future retrieval. Particularly as both recency and frequency of past retrieval are major determinants of future retrieval (Anderson and Bower 1979).

The fan effect

The more concepts linked to the retrieval cue, the less likely the retrieval of each concept will be. For example a concept that has 10 other items linked to it will be slower to elicit one of them than a concept with only 5 items linked. This is referred to as the fan effect because, when the number of linked items increases, the activation is thought to 'fan out' along them (Heil, Rösler et al. 1994). Therefore the more concepts, the more the activation is divided up, thus the initial strength is diluted across more concepts. Or put simply – if there were two linked concepts 50% of the activation would be used to retrieve each. If there were 10 linked concepts, then only 10% of the activation would travel to each linked concept. Thus in the latter example it is likely only a few items would be sufficiently strong to be retrieved.

This suggests, therefore, that the more competitors that are linked to brand attributes, the lower the likelihood the brand will be retrieved for those attributes.

These theories explain why a high competitor response level in general, should coincide with a higher likelihood of switching from the brand currently being used. Thus I would expect overall competitor response level to have a negative effect on loyalty to the existing brand.

Competitor brand inhibition effects

It has also been shown that a link that is highly salient can have an inhibiting effect on the retrieval of competing concepts (Alba and Chattopadhyay 1985). The hypothesised process behind this is that if a concept is particularly salient, then it will continue to be retrieved every time a consumer tries to think of another brand. Over time, the activation[63] is finite and will be 'used up' before the competing brands are retrieved. This approach suggests a 'sampling-with-replacement' idea (Rundus 1973) where retrieval of items even in the immediately prior retrieval does not discount the concept from being the next item retrieved from the same set. In a series of 6 experimental conditions where the salience of the brand was manipulated and then subjects were the asked to undertake a recall task, Alba and Chattopadhyay (1985) found a significant difference in the number of brands recalled. An example of the results is shown in Table 25.

Table 25: Sample of results from Alba and Chattopadhyay (1986)

	No of brands recalled in Control group	No of brands recalled in Salience Enhanced group
Experiment 1 - shampoo	10.4	8.9
Experiment 2 - coffee	5.0	3.8
Experiment 4 – Nasal decongestants	5.4	3.2

Table 25 shows clearly that the control groups recalled a higher number of brands than those in the salience-heightened groups. This research was also conducted in situations where subjects were given multiple cues (Alba and Chattopadhyay 1985). In this instance there was also inhibition of the retrieval of other brands.

This research shows another way in which competitor response can have a negative influence on retrieval of the brand, and as such may be positive related to (ie increase the likelihood of) customer defection. It also suggests that this effect of competitor response can occur across multiple/all competitors or just for a specific competitor.

[63] Which as discussed in Chapter 4

Competitor advertising effects

The purpose of competitor advertising (from the competitor's perspective) is to generate awareness of an alternative, and to build links between relevant brand attributes and the competitor brand name. This should then increase the likelihood that the competitor brand will be retrieved in a future choice situation. This is a difficult task – it has to fight against the inherent advantage of the 'incumbent' brand in both the recency and frequency influences on retrieval. Hence why response levels of non-users are much lower than users (Bird and Ehrenberg 1966).

Burke and Srull (1988) in a series of experiments looking at the effects of competitive advertising on brand recall, found the same style inhibition effects previously found from part list cuing (Alba and Chattopadhyay 1985). They also found that repetition of the same advertisement only had a positive effect of recall of the brand name when there were no competitive ads present. This finding was supported by Unnava and Sirdeshmukh (1994).

It has also been found that the greater the number of advertisements for competing brands to which a consumer is exposed, the less likely they will recall any specific brand's advertising (Keller 1991). However, Kent and Allen (1994) found this did not occur when the consumer was highly familiar with the target brand.

These pieces of research suggest that exposure to competitor advertising (and the building of competitor response level) can dilute the effect of a brand's advertising and hamper the prospects of the current brand being chosen at a later point in time. Thus it could be expected that the more competitor activities to which a person is exposed, the less effective their current brand's advertising will be and the more likely the customer will switch brands.

Frequency effects for competitor brands

Given the generalisability of the automatic effects of frequency cited by Hasher and Zacks, it would be expected that any influence of exposure to brand information on brand response level and subsequent behaviour should be extendable to exposure to competitor information, competitor response level and subsequent behaviour towards that competitor. This would however suggest that competitor response level was related to future behaviour towards that competitor brand as frequency effects refer to exposure to and item and behaviour towards that item .

Discussion

There appears to be little work that looks at the effect of competitor perceptions on customer behaviour, with the majority of research looking at the effect of competitor activities on ad or brand recall. However, the research specifically on competitor efforts to date suggests that the relationship between brand response level and customer switching should extend to competitor response level. It can be hypothesised, from the results presented here, that competitor response level will have a negative effect on brand loyalty/repurchase. This effect can work in two ways. The first is that the response level for competitors can inhibit brand response, and as such customers are less likely to chose that brand. This would suggest that the greater the overall competitor response level the less likely the customers will chose that brand, however it does not suggest which brand they would chose. Alternatively, higher response level of a specific competitor may suggest that the customer is likely o switch to that competitor in the future (and a by-product of that is that the customer is less likely to purchase the existing brand).

Hypothesis

There are two research hypotheses that come out of the prior research (both external and in this thesis). These are:

Competitor Hypothesis A: The higher the response level from an individual competitor the higher the likelihood of defection.

Competitor Hypothesis B: The higher the overall competitor response level the higher the likelihood of defection.

Individual competitor response level refers to the number of times an individual competitor is mentioned and the overall competitor response level refers to the total number of times competitor brands are mentioned, regardless of for which competitors.

The studies used in this analysis

The studies used in this analysis are the same as were used in Chapter 4-6. As these markets are subscription markets with customers generally ascribing a large proportion of their share of category requirements to one brand, competitor brands are brands that are not currently used by consumers for this product (Sharp and Wright 1999). This is an important control. To check this there should be a markedly lower number of times competitor brands are mentioned in comparison to the number of times the brand currently used is mentioned.

Study 7: Telecommunications

The data used in this analysis was the same as was used for Study 4. As the indicators of switching were taken from internal records, the information about to which the customers have switched to was not available. Therefore, the analysis for this data set is based on all customers being tested for mention of all competitors. However, it is known that generally under stationarity, customers switch to other brands in line with the share of those other brands (Ehrenberg 2000). Therefore it would expect most of the defectors to go to the largest competitor brand and this to decrease down to the smallest brand in line with market share.

Descriptive versus evaluative attributes

All of the attributes used in this study are evaluative. Therefore they all have an equal (albeit low) likelihood of being mentioned by non-users. Additionally respondents were prompted for brand names and as such it is unlikely that non-mention of the competitor brand is simply due to 'forgetting'.

Results: Telecommunications

The results for Study 7 are shown in Table 26.

Table 26: Competitor response level and switching for Study 7

Customers of Brand 1 mentioning....	Mean number of times brand is mentioned by switchers	Mean number of times brand is mentioned by non-switchers	Differ-ence	P-value
Own brand	*8.4*	*9.4*	*-1.0*	*0.001*
Competitor 1 mention	4.9	4.1	0.8	0.001
Competitor 2 mention	1.1	1.2	-0.1	ns
All competitor brands	8.0	7.2	0.8	0.07

Discussion of Table 26

It is evident that those who switched brands mentioned Competitor 1 more often than those who did not switch brands did. This is what I would expect if individual competitor response level was related to future switching.

While the difference for Competitor 1 was clearly evident, after that the relationship was not apparent. This is presumably because the smaller competitor brands are rarely mentioned. These competitors also have only a few likely to be switching to them and (in line with Double Jeopardy (McPhee 1963)) even the (likely) switchers do not mention that specific competitor very much.

In Table 26 it is also evident that mention across all competitor brands is actually less 'powerful' than mention for Competitor 1 by itself. If responses for this competitor are removed, and the overall competitor response level recalculated, then there is no difference between switchers and non-switchers (both having a mean of 3.1). Thus the significant result for overall competitor response is simply an artefact of the effect of the individual competitor response level.

This suggests that the relationship between competitor response level and switching is linked to mention of a specific competitor and switching to that competitor. This competitor has about twice the market share of its next rival (25% cf 12%) – therefore it would be expected that most of the defectors went to this brand. This is explored further in the next two replications, where information about to which brand customers switched is available.

Study 8: Insurance

The data used in this analysis is the same as was used in Study 6. One month before and after renewal customers of an insurance company were called up and asked about their perceptions of the brand (amongst other questions).

Unprompted data collection

In addition to the extension conditions mentioned previously, it is expected that, unlike brand response level, competitor response level will be affected by unprompted data collection. This data collection technique should make it more difficult for competitor brands to be mentioned, and thus, when they are, I expect that the response level will have a larger difference in the switching rate.

Results

Table 27 shows the relationship between customer switching and both the individual competitor response level and overall competitor response level. The maximum number of times any brand could be mentioned is 5.

Table 27: Competitor response level and switching for Study 8

	Mean number of times brand is mentioned by switchers	Mean number of times brand is mentioned by non-switchers	Differ-ence	P-value
Own brand	*2.8*	*3.4*	*-0.6*	*0.01*
Competitor 1	1.8	1.2	0.6	ns
Competitor 2	1.3	0.4	0.9	0.01
Overall competitor	4.4	4.5	-0.1	ns

Discussion of Table 27

The results show that those who switched to a competitor were initially more likely to mention competitors more often than those that did not switch to a competitor brand. This is what I would expect and replicates the findings from Study 7. However, the difference is generally equivalent to that which was evident in Study 7 – therefore the unprompted data collection did not have the expected effect on the magnitude of the results.

As expected, Competitor 1 (the larger brand) had a higher response level than Competitor 2, however the differential between switchers and non-switchers is much higher for Competitor 2.

The results for the individual brands provide further evidence that those who switched mentioned the individual competitor brand more often than customers who stayed with their original brand.

