

**THE IMPACT OF INVOLVEMENT
ON THE ATTITUDE-BEHAVIOUR SEQUENCE**

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To my grandmother.

ABSTRACT

This thesis argues for the importance of involvement as a factor playing a significant part in the processes through which attitudes exert their impact on behaviour. After reviewing theoretical approaches and research findings related to the effects of involvement on attitude formation and on attitude-behaviour consistency, the role of the variable within the most prominent models of the attitude-behaviour sequence is investigated. This investigation is conducted in a consumer behaviour context.

The model of automatic attitude activation posits that attitudes can be automatically retrieved to influence behaviour in a spontaneous, effortless way. Attitude accessibility, which reflects the strength of the object-evaluation association in memory, determines the ability of attitudes for such automatic activation. The first two studies of the thesis examine the role of involvement within this model and, specifically, the relation between involvement, accessibility and attitude-behaviour consistency. The findings indicate that involvement functions as an antecedent of attitude accessibility. High levels of involvement are associated with more accessible attitudes. However, involvement and accessibility contribute independently to attitude-behaviour correspondence.

Unlike the model of automatic attitude activation, the theories of reasoned action and planned behaviour view intentional behaviour as the end result of rational consideration of information. According to these models, intentions and behaviour are jointly determined by attitudes, subjective norms and perceived behavioural control, which are, respectively, based on individuals' beliefs concerning the consequences, the social approval and the anticipated ease or difficulty of performing the behaviour. However, the conditions that determine the relative importance of each of these factors are not specified in the models. Two studies were conducted to investigate the moderating effect of involvement on the relative importance of attitudes, subjective norms and perceived control. The findings indicate that high levels of involvement enhance attitudinal