Examining the results for overall competitor response level it is evident that this is the same for both those who switched and those that stayed. This suggests that the relationship between competitor mention and loyalty/switching is related to the response level of a specific competitor, rather than overall response level of competitors.

Further analysis of individual competitor response level

In order to check the relationship between individual competitor was mentioned and switching, those who switched were divided into groups according to which brand they switched. It would expected that:

Competitor Hypothesis C: Customers who switched to a specific competitor should have a prior higher response level for that competitor brand than their response level for the competitor brand they had not switched to.

Competitor Hypothesis D: Customers who switch to a particular competitor should have a higher competitor response level than the competitor response level of those who switched to another competitor.

The results of this analysis are shown in Table 28.

Table 28: Competitor response level and switching to a specific brand

	Switch to Brand 1 (n=12)	Switch to Brand 2 (n=9)
Switch to that competitor brand	1.8	1.3
Switch to other competitor brand	1.5	0.6
Non switchers	1.2	0.4
P value	ns	<0.01

Discussion of Table 28

A clear trend is evident whereby the response level for a particular competitor brand is mentioned is highest for those who switched to that brand, then slightly lower for those who switched to another brand and lowest amongst customers who did not switch brands. This supports Competitor Hypotheses C & D.

Study 9: Banking

This analysis draws on the same sample that was utilised in Study 5. In this instance respondents who switched were categorised according to the brand to which they switched (regardless of which brand was their previous[64]). ANOVAs were then undertaken to see if the people who were non-users and switched to a brand had a higher competitor response level (both individual and overall) than non-users who didn't switch to that brand. The table can be interpreted as (for example): *for those who switched to Brand 1, the difference in the competitor response level for Brand 1 was 0.7 higher for those who switched brands than for those who did not*[65].

Table 29: Competitor response level and switching for Study 9

	Switched to Brand 1 (n=6)	Switched to Brand 2 (n=8)	Switched to Brand 3 (n=7)	Switched to Brand 4 (n=6)
Difference between switchers and non-switchers[66]	**0.7**	**0.3**	**0.5**	**-0.5**
P value (switchers cf non switchers)	0.08	ns	0.09	ns
Difference between those that switched to that competitor and those that switched to another competitor	**0.9**	**0.6**	**0.7**	**-0.2**
P value switch to brand cf switch to other brand	0.03	0.05	0.04	ns

[64] No respondents switched to Brand 5

[65] The small sample sizes mean that it is difficult to achieve a statistically significant result at the 0.05 level. However, as the results are used to replicated previous findings and I am looking for results that are similar to previous (ie I know what to expect), the relevance of statistical significance decreases.

[66] A positive score indicates a higher competitor response level.

Discussion of Table 29

Apart from those who switched to Brand 4[67], the results are as expected. Those who switched to a competitor mentioned that competitor more times than those who did not switch, or who switched to another competitor.

Descriptive versus evaluative attributes

Descriptive attributes were also included in this analysis. I would expect overall competitor response levels to be higher than was evident in previous studies (as descriptive attributes are more likely to be mentioned by non-users). However, if frequency effects are independent of the semantic content of the attribute then I would not expect any difference between descriptive and evaluative attributes.

Tests were undertaken to see if there was any difference in the effects for descriptive versus evaluative attributes. Using the classification of attributes identified in Chapter 6, tests were undertaken to see if the differences between those who switched to a specific brand and those who switched to another brand vary according to classification of the attribute.

Table 30: Competitor response level differences by type of attribute

	Switched to Brand 1 (n=6)	Switched to Brand 2 (n=8)	Switched to Brand 3 (n=7)	Switched to Brand 4 (n=6)
Descriptive attributes	**1.1**	**0.3**	**0.3**	**0.1**
P value	0.03	0.11	0.12	ns
Evaluative attributes	**0.3**	**0.5**	**0.7**	**-0.2**
P value	0.33	0.05	0.06	ns

Discussion of Table 30

There does not appear to be any conclusive evidence to support differences based on evaluative or descriptive attributes. For brand 1 the difference was greater for descriptive attributes, for Brands 2 and 3 the difference was greater (but not substantively) for evaluative attributes. Therefore there does not appear to be any clear pattern that would lead to the conclusion that one was more likely to show a difference than the other type. This provides additional evidence as to the effect of frequency as its automatic nature would suggest that the type of attribute should not matter.

[67] A result that was also non-significant

Overall number of competitor mentions

For this analysis the overall competitor response level was calculated by adding together all the competitor brand mentions. The results shown in Table 31 are for each individual brand. The figure in the table was the difference between switchers and non-switchers in the overall competitor response level.

Table 31: Overall competitor response level and customer switching for Study 9

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5
Difference between switchers and non-switchers	-0.3	-0.5	-0.1	0.1	-0.3
P value	ns	ns	ns	ns	ns

Discussion of Table 31

There were no significant (and little interpretive) differences between the overall number of times competitors brands are mentioned of those who switched compared to those who stayed. That is, both those who switched and those who did not switch were equally likely to mention competitor brands generally.

Overall Summary

This chapter found a relationship between the competitor response level and customer switching. Specifically, those who had a higher response level for a specific competitor were more likely to switch to that competitor. This finding (and associated trends) was evident despite quite small sample sizes and replicated across the three studies and extends the findings for brand response level to competitor information.

There was no apparent relationship between overall number times competitors in general are mentioned and customer switching. This was also consistent across all three studies.

Comparing the brand and competitor response levels across all three studies, the positive difference in competitor response level for those that switched was generally equivalent to the negative difference in brand response level of those who switched. The relationship between the two measures will be further examined in the next chapter.

The implications of individual rather than overall competitor response level

The literature suggests both individual and overall competitor response level should be related to future switching. However, empirically it appears that the most distinct relationship is between the response level for an individual competitor brand and customer defection. This has implications for the explanation of the mechanism of competitor response level. This is now discussed.

The finding that the response level of an individual competitor was linked to switching to that competitor suggests that customers may not switch until they know which brand to switch to. The causes of this may be some piece of marketing communications from the competitor has been particularly noticed, or a sale representative has called. The ability to predict to whom a customer was switching is of limited additional use to managers. It is already an established empirical generalisation that in a market with little change in market share (which is the case for these markets) brands lose customers to other competitors in line with the share of competitor brands (ie most customers go to the biggest competitors) (Ehrenberg 2000). It finding is important, however, in understanding the relationship between competitor response level and behaviour. If a higher response level for a specific competitor was not related to switching to that competitor then it is difficult to attribute any sort of 'causality' to competitor activities. The level of competitor response level was related to customer switching in the three different time frames of 1 month, 6 months and 18 months. This provides some evidence that this heightened competitor response level may come before choice – however further testing needs to be undertaken before this assertion could be confidently made.

However, it may be that customers may decide to switch to a competitor (ie have received an offer). They then pay more attention to that competitor's marketing activity as a conscious or unconscious reinforcer of that decision to switch (ie acts like a user even though it is still behaviourally not a user of that brand). The consumer therefore has a higher response level for that competitor, which is then followed by the behaviour that is reflected in the response level. However, the response level did not cause the customer to switch brands. To provide some more explanation, I examine what happens to brand and competitor mention after the opportunity to switch has presented itself.

What happens to brand and competitor response level after opportunity to switch?

To further provide some insight into how the mechanism of competitor response level works, some exploratory analysis was conducted comparing brand and competitor mention both pre and post switching. This analysis was undertaken using Study 8. This study was in the insurance market where the opportunity to switch took place at a certain point in time and both the initial survey and the follow up were at fixed time periods from this point. This controls for differences (such as decay effects because of the change in usage reinforcement) that may be based on differing time lapses between switching suppliers and re-interview. It is apparent that prior to switching, customers who are likely to switch have competitor response levels that

make them look more like customers of the competitor brand. This analysis seeks to address the following question: **After customers switch - what happens to their brand and competitor response levels?**

Does the level for this (prior) competitor continue to increase making them even more look like they are users of that brand? I would expect that the (previous) competitor response level would further increase, now that the customer has become a user of that brand. As a control to check if any further rise in competitor response level is due to other activities (such as increased advertising) I would also expect that the response level for customers who did not switch to that competitor to remain at the pre-potential switching event level.

Does the level for the (previous) brand they used decline to resemble that of other competitors? I would expect that the response level for the brand customers switched away from to decline over time to a figure lower than current users, but higher than those who have never used the brand in line with Bird et al's work (1970; 1970) examining the response patterns of former users.

Results

ANOVA tests were performed to see if there were significant differences in the response levels between the groups.

Those who switched to Competitor 1

Table 32 shows the change in response level for customers who switched from Brand 1 to Competitor 1.

Table 32: Brand 1 customers who switched to competitor 1 (n=11, p=0.05)

	Number of mentions before switching	Number of mentions after switching	Difference
Brand 1	2.2	2.8	+0.6
Competitor 1	**1.5**	**2.5**	**1.0**
Competitor 2	0.6	0.5	-0.1

Discussion of Table 32

It is evident that after they switch, the response level of the competitor to which the customer switched increases. This is what would be expected, the switcher's image response patterns further change to more resemble the user of the brand they have behaviourally become. The response level is equivalent to that which the original brand had prior to switching.

There was no change in the response level for the competitor brand *not* switched to. This provides further support of the hypothesis for individual competitor response level.

In this instance the response level of the original brand also increased. This might be a 'carry over' effect from the recent brand choice situation (ie symptomatic of heightened processing of market information in memory at this time). Thus customers had a higher propensity to mention those brands they were deciding between. This is not what was expected, but it might be that the time lapse between the decision and the interview was not sufficient for the decay process to occur.

Those who switched to Competitor 2

Table 33 shows the response levels for Brand 1 customers who switched to Competitor 2.

Table 33: Brand 1 customers who switched to competitor 2 (n=9, p=0.002)

	Number of mentions before switching	Number of mentions after switching	Difference
Brand 1	3.6	2.9	-0.7
Competitor 1	1.4	1.6	0.2
Competitor 2	**1.3**	**2.6**	**1.3**

Discussion of Table 33

Table 33 also shows an increase in the response level for the competitor to which the customers switched. This is a replication of what was found in Table 32. In this instance, the response level is not at the level of the original brand prior to switching. However this may be due to this being a smaller brand, and thus more time is taken to reach the level of the original brand (which is a substantially bigger brand).

In line with Table 32 the response level for the competitor brand not switched to remained at the same level as prior to switching.

In this instance there was also a decrease in the response level of the original brand. While this is what I would have expected, it is unclear why this would be a decrease and the results for those who switched to Competitor 1 being an increase.

Non-switchers

Table 34 shows the before and after response levels for those who stayed with the original brand. As previously mentioned, this provides something of a control that the increases in competitor response level were due to change in usage and not simply due to other communications efforts.

Table 34: Customers who didn't switch From Brand 1 (n=494)

	Number of mentions before renewal	Number of mentions after renewal	Difference
Brand 1	3.4	3.6	0.2
Competitor 1	1.2	1.2	0
Competitor 2	0.4	0.5	0.1

Discussion of Table 34

Table 34 shows negligible change in the response level of any brand for those who did not switch brands at the renewal time. This provides further confidence that the changes in competitor response levels for those that switched to Competitor 1 and Competitor 2 were due to impending changes in usage patterns.

Overall Discussion – Competitor response level and customer behaviour

Theoretically, links in memory to competitor brands are thought to reduce the likelihood that brand will be chosen in the future. In Studies 1 to 6 I showed how the number of links between attributes and the brand has a consistent, positive effect with customer loyalty. In this analysis, two hypotheses, specifically related to competitor response level were tested. These hypotheses were tested over the same three markets as were used in Studies 4 to 6. All three studies used actual behaviour at a later point in time to determine customer switching.

The first was that the overall competitor response level is related to customer loyalty. That is, regardless of the competitors for which the attribute is mentioned the more times a customer mentions competitor brands the more likely they are to switch away from their current brand. There was no relationship found between overall competitor response level and customer switching. This lack of a relationship was also replicated across the three studies.

The second was that the individual response level of a competitor brand is linked is positively related to brand switching, whereby the more times a customer mentions a particular competitor, the more likely the customer is to switch from their current brand. The results showed clear support for the individual competitor hypothesis. This was replicated over all three studies. The findings were further substantiated when further exploration found:

- The higher the response level of a particular competitor the more likely a customer was to switch to **that** competitor at a later point in time; and
- After switching brands, the response level for that competitor to which the customer switched rose, such that the customer continued to provide image response level as would be expected from a user of that brand.

Both of which provide additional support to the idea that it is the response level of an individual competitor is linked that is related to switching to that competitor at a future point in time.

It should be noted that even though future behaviour is used as the dependent variable, I am not making any causal inferences about competitor response level and customer switching. The reason for this is that it is not known whether customers have made the decision[68] to switch to a competitor, and thus the competitor response level increases (therefore mentioning competitors is an indicator of future switching rather than a causal factor of that future behaviour). Alternatively, it could be that competitor response levels increase, and then customers decide to switch (which more closely resembles a causal relationship). This cannot be answered with the information available, as change in competitor mention over time is required. In this thesis, I have identified that the level of competitor response appears to be able to predict future switching behaviour. This can then provide the platform for future research into examining if the nature of that relationship can be considered causal.

[68] In the broadest sense of the word – that is they have some vague intent to use that brand in the future.

Chapter 9: Combining brand and competitor response information

This chapter takes the key findings from the previous analyses and pulls them together to create a more complete picture of how image responses are related to customer switching behaviour. It shows how the two influences of brand response level and competitor response level interact to influence consumer behaviour.

In the previous chapters the relationship between two types of brand image responses and customer switching were explored. The first analyses showed how brand response level is related to customer switching. That is, the more frequently the brand is mentioned for a series of image attributes, the less likely to customer would switch. The second series of analyses showed that the higher the response level for a particular competitor brand is, the more likely the customer will switch to that competitor.

This suggests that there are two opposing forces acting on customer loyalty – brand response level (positive impact) and competitor response level (negative impact). Since both of these forces interact with each other (ie consumers are retrieving/eliciting brands and competitors at the same time) this chapter seeks to determine if and how competitor response level and brand response level are linked together.

It draws on the work of Danenberg and Sharp (eg Danenberg, Sharp et al. 1998; Danenberg 1998) in determining the accuracy levels of measures of defection. Their research focussed on the ability Juster scale (Juster 1966) to predict customer defection. This thesis draws on their methodology for determining the accuracy of a measure using the following key metrics:

- *the proportion of defectors correctly classified.* For instance, 25% of defectors had X level of response.
- *the proportion of the sample required to identify (a).* How many people in the sample need to be taken into account in order to identify those 25% of defectors? Obviously it is desirable to identify as many defectors as possible, but it is also desirable to do so using as few people in the sample. If, for instance 25% of the sample is needed to identify 25% of the defectors, our ability to predict defection is no better than chance.
- *% improvement over chance* this is the improvement over chance as a proportion of the expected proportion of switchers according to chance. For example if it would be expected that 20% of switchers would be categorised by chance and 30% were categorised, this would represent a 10-percentage point improvement.

Correlation between brand and competitor response level

The first consideration in reconciling these two influences is to examine the correlation between the brand response level and the competitor response level. This is shown in Table 35[69].

Table 35: Correlation between brand and competitor response levels

	Correlation coefficient
Study 1: Telecommunications – competitor 1	0.10
Study 2: Banking – Brand 1 – range of all competitors	0.32 to 0.41
Study 2: Banking – Brand 2 – range of all competitors	0.11 to 0.34
Study 2: Banking – Brand 3 – range of all competitors	-0.10 to 0.51
Study 2: Banking – Brand 4 – range of all competitors	-0.15to 0.44
Study 2: Banking – Brand 5 – range of all competitors	0.37 to 0.53
Study 3: Insurance – competitor 1	0.28
Study 3: Insurance – competitor 2	0.11

Discussion of Table 35

As the correlations between brand mention and competitor response level are relatively low and variable this suggests these two measures are not measuring the same thing, or varying in line with each other consistently across brands. There is, therefore, a rationale for hypothesising that knowing both about a consumer would increase the ability to accurately identify those who are going to switch brands.

Establishing benchmarks

It is first necessary to identify the impact of the individual brand and competitor response levels across the three studies. These benchmarks are needed to determine if the combined measures are worth the added complexity. If only a minor improvement is achieved, this would suggest that the best, most parsimonious model would be one with a single measure only. The specific benchmarks for each study are contained in appropriate tables for reference.

[69] The individual p values are not included as they vary in line with what you would expect – lower correlations are either less or not significant.

Interaction between brand and competitor response levels

To examine the relationship between brand and competitor response level, a calculation was made to determine the level of competitor response as a proportion of brand response. That is:

(Number of competitor mentions/number of brand mentions)*100

This approach was chosen because a brand response level is based on the single brand (the one currently used), where as there are several individual competitor measures. Therefore to enable comparison both between competitors within a study and between studies the level of brand response (the number of brand mentions) was used as the base. Also given that most customers in this market continue to purchase the same brand, brand response is expected to be the dominant influence for the majority of customers. From this, customers were put into 4 categories. It is expected that the likelihood of switching will increase as the ratio of competitor to brand response increases (ie as we move from Category 1 to Category 4).

Category 1: 0% (No competitor response). This is where customers are simply not mentioning competitors at all. It is expected that this would be the most loyal group, as they have no awareness of to whom to switch.

Category 2: 1-99% (Competitor response less than brand response). This is where competitor response is lower than brand response. Customers in this group would also expected to be less likely to switch than customers in Category 3 and 4 as although they have some awareness of competitors, the current brand has the greatest share of mind and therefore is most dominant in retrieval.

Category 3: 100% (Competitor response equal to brand response). This is where customers of a brand start to look like customers of a competitor brand. Therefore I expect this group to have one of the highest likelihood of switching.

Category 4: Greater than 100% (Competitor response higher than brand response). Customers in this group are expected to be the most likely to switch from their current brand to the competitor brand. In this instance, if you only looked at their response level for competitors versus their current brand, you would think they had already switched brands.

Due to the low number of individual switchers to each brand in the banking industry this study was not included in this section of the analysis.

Study 10: Telecommunications

This analysis draws on the same sample that was used previously in Studies 4 and 7. The results are shown in Table 36. A difference of zero would imply that the proportion of switchers reached is equal to that which would be expected if a random sample of the population was taken (thus knowledge of the response levels provides no additional benefit in predicting defection). The greater the positive number, the greater the impact. If the number is negative, this suggests that the customers in that category were less likely to switch than expected (ie more loyal).

The positive and negative numbers should cancel each other out (subject to rounding effects). The reason for this is that as this categorisation covers the whole customer base, if more switchers are in one category, there must be, but default, less of those who switched in another category.

Table 36: Brand and competitor response 1 for Study 10

	% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % or sample
Category 1 - No competitor response	20	24	-4
Category 2 - Competitor response less than brand response	51	53	-2
Category 3 - Competitor response = brand response	7	6	1
Category 4 - Competitor response higher than brand response	*22*	*16*	*6*

Discussion of Table 36

It is possible to see a difference in the proportion of switchers classified based on their image response levels. The greatest improvement over chance was evident when competitor response was higher than brand response. This categorisation results in a proportion of switchers 6 percentage points higher than would be obtained from a random sample of the same size (ie a 6 percentage point improvement over chance). Given that randomly only 16% would have been expected, the additional 6 percentage point is an increase of 38%.

Results for Competitor 2

Table 37 details the results for Competitor 2.

Table 37: Brand and competitor response 2 for Study 10

	% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % or sample
Category 1 - No competitor response	66	66	0
Category 2 - Competitor response less than brand response	21	25	-4
Category 3 - Competitor response = brand response	2	2	0
Category 4 - Competitor response higher than brand response	*11*	*7*	*4*

Discussion of Table 37

Again it is possible to see an improvement over chance based on the image response categorisation. Table 37 shows that the only improvement over chance was evident in the category where competitor response was greater than brand response. In this category the proportion of switchers was 4-percentage points higher than expected. This is a 57% increase over what would have been expected by chance.

Discussion: Study 10

The results for the two competitors were positive and consistent. In both cases the only improvement over chance was when competitor response was greater than brand response. That is, when customers were looking, in response terms, like users of the competitor brand. The resultant improvement over chance represented a 40-50% increase in the number of switchers correctly categorised prior to switching.

Study 11: Insurance

This study was conducted using the same customers that were used in Study 6 and 8. The same procedure for categorising customers into the four brand/competitor response groups was undertaken for Study 7. The results for Competitor 1 are detailed in Table 38.

Table 38: Brand and competitor 2 response for Study 11

	% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % or sample
Category 1 - No competitor response	33	42	-9
Category 2 - Competitor response less than brand response	29	40	-11
Category 3 - Competitor response = brand response	*29*	*15*	*14*
Category 4 - Competitor response higher than brand response	*10*	*3*	*7*

Discussion of Table 38

For this study both Categories 3 and 4 had the greatest improvements over chance. Category 3 (where competitor response is equal to brand response) had a 93% improvement over chance (absolute improvement of 14 percentage points). While Category 4 (where competitor response is greater than brand response) the improvement was up to 230%.

Results for Competitor 2

Table 39 details the results for Competitor 2.

Table 39: Brand and competitor 1 response for Study 11

	% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % or sample
Category 1 - No competitor response	57	72	-15
Category 2 - Competitor response less than brand response	*29*	*21*	*8*
Category 3 - Competitor response = brand response	*14*	*7*	*7*
Category 4 - Competitor response higher than brand response	0	1	-1

Discussion of Table 39

For Competitor 1, there are two categories where the proportion of switchers correctly classified is greater than what would be expected by chance. In the case of Category 2 there is a 38% improvement over chance, while in Category 3 there is a 100% improvement. Overall, therefore, there is the greatest improvement over chance are evident if competitor response is present (regardless of its relationship to brand response). Those for whom competitors were not salient at all were substantially much less likely to switch suppliers than would be expected.

There appears to be no improvement over chance for Category 4 – when competitor response is greater than brand response. However this is most likely due to the small sample size in this group making it prone to sampling error.

Discussion: Study II

Consistently across the two studies and individual competitors there was a substantial improvement over chance when competitor response greater than brand response. In the insurance market, this also extended to when competitor response was equal to brand response for Competitor 1 (the largest competitor) and for Competitor 2 further to when competitor response is present at all.

There are some potential reasons for this. It may be due to the more stringent classification of switchers – that is totally switching from the brand rather than simply classifying the 20% reduction and decrease in services criteria.

Alternatively, this difference between the markets may be due to the fact that the image responses were collected unprompted. This could potentially weight the responses much more in favour of the brand currently used. However, the ratio of the number of brand mentions to number of competitor mentions appears to be relatively consistent across studies, regardless of the data collection method. That is for Study 7 (telecommunications prompted) brand response level was about9 while the next competitor response level was about 4.5. For the insurance market where the image responses were collected unprompted the brand response was about 3 while competitor response for the next brand was about 1.5. In both cases a 2:1 ratio. This casts doubt over this as an acceptable explanation for the difference.

Given that the relationship is with individual competitor brands, it suggests that if any single competitor brand is particularly salient then the customer should be more likely to defect.

It also suggests that brand response level could act as the benchmark for determining if a competitor brand is particularly salient, particularly for larger competitors (ie provides us with the knowledge of what to expect). For smaller competitors simply being aware of the brand appears to be sufficient to change the likelihood of defection.

Overall models

Combinations of the brand and competitor response measures were tested to determine if brand response can act as a benchmark for detecting when competitor response should be 'of concern' as it suggested a customer was vulnerable. The first (Overall Combination 1 (OC1)) draws from the previous tables whereby customers were considered as switching if the level of competitor response (*for any competitor*) was greater than or equal to the brand response level[70]. Overall Combination Model 2 (OC2) draws from the same concept, but this time makes the cut off point at a slightly lower level, where those customers with a competitor response level which was just below, equal or higher than the brand response level was considered to be likely to switch suppliers.

Study 12: Telecommunications market

This analysis draws from the same respondents that were used for Study 10.

Table 40: Final combination models

		% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % of sample
OC1	Response of any competitor is greater than or equal to brand response	35	27	8
OC 2	**Competitor response which is at least 80% of brand response**	**54**	**42**	**12**
Brand	Greatest cumulative brand response effect	64	56	8
Comp	Greatest cumulative competitor model	39	32	6

[70] A combination of categories 3 and 4

Discussion of Table 40

For OC1 the results obtained were 8 percentage points higher than would be expected by chance alone. This represents a 30% increase in the number of switchers correctly classified. For OC2 the results were higher in terms of absolute percentage levels (12 percentage points) but equivalent in the proportional increase in switchers (29%). In both cases it was possible to classify substantially a higher proportion of switchers over chance than was able from the individual models.

Study 13: Insurance market

In order to maximise the generalisability of the results across studies the same proportional competitor response point (80%) is used in this study. It draws from the same customers as were used in Study 11.

Table 41: Combination models for Study 3

		% of switchers that are in this category	% sample that this category covers	Difference between % of switchers and % of sample
OC1	Response of any competitor is greater than or equal to brand response	43	21	22
OC2	**Competitor response which is at least 80% of brand response**	**62**	**37**	**25**
Brand	Greatest cumulative brand response effect	92	75	17
Comp	Greatest cumulative competitor model	52	39	13

Discussion of Table 41

Table 41 shows that OC1 resulted in an absolute increase in the number of switchers accurately identified of 22 percentage points. This represents a proportional increase of 105% over chance. For OC2 the absolute percentage point increase rises to 25%, but the proportional increase is lower (68%) due to the much higher proportion of the sample targeted. These results have a higher accuracy than the benchmarks for brand and competitor response levels individually.

Overall Discussion: Studies 12 and 13

In both Studies 12 and 13 the classification based on competitor responses 80% or greater than brand responses was more accurate than the prior categorisations. This suggests that to identify vulnerable customers:

- number of brand mentions can provide a benchmark; and
- competitor response should be of concern when it is 80% or greater than the customers responses for the brand they currently use.

Are these good results?

In order to evaluate the worth of these results, there are two benchmarks that can be taken. The first is that any significant improvement over chance is good. Therefore the findings are of merit. The second, more rigorous test, however is how do these results compare to that which is found in other well-established, more direct measures of future switching behaviour? In Study 4 (telecommunications) and Study 6 (insurance) probabilistic estimates were also collected with the image data. This section compares the accuracy of these direct measures. These probabilistic measures have an advantage because of the higher face validity of the measures. They directly ask a question about the behaviour that is of interest, ie likelihood of switching brands in a specified time frame.

Therefore customers are in no doubt as to the information that is sought and can give as accurate information as possible. This is of course predicated on the assumption that consumers can provide an accurate assessment of their own future behaviour. This assumption has been tested by Danenberg (1996) and found to be reasonably valid. People's probabilistic estimates of their own future behaviour towards the brand were generally in line with how they ended up behaving. This relationship was not perfect. There were people who said there was practically no possibility that they were going to switch brands who ended up switching. And there were customers who said they were practically certain they were going to switch who did not. However, in the main, those who said they were going to stay were more likely to stay, and those who said they were more likely to switch ended up switching brands.

This analysis concentrates on two markets – telecommunications and insurance. In both cases a probabilistic scale was included in the study. I was not involved in the selection of the two probabilistic/likelihood measures. Therefore I will not go into any depth beyond a basic description of their scale points [71](particularly for the 4-point likelihood measure used in Study 4).

[71] A discussion of the Juster scale/verbal probability scale is contained on pg 53

Telecommunications market: 4 point likelihood scale

In the Telecommunications market a 4-point measure of the likelihood of switching suppliers in the next 6 months was collected.

The results are shown in Table 42.

Table 42: Accuracy of a 4 point probabilistic measure for Study 1

	% accurately classified as switching	% sample	Difference
Very likely	13	5	8
Somewhat likely	22	17	5
unlikely	31	30	1
Very unlikely	34	48	-14

Discussion of Table 42

Using the 'very likely' point on the scale to classify those as switching resulted in an absolute increase in the number of switchers classified of 8 percentage points. This represented a 160% improvement in the accuracy level over chance. The 'somewhat likely' point resulted in an absolute improvement of 5 percentage points, which resulted in a 30% increase in accuracy level over chance. Taking both the 'very likely' and 'somewhat likely' categories the absolute percentage increase is 13% (35% of switchers from 22% of the sample) and the accuracy level improves 60% over chance.

The best overall difference for the image measure in this study was 54% from 42% of the sample or an absolute difference of 12 percentage points, which although categorising more switchers is only a 30% improvement in accuracy. This suggests that the probabilistic estimate is performing marginally better.

Insurance market: Comparing with Verbal Probability Scale

In the Insurance market, the Verbal Probability Scale, which is the verbal equivalent of the Juster scale (See Chapter 4 for full description) was also included in the questionnaire. Table 43 details the accuracy of the individual points on this scale and the cumulative accuracy.

Table 43: Accuracy level of the Verbal Probability Scale for Study 3

	% of switchers correctly classified	% of Sample	Difference	Cumulative difference
10 out of10	8	3	5	5
9 out of 10	4	1	3	8
8 out of 10	4	1	3	11
7 out of 10	4	4	0	11
6 out of 10	4	2	2	13
5 out of 10	32	18	14	27
4 out of 10	4	3	1	28
3 out of 10	4	7	-3	25
2 out of 10	12	11	1	26
1 out of 10	0	9	-9	15
0 out of 10	28	42	-15	0

Discussion of Table 43

The point on the scale with the greatest improvement in accuracy over chance is at the 5 out of 10 mark. This is where customers rated that there were 5 chances out of 10 that they would switch suppliers. A total of 18% of customers gave this rating, of which 32% switched suppliers, which is a 14 percentage point increase over chance. This is a78% improvement in accuracy level.

An alterative way of looking at the accuracy of the measure is through the cumulative accuracy. These is the accuracy achieved if you chose one point as a cut off and categorise anyone who gave a score higher than your cut off as switching. The maximum cumulative difference is 28 percentage points (60% of the switchers from 32% of the sample). This is an improvement in accuracy of 88% over chance.

This compares with the best model of the image responses with a classification of 62% of the switchers from 37% of the sample or an absolute difference of 25-percentage points. This is a 67% improvement in accuracy level. Again this suggests that the probabilistic measure is performing marginally better.

Discussion: Comparison between measures

It is possible to accurately predict which customers are likely to switch brands from brand image information. When competitor response level is just below, equal to or greater than brand response level, a customer is much more likely to switch in the future. That is, the customer begins to look like they are a user of the competitor brand, even though, behaviourally, they are not at that point in time.

The accuracy levels achieved and the improvements over chance are similar to direct probabilistic measures of future switching. However, the image measure does have some advantages over the probabilistic measures. These are as follows:

- Image measures are already included in the majority of tracking studies for large companies. Therefore, rather than asking an additional question, similar information can be obtained from these questions.
- Managers might psychologically prefer to ask their customers image questions rather than questions prompting for the probability of switching.
- It may capture customers who are reluctant to directly inform the interviewer that they are thinking of switching suppliers, or who are not even aware of their likelihood of undertaking this future behaviour.
- If a causal link can be established then image measures may actually provide some explanatory power as to why people switch brands. Probabilistic measures can be used to tell us what customers are likely to do, but they offer little by way of explaining why customers are likely to behave in that way. Therefore managerially, they offer little to help managers know what to do once vulnerable customers are identified.

In both cases the image measure, although performing well comparatively, is not as accurate as the probabilistic measures. The fact that it is performing in the same league is quite amazing, considering the image measure has much less face validity than probabilistic measures and therefore is very 'roundabout' in collection. Therefore the findings of this thesis are an important development in the ability to identify vulnerable customers and develop a future research direction for potentially identifying and testing some of the mechanisms that stimulate this vulnerability. This is further discussed in the future research section.

Chapter 10: Discussion

Discussion of the research findings

The overall aim of this thesis was to investigate if, and how, responses to brand image questions are related to future behaviour. It started by setting up three competing hypotheses as to how this relationship could take place and testing those over three markets with both self-reported probabilistic estimates of future switching behaviour and actual future behaviour. Finding consistent clear support for one of these, it then extended the relationship further to image responses from competitors. Finally it brings together these two influences of brand and competitor responses to provide additional insight as to how consumers use image information in their choice process.

The key research findings of this thesis are now discussed. For ease of expression (ie so I am always discussing a positive relationship) I alternate between the terms 'loyalty' and 'switching' – in the context that loyalty is the behavioural opposite of switching from the brand, namely staying with the current brand.

Brand image response and customer behaviour

- Mention of a brand for a non-negative attribute was positively related to customer loyalty. However, there was little consistent evidence to suggest that there are specific attributes or positions that have a greater/stronger relationship with customer loyalty than any other.

- There was some consistent evidence that there are some attributes that are not related to customer loyalty. However, it was also difficult to see any specific qualities of these attributes that would enable the predication of them prior to analysis. These attributes were not confined to being descriptive or evaluative.

- There is a consistent positive (apparently[72]) linear relationship between the level of brand response (based on the number of times a customer mentions a brand across the range of (non-negative) image attributes) and the self reported probability of switching. The rate of change was about 1 to 2 percentage point decrease in the subjective probabilistic switching rate for each additional mention of the brand.

[72] Further model fitting is required before a linear relationship can be confidently asserted.

- The relationship was further verified using actual switching behaviour. In this instance the rate of change was a 0.5 to 1 percentage point decrease in the actual switching rate as number of times the brand was mentioned increased.

- These findings were extended across three markets, residential and business customers, data collection by mail or telephone, different market share structures, prompted or unprompted collection of brand names and regardless of how the attributes were chosen.

Implications of these findings

The more frequently that customers mention a brand the less likely it is that they will switch from that brand. One of the most important contributions of this thesis to marketing knowledge is that this simple, generalisable and quantifiable pattern was uncovered in all three subscription markets tested. This is important because generalisable knowledge is one of the keys to scientific progress. In this thesis I have identified a generalisable pattern in consumer response that is related to customer behaviour – something that has been lacking in previous brand image research.

While Bird et al. (1970) and Woodside and Trappey (1992) identified relationships between brand image responses and current or past behaviour. Alba and Marmonstien (1987) went one step further and showed how exposure to more attributes can lead to choice independent of the valence or importance of the attribute. However, none of these studies compared the different hypotheses as tested in this thesis, nor were they able to show that a generalisable, quantitative relationship between the number of attributes for which a consumer mentions a brand and their 'real world' future behaviour towards that brand.

Additionally, the explanation of frequency effects (as per Hasher and Zacks (1984)) is in itself does appear to be inadequate, particularly when considering the findings from Chapters 8 and 9 which are now discussed.

Competitor response and customer behaviour

- The level of competitor image response for a specific competitor brand was related to a customer switching to that competitor. This relationship was even more apparent when knowledge of to which brand the customer had switched was available. That is level of competitor response to the brand they switched was higher than the level of competitor responses to other competitor brands in the marketplace.
- Overall level of competitor response was not directly related to customer switching.
- These findings are also generalisable across all three markets.

Implications of these findings

A customer is more likely to switch when they are eliciting a high level of response for a specific competitor. The relationship between usage and image responses first identified by Bird et al. (1970) means that we expect customers of a brand to be more likely to mention that brand than non customers are and (correspondingly) that these customers are less likely to mention competitor brands. In this thesis I was able to show that is not simply the level of brand response that is related customer switching, but the level of competitor response (for a specific competitor) relative to brand response. That is, consumers have a propensity to give a certain level of brand response. This varies between consumers based presumably on all sorts of factors such as length of time with the brand, level of involvement with the product category and or brand, frequency of exposure to brand information and the like.

For some customers, for some reason, a competitor approaches/reaches a level of response that is near their 'natural propensity' for a brand response. That is their image responses for a competitor brand reaches a level where they begin to look like a user of that competitor brand, even though (behaviourally) they are not. For these customers, the survey response pattern of high response of current brand, lower response level for competitor brands changes to one that also reflects their possible future behaviour to that brand. That is, high response level for the current brand, approaching equivalent response level for a specific competitor, low response for other competitor brands.

When this happens, these customers are more likely to become a user of the competitor brand in the future (ie their behaviour is likely to fall in line with their prior competitor response levels). If they switch brand, then their (previous) competitor responses will increase to the 'natural' level that was apparent for the original brand they were using.

Brand response and customer switching explained

The initial pattern between level of brand response and customer switching is probably explained by the fact that this process is more likely to happen for someone with a lower brand response level as they are more likely to have a smaller differential between brand and competitor response. Therefore it is easier for a competitor brand to reach that 'threshold'. Thus there will be more customers switching at the lower brand response levels.

Former users

Bird et al (1970) showed that former users were more likely to give an image response than non-users. This also suggests that former users would be easier to 'lure back' that those who have never tried the brand because they would have a higher competitor response level for that brand. Therefore it should theoretically not take much 'nudging' to reach the required level of competitor salience. Further work needs to explore this.

Additional findings

In addition this thesis also makes some contribution to understanding the strategies that managers can take towards building their brands to influence customer retention. On approach is to continuously reinforce that a brand is superior in a specific area – such as for example on service or price. This thesis shows that, by itself, this is a good approach – as if a customer associated your brand with a positive evaluative attribute they are less likely to switch to an alternative. However, on of this thesis' important contributions is that it shows empirically that the distinction between specific attributes is at best generally trivial. It is important that customers give a response about the brand – but the question to which they respond is of less importance.

There did appear to be some attributes that had no relationship with customer switching. This is important because it does suggest that it is not necessarily an 'anything goes' approach. Rather than having future research focussing on identifying the 'best' attributes (which has been the focus of previous studies like Alpert (1971) and Woodside and Trappey (1992)), maybe the focus should be on identifying those that are not related to customer switching and the reasons behind that. This research has found this empirically evident, however further work is needed to check these are not simply due to sampling variation and, if not, to provide some explanatory power.

Managerial implications

Given the prevalence of brand image studies in market research, the findings of this thesis are of considerable direct benefit to managers. It provides a mechanism for classifying/identifying vulnerable customers before they switch suppliers. It

therefore provides something that has been considerably lacking in brand image research, a *reason* to measure the image of a brand.

The vulnerable customers identified based on brand image responses is similar to that which would be identified by probabilistic measures such as the Juster scale. However, the image response measures do have clear advantages over the direct probabilistic measures, namely:

- Image measures are already included in the majority of tracking studies for large companies. Therefore, rather than asking an additional question, similar information can be obtained from these questions.

- Managers might intuitively prefer to ask their customers image questions rather than questions directly prompting for the probability of switching (for fear it will 'put ideas' into customer's minds)

- If a causal relationship is established, image measures may actually provide some explanatory power as to why people switch brands. Probabilistic measures can be used to tell us what customers are likely to do, but they offer little by way of explaining why customers are likely to behave in that way. Therefore managerially, they offer little to help managers know what to do once vulnerable customers are identified.

In addition it provides guidelines for knowing what information from brand image monitors are useful benchmarks. That is, managers do not need to concentrate on interpreting scores of individual attributes and trying to reach specific locations on perceptual maps, but can look to brand response levels as indicators of brand strength. In a world of increasing information, providing guidelines that decreases/focuses the amount of information that needs to be monitored is of considerable value.

At this point there is a lot that is not known. For example, as this research only has data at two points in time not much information about the changes in both brand response and competitor response over time. Additionally it may be possible to identify the expected levels of competitor response, given the customer's brand response level, which can then be used to more clearly identify when a customer becomes vulnerable and to determine (a) the cause of this and (b) what to do about it. This is discussed further in the future research section.

Limitations and future research

The main limitations of this thesis are as follows:

The scope of the markets

The analysis for this thesis was conducted in a particular type of market, referred to as a subscription market. This type of market has specific peculiarities (such as generally 100% share of category requirements with one brand) which may mean that the differential between brand response and competitor response is important. This might not be the case in repertoire markets where consumers are using multiple brands. Although it would perhaps be expected that there will be a differential between the first brand and other brands in the market, with some gradation based on the share of category requirements that each brands represents. However this needs to be tested.

Image measures

This thesis focussed on one form of brand image measurement. Therefore it is important to determine if the findings hold under for alternative brand image measures, particularly forced choice measures such as ranking and rating. This is important for determining the mechanism for which brand and competitor response function. If these findings are not able to be replicated using other brand image measures, then this would have important implications for the role of image attributes in consumer behaviour.

The image measures used in this research did not allow for the presence of other attribute links for the brand currently used and competitor brands that may also have an effect on consumer behaviour, but were not included in the survey. However, the systematic relationship suggests that it may not matter which attributes are used, as long as the number remains constant. This needs to be tested.

Testing individual variation

This thesis focussed very much on aggregate level analysis and between comparisons between groups. It does not examine if there are subgroups for which specific attributes or positions have a greater differential switching rate than others. That is there might be more variation between customer groups on a single attribute, than between attributes. This was not addressed in this thesis as the research by Alba and Marmonstein (1987) and its precursor in Hasher and Zacks(1984) both suggested that the effects of number of attributes would be independent of the importance eof the attribute. It was also not a point of discussion for other articles in the areas (eg Alpert, (1971)) beyond simply saying the attributes should be meaningful to consumers. But this does not preclude this from happening. While this finding would not necessarily dispute the findings in this thesis, it would provide additional insight into the brand attributes a brand should focus on.

Therefore a limitation of this thesis is that it does not explore areas of differentiation between customers such as levels of involvement, importance of attributes, or length of time with the brand. This may change the nature of the empirical relationship for certain subgroups.

Future research agenda

There are many avenues for future research generated based on this thesis. These are discussed in the following section.

Longitudinal analysis

This thesis focussed on relationships are (predominantly) 2 points in time. Further insight into the brand/competitor response mechanism could be obtained by looking at the levels of brand and competitor response over time – both at aggregate and individual level. This would help understand:

- Further if overall brand/competitor response more stable than responses to individual attributes (as per Dall'Olmo Riley et all (1997))? Some analysis is contained in this thesis but there is still considerable work that needs to be undertaken to explore this further.
- Are the response levels stable over time or wildly fluctuating based on purchase patterns and marketing communications?
- What happens to brand response after switching? It should settle to a level somewhere between the original brand response and the competitor response level for competitor brands not used.

Additionally, understanding what happens to former users leads to the following conjecture. If it is the difference between brand and competitor response that influences future switching then, given that former users have a higher brand response than 'never trieds', this would suggest that former users should be easier to lure back than those who have never tried the brand.

Predictive and causal relationship testing

While the analysis in this thesis did use switching at a future point in time, further tests should be undertaken where customer are pre-classified as vulnerable and then have their future behaviour monitored to see if they are more likely to switch suppliers.

Additional manipulations of brand and competitor response can by then undertaken experimentally to see if (a) it is possible for marketing communications to influence brand and/or competitor response levels and (b) if these manipulations have the expected effect on customer switching rates. This would start separating out if these image response measures could in fact cause customer switching or if they are simply indicators of future behaviour (ie the difference between a thermometer and the flu).

Influencing brand and competitor response levels

If a change in brand or competitor image response levels can drive changes in switching rates it is important to determine the mechanisms for influencing these image response levels. This would involve the assessment of different communications strategies and examining questions such as:

If the objective is to increase the number of attributes for which the brand is mentioned – does this mean that:

- A communication strategy that is based on a variety of attributes will be more effective than one, which constantly reinforces a single theme? Unnava and Sirdeshmukh (1994) found this strategy improved brand recall, but does it, as would be expected, build brand attribute links?
- How many reinforcements of a link are required to have an effect of behaviour?
- A strategy that targets those customers with a low brand response level will have a greater effect on switching rates than one for the overall market?

Does the source of attributes affect their impact on response levels (eg attributes obtained via usage versus those obtained from an ad campaign)?

Negative attributes

As with previous research, this thesis focussed on positive, evaluative attributes. However it would be interesting to test if the same relationships hold for attributes that are worded negatively. It would be expected that the same relationships would hold but in reverse (ie the more negative brand attributes the higher the switching rate). This may also improve the predictive ability of image measures if it provides additional information that allows us to separate out the 'disinterested' from the 'disenchanted'.

References

Aaker, D. and J. G. Myers (1987). Advertising Management. New Jersey, Prentice-Hall.

Aaker, D. A. and G. Shansby (1982). "Positioning Your Product." Business Horizons **25**: 56-62.

Aaker, J. L. (1997). "Dimensions of Brand Personality." Journal of Marketing Research **34**(August): 347-356.

Alba, J. and A. Chattopadhyay (1985). "Effects of Context and Part-Category Cues on Recall of Competing Brands." Journal of Marketing Research **22**: 340-9.

Alba, J. W., J. W. Hutchinson, et al. (1991). Memory and Decision Making. Handbook of Consumer Theory and Research. Englewood Cliffs, NJ, Prentice Hall: 1-49.

Alba, J. W. and H. Marmorstein (1987). "The Effects of Frequency Knowledge on Consumer Decision Making." Journal of Consumer Research **14**: 14-25.

Alpert, M. I. (1971). "Identification of Determinant Attributes: A Comparison of Methods." Journal of Marketing Research **8**(May): 184-191.

Ambler, T. (1993). "Brand Size and 'Brand Equity'." Admap(December): 16-17.

Anderson, J. R. and G. H. Bower (1979). Human Associative Memory. Hillsdale N.J., Lawrence Erlbaum.

Axelrod, J. N. (1968). "Attitude Measures That Predict Purchase." Journal of Advertising Research **8**(No. 1): 3-17.

Barnard, N. R. and A. S. C. Ehrenberg (1990). "Robust Measures of Consumer Brand Beliefs." Journal of Marketing Research **27**(November): 477-4874.

Barsalou, L. W. (1983). "Ad Hoc Categories." Memory & Cognition **11**(No. 3): 211-227.

Barwise, T. P. and A. S. C. Ehrenberg (1985). "Consumer Beliefs and Brand Usage." Journal of the Market Research Society **27**(No. 2, April): 81-93.

Biehal, G. and D. Chakravarti (1986). "Consumers' Use of Memory and External Information in Choice: Macro and Micro Perspectives." Journal of Consumer Research **12**(March): 382-405.

Biel, A. (1992). "How Brand Image Drives Brand Equity." Journal of Advertising Research **32**: RC6-RC12.

Biel, A. L. (1991). "The Brandscape: Converting Brand Image into Equity." Admap(October): 41-46.

Bird, M. and C. Channon (1969). "Brand Usage, Brand Image, and Advertising Policy - Part I." Admap **6**: 27-46.

Bird, M. and C. Channon (1970). "Further Analysis of Former Users Brand Image Deviations - Part II." Admap(January): 28- 32.

Bird, M., C. Channon, et al. (1970). "Brand Image and Brand Usage." Journal of Marketing Research **7**(August): 307-314.

Bird, M. and A. S. C. Ehrenberg (1966). "Intentions-to-Buy and Claimed Brand Usage." Operational Research Quarterly **17**(1): 27-46.

Bird, M. and A. S. C. Ehrenberg (1966). "Non-Awareness and Non-Usage." Journal of Advertising Research **6**(December): 4-8.

Bird, M. and A. S. C. Ehrenberg (1970). "Consumer Attitudes and Brand Usage." Journal of the Market Research Society **12**(4): 233-247.

Birdwell, A. E. (1968). "A Study of the Influence of Image Congruence on Consumer Choice." Journal of Business **41**(January): 76-88.

Bjork, R. A. and M. Vanhuele (1992). "Retrieval Inhibition and Related Adaptive Peculiarities of Human Memory." Advances in Consumer Research **19**: 155-160.

Bolger, J. F., Jr. (1959). "How To Evaluate Your Company Image." Journal of Marketing(October): 7-10.

Bootzin, R. R., E. F. Loftus, et al. (1991). Psychology Today: An Introduction. New York, Random House.

Brennan, M. (1995). "Constructing Demand Curves from Purchase Probability Data: An Application of the Juster Scale." Marketing Bulletin(6): 51-58.

Brennan, M., D. Esslemont, et al. (1994). Obtaining Purchase Predictions Via Telephone Interviews. Australian Marketing Conference, Adelaide, Marketing Science Centre.

Brennan, M., D. Esslemont, et al. (1995). "Obtaining Purchase Predictions Via Telephone Interviews." Journal of the Market Research Society **37**(No. 3, July): 241-250.

Brennan, M., D. Hini, et al. (1994). "Obtaining Purchase Probability Data Via Telephone Surveys: A Preliminary Test of Two Techniques." Marketing Bulletin(5): 64-70.

Brown, A. S. (1981). "Inhibition in Cued Retrieval." Journal of Experimental Psychology: Human Learning and Memory **7**(No. 3): 204-215.

Brown, G. (1985). "Tracking Studies and Sales Effects: A U.K. Perspective." Journal of Advertising Research **25**(1, February): 52-64.

Bullmore, J. (1984). "The Brand and Its Image Re-visited." International Journal of Advertising **3**: 235-238.

Burke, R. R. and T. K. Srull (1988). "Competitive Interference and Consumer Memory for Advertising." Journal of Consumer Research **15**(June): 55-68.

Castleberry, S. B., N. R. Barnard, et al. (1994). "Individual Attitude Variations Over Time." Journal of Marketing Management **10**: 153-162.

Chattopadhyay, A. and B. Kurnal (1990). "Humour in Advertising: The Moderating Role of Prior Brand Evaluation." Journal of Marketing Research **27**(November): 466-476.

Cohen, L. (1966). "The Level of Consciousness: A Dynamic Approach to the Recall Technique." Journal of Marketing Research **3**(May): 142-148.

Collins, A. M. and E. F. Loftus (1975). "A Spreading Activation Theory of Semantic Processing." Psychological Review **82**(6): 407-428.

Coulter, R. C. and G. Zaltman (1994). "Using the Zaltman Metaphor Elicitation Technique to Understand Brand Images." Advances in Consumer Research **21**: 501-517.

Dall'Olmo Riley, F., A. S. C. Ehrenberg, et al. (1998). Changes in Attitudes and Behaviour. 27th European Marketing Academy Conference, Stockholm, Stockholm School of Economics.

Dall'Olmo Riley, F., A. S. C. Ehrenberg, et al. (1997). "The Variability of Attitudinal Repeat-Rates." International Journal of Research in Marketing **14**(No. 5): 437-450.

Danenberg, N. and B. Sharp (1996). Testing Probabilistic Measures of Behaviour as Measures of Customer Loyalty. Southern Marketing - Theory and Applications, proceedings of the Australian Marketing Educators' Conference, Adelaide, Marketing Science Centre, University of South Australia.

Danenberg, N., B. Sharp, et al. (1998). Will they stay or will they go? Improving predictions of brand loyalty. MRSA National Conference 1998, Melbourne, The Market Research Society of Australia.

Danenberg, N. J. (1998). Predicting Customer Loyalty: A Probabilistic Approach. School of Marketing. Adelaide, University of South Australia: 205.

Day, D., B. Gan, et al. (1991). "Predicting Purchase Behaviour." Marketing Bulletin **2**: 18-30.

de Chernatony, L. (1993). "Categorizing Brands: Evolutionary Processes Underpinned by Two Key Dimensions." Journal of Marketing Management 9: 173-188.

Dickson, P. R. and A. G. Sawyer (1986). Point-of-purchase behaviour and price perceptions of supermarket shoppers. Cambridge, MA: MSI, Marketing Science Institute.

Dickson, P. R. and A. G. Sawyer (1990). "The Price Knowledge and Search of Supermarket Shoppers." Journal of Marketing **54**(July): 42-53.

Dillon, W. R. and N. Mulani (1984). "A Probabilistic Latent Class Model for Assessing Inter-Judge Reliability." Mulivariate Behavioural Research **19**(4): 438-458.

DiMingo, E. (1988). "The Fine Art of Positioning." Journal of Business Strategy **9**(2): 34-38.

Dobni, D. and G. M. Zinkhan (1990). "In Search of Brand Image: A Foundation Analysis." Advances in Consumer Research **17**: 110-119.

Dolich, I. J. (1969). "Congruence Relationships Between Self Images and Product Brands." Journal of Marketing Research **6**(February): 80-84.

Doyle, P. (1975). "Brand Positioning Using Multidimensional Scaling." European Journal of Marketing **9**(1): 20-34.

Durgee, J. F. (1988). "Commentary: Understanding Brand Personality." The Journal of Consumer Marketing **5**(3, Summer): 21-25.

East, R. (1990). Changing Consumer Behaviour. London, Cassell Education Ltd.

Ehrenberg, A. S. C. (1993). "If You're So Strong, Why Aren't You Bigger?" Admap(October): 13-14.

Ehrenberg, A. S. C. (1994). A Primer in Data Reduction. New York, John Wiley & Sons.

Ehrenberg, A. S. C. (2000). "Data Reduction - Analysing and Interpreting Statistical Data." Journal of Empiricial Generalisations in Marketing Science **5**.

Ehrenberg, A. S. C. (2000). "Repeat Buying Facts, Theory and Applications." Journal of Empirical Generalisations in Marketing Science **5**.

Engel, J. F., R. D. Blackwell, et al. (1993). Consumer Behavior. Fort Worth, Dryden Press.

Estes, W. K. (1976). "The Cognitive Side of Probability Learning." Psychological Review **83**(No. 1): 37-64.

Estes, W. K. (1976). Some Functions of Memory in Probability Learning and Choice Behavior. The Psychology of Learning and Motivation. G. H. Bower. New York, Academic Press. **10:** 2-45.

Ettenson, R. and G. Gaeth (1991). "Consumer Perceptions of Hybrid (Bi-National) Products." Journal of Consumer Marketing **8**(No. 4, Fall): 13-18.

Fazio, R. H. (1990). A Practical Guide to the Use of Response Latency in Social Psychological Research. Research Methods in Personality and Social Psychology. C. Hendrick and M. S. Clark. California, Sage Publications: 75-97.

Fishbein, M. (1967). Attitude and the Prediction of Behavior. Readings in Attitude Theory and Measurement. M. Fishbein. New York, John Wiley and Sons Inc.: 477-492.

Franzen, G. and M. Bouwman (2000). Mental Images of Brands, Awaiting Publication.

Fry, J. N. (1971). "Personality Variables and Cigarette Brand Choice." Journal of Marketing Research **8**(August): 298-304.

Fry, J. N. and J. D. Claxton (1971). "Semantic Differential and Nonmetric Multi-Dimensional Scaling Descriptions of Brand Images." Journal of Marketing Research **8**(May): 238-240.

Gardner, B. B. and S. J. Levy (1955). "The Product and the Brand." Harvard Business Review(March-April): 33-39.

Garvin, D. A. (1984). "Product Quality: An Important Strategic Weapon." Business Horizons **27**(March-April): 40-43.

Gendall, P., D. Esslemont, et al. (1991). "A Comparison of Two Versions of the Juster Scale Using Self-Completion Questionnaires." Journal of the Market Research Society **33**(No. 3, July): 257-263.

Greenwald, A. G. (1968). Cognitive Learning, Cognitive Response to Persuasion, and Attitude Change. Psychological Foundations of Attitudes. A. G. Greenwald, T. C. Brock and T. M. Ostrom. New York, Academic Press: 147-170.

Greenwald, A. G., A. R. Pratkanis, et al. (1986). "Under What Conditions Does Theory Obstruct Research Progress?" Psychological Review 93(No. 2): 216-229.

Han, C. M. (1989). "Country image: halo or summary construct ?" JMR **16**: 222-9.

Hasher, L. and R. T. Zacks (1984). "Automatic Processing of Fundamental Information: The Case of Frequency of Occurance." American Psychologist 39: 1372-88.

Hastie, R., B. Park, et al. (1984). Social Memory. Handbook of Social Cognition. R. S. Wyer and T. K. Srull. Hillsdale, NJ, L. Erlbaum Associates. **2**: 151-212.

Hauser, J. R. (1978). "Testing the accuracy, usefulness and significance of probabilistic models." Operations Research **26**: 406-21.

Hauser, J. R. and P. Simmie (1981). "Profit Maximising Perceptual Positions: An Integrated Theory for the Selection of Product Features and Price." Management Science **27**(1, January): 33-56.

Heil, M., F. Rösler, et al. (1994). "Dynamics of Activation in Long-Term Memory: The Retrieval of Verbal, Pictorial, Spatial, and Color Information." Journal of Experimental Psychology: Learning, Memory and Cognition **20**(No. 1): 185-200.

Hirschman, E. C. (1980). "Attributes of Attributes and Layers of Meaning." Advances in Consumer Research **7**: 7-11?

Holbrook, M. B., W. L. Moore, et al. (1982). "Constructing Joint Spaces from Pick-Any Data: A New Tool for Consumer Analysis." Journal of Consumer Research **9**(June): 99-105.

Holden, S. J. S. (1993). "Understanding Brand Awareness: Let Me Give You a C(l)ue!" Advances in Consumer Research **20**: 383-388.

Holden, S. J. S. and R. J. Lutz (1992). "Ask Not What the Brand Can Evoke; Ask What Can Evoke the Brand?" Advances in Consumer Research 19: 101-107.

Hooley, G. J., D. Shipley, et al. (1988). "A Method for Modelling Consumer Perceptions of Country of Origin." International Marketing Review 5(3, Autumn): 67-76.

Howard, J. A. and J. N. Sheth (1969). The theory of buyer behaviour. New York, Wiley.

Hoyer, W. D. (1984). "An Examination of Consumer Decision Making for a Common Repeat Purchase Product." Journal of Consumer Research 11: 822-9.

Jacoby, J. and D. Mazursky (1985). The Impact of Linking Brand and Retailer Images on Perceptions of Quality. Perceived Quality. J. Jacoby and J. Olson. Massachsetts, Lexington Books: 155-159.

Johansson, J. K., S. P. Douglas, et al. (1985). "Assessing the impact of country of origin on product evaluations: a new methodological perspective." JMR **22**: 388-96.

Johnson, M. D. and C. P. Puto (1987). A Review of Consumer Judgment and Choice. Review of Marketing. M. Houston. USA, American Marketing Association: 236-292.

Jones, J. P. (1990). "Advertising: Strong Force or Weak Force? Two Views an Ocean Apart." International Journal of Advertising 9: 233-246.

Joyce, T. (1963). Techniques of Brand Image Measurement. New Developments in Research. London, Market Research Society: 45-63.

Joyce, T. (1971). Brand Images. Consumer Behaviour. A. S. C. Ehrenburg and F. G. Pyatt. Harmondsworth Middlesex UK, Penguin Books: 123-178.

Juster, F. T. (1960). "Prediction and Consumer Buying Intentions." American Economic Review **50**: 604 -622.

Juster, F. T. (1966). Consumer Buying Intentions and Purchase Probability: An Experiment in Survey Design, National Bureau of Economic Research, Columbia University Press.

Juster, F. T. and P. Wachtel (1972). "Anticipatory and Objective Models of Durable Goods Demand." American Economic Review **72**: 564-579.

Kahneman, D. and Tversky (1979). "Prospect Theory: An Analysis of Decision Under Risk." Econometric **47**(2): 263-291.

Keller, K. L. (1991). "Memory and evaluation effects in competitive advertising environments." JCR **17**: 463-76.

Keller, K. L. (1993). "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity." Journal of Marketing **57**(January): 1-22.

Kent, R. J. and C. T. Allen (1994). "Competitive Interference Effects in Consumer Memory for Advertising: The Role of Brand Familiarity." Journal of Marketing **58**(July): 97-105.

Keon, J. W. (1983). "Product Positioning: TRINODAL Mapping of Brand Images, Ad Images, and Consumer Preference." Journal of Marketing Research **20**(November): 380-392.

Kohli, C. S. and L. Leuthesser (1993). "Product Positioning: A Comparison of Perceptual Mapping Techniques." Journal of Product & Brand Management **2**(No. 4): 10-19.

Krishnan, H. S. (1996). "Characteristics of Memory Associations: A Consumer-Based Brand Equity Perspective." International Journal of Research in Marketing **13**: 389-405.

Krugman, H. E. (1966-67). "The Measurement of Advertising Involvement." Public Opinion Quarterly **30**(No. 4): 583-596.

Levy, S. J. (1958). "Symbols by Which we Buy." Advancing Marketing Efficiency(December): 409-416.

Lichtenstein, D. R. and S. Burton (1989). "The Relationship Between Perceived and Objective Price-Quality." Journal of Marketing Research **26**(November): 429-443.

Lichtenstein, M. and T. K. Srull (1985). Conceptual and Methodological Issues in Examining the Relationship Between Consumer Memory and Judgment. Psychological Processes and Advertising Effects. L. F. Alwitt and A. A. Mitchell. London, Lawrence Erlbaum Associates: 113-128.

Lynch, J. G., Jr and T. K. Srull (1982). "Memory and Attentional Factors in Consumer Choice: Concepts and Research Methods." Journal of Consumer Research **9**(June): 18-37.

Lynch, J. G., Jr., H. Marmorstein, et al. (1988). "Choices from Sets Including Remembered Brands: Use of Recalled Attributes and Prior Overall Evaluations." Journal of Consumer Research **15**(September): 169-184.

McPhee, W. N. (1963). Formal Theories of Mass Behaviour. New York, The Free Press of Glencoe.

Meyers-Levy, J. (1989). "The Influence of a Brand Name's Association Set Size and Word Frequency on Brand Memory." Journal of Consumer Research **16**(September): 197-207.

Miller, G. A. (1956). "The Magic Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information." The Psychological Review **63**(March): 81-97.

Mitchell, A. A. (1982). Models of Memory: Implications for Measuring Knowledge Structures. Advances in Consumer Research (US) Conference, Urbana, Illinois, Association for Consumer Research.

Mitra, A. and J. G. Lynch, Jr. (1995). "Toward a Reconciliation of Market Power and Information Theories of Advertising Effects on Price Elasticity." Journal of Consumer Research **21**(March): 644-659.

Narayana, C. L. and R. T. Markin (1975). "Consumer Behavior and Product Performance: An Alternative Conceptualization." Journal of Marketing 39(October): 1-6.

Nedungadi, P. (1990). "Recall and Consumer Consideration Sets: Influencing Choice Without Altering Brand Evaluations." Journal of Consumer Research **17**(December): 263-276.

Nedungadi, P. and V. Kanetkar (1992). "Incorporating Consideration Sets into Models of Brand Choice." Advances in Consumer Research **19**: 251-262.

Park, C. W., B. J. Jaworski, et al. (1986). "Strategic Brand Concept - Image Management." Journal of Marketing **50**(October): 135-145.

Raaijmakers, J. G. W. and R. M. Shiffrin (1981). "Search of Associative Memory." Psychological Review **88**(No. 2, March): 93-134.

Raaijmakers, J. G. W. and R. M. Shiffrin (1992). "Models for Recall and Recognition." Annual Review of Psychology **43**: 205-234.

Ratneshwar, S. and A. D. Shocker (1988). The Application of Prototypes and Categorization Theory in Marketing: Some Problems and Alternative Perspectives. Advances in Consumer Research, Consumer Research Association. **15:** 280-285.

Ratneshwar, S. and A. D. Shocker (1991). "Substitution in Use and the Role of Usage Context in Product Category Structures." Journal of Marketing Reserach **28**(August): 281-295.

Ries, A. and J. Trout (1981). Positioning The Battle For Your Mind. New York, McGraw-Hill Inc.

Riquier, C. and B. Sharp (1997). Brand Image Congruence Across Market Segments. Australia New Zealand Marketing Educators Conference 97, Melbourne, Department of Marketing , Monash University.

Roberts, J. and P. Nedungadi (1995). "Studying Consideration in the Consumer Decision Process: Progress and Challenges." International Journal of Research in Marketing **12**: 3-7.

Romaniuk, J. (2000 (forthcoming)). Relationships Between Usage Categories, Image Responses ande Probability of Purchase. European Marketing Academy Conference, Rotterdam.

Romaniuk, J., A. Sharp, et al. (1997). CLEAR Communications - Usage Attitude Business Quantitative Report. Adelaide, Marketing Science Centre.

Rosch, E. and C. B. Mervis (1975). "Family Resemblances: Studies in the Internal Structure of Categories." Cognitive Psychology 7: 573-605.

Rossiter, J. R. (1986). Comments on "Consumer beliefs and brand usage" and on Ehrenberg's ATR model. Broadway, NSW, NSW Institute of Technology.

Rossiter, J. R. (1987). "Comments on "Consumer Beliefs and Brand Usage" and on Ehrenberg's ATR Model." Journal of the Market Research Society **29**(No. 1): 83-93.

Rossiter, J. R. and L. Percy (1987). Advertising and Promotion Management. Singapore, McGraw-Hill.

Rossiter, J. R., L. Percy, et al. (1991). "A Better Advertising Planning Grid." Journal of Advertising Research **31**(October/November): 11-21.

Roth, E. M. and E. J. Shoben (1983). "The Effect of Context on the Structure of Categories." Cognitive Psychology **15**: 346-378.

Rundle-Thiele, S., J. Dawes, et al. (1998). An Empirical Investigation of the Relationship Between Three Types of Loyalty. Australia and New Zealand Marketing Academy Conference 98, Dunedin, New Zealand, Department of Marketing, University of Otago.

Rundus, D. (1973). "Negative Effects of Using List Items as Recall Cues." Journal of Verbal Learning and Verbal Behavior **12**: 43-50.

Rungie, C. and N. Danenberg (1998). Modelling the Juster Scale. Australian and New Zealand Marketing Academy Conference 98, Dunedin, New Zealand, University of Otago.

Sampson, P. (1993). "A Better Way to Measure Brand Image." Admap(July/August): 19-24.

Sarel, D. (1980). Product Positioning - A Reassessment. Theoretical Developments in Marketing. C. W. Lamb and P. M. Dunne, American Marketing Association: 116-119.

Seymour, P., M. Brennan, et al. (1994). "Predicting Purchase Quantities: Further Investigation of the Juster Scale." Marketing Bulletin(5): 21-36.

Sharp, A. and J. Romaniuk (2000 (forthcoming)). The Stability of Brand and Competitor Responses. European Marketing Academy Conference, Rotterdam.

Sharp, B., S. Rundle-Thiele, et al. (1997). Three Conceptualisations of Loyalty. Australia New Zealand Marketing Educators Conference 97, Melbourne, Department of Marketing , Monash University.

Sharp, B. and M. Wright (1999). There are Two Types of Repeat Purchase Markets. 28th European Marketing Academy Conference, Berlin, Germany, Institute of Marketing, Humboldt-University.

Sheth, J. N., B. I. Newman, et al. (1991). "Why We Buy What We Buy." Journal of Business Research **22**: 159-171.

Steenkamp, J.-B. E. M., H. C. M. Van Trijp, et al. (1994). "Perceptual Mapping Based on Idiosyncratic Sets of Attributes." Journal of Marketing Research **31**(February): 15-27.

Stern, P. and A. Ehrenberg (1997). Replication Means Extension. 26th European Marketing Academy Conference, Warwick Business School, U.K., The University of Warwick.

Stigler, G. J. (1961). "The Economics of Information." The Journal of Political Economy **69**(June): 213-225.

Thaler, R. (1983). "Transcation Utility Theory." Advances in Consumer Research **10**: 229-232.

Tulving, E. and Z. Pearlstone (1966). "Availability Versus Accessibility of Information in Memory for Words." Journal of Verbal Learning and Verbal Behavior **5**: 381-391.

Uncles, M. and K. Hammond (1995). "Grocery Store Patronage." The International Review of Retail, Distribution & Consumer Research **5**(3 July): 287-302.

Unnava, H. R. and D. Sirdeshmukh (1994). "Reducing Competitive Ad Interference." Journal of Marketing Research **31**(August): 403-411.

Woodside, A. G. and R. J. Trappey (1992). "Finding Out Why Customers Shop Your Store and Buy Your Brand: Automatic Cognitive Processing Models of Primary Choice." Journal of Advertising Research **32**: 59-78.

Wright, M. and Z. Kearns (1998). "Progress in Marketing Knowledge." Journal of Empirical Generalisations in Marketing Science 3: 1-21.

Zajonc, R. B. (1968). "Attitudinal Effects of Mere Exposure." Journal of Personality and Social Psychology - Monograph Supplement 9(No. 2, Part 2, June): 1-27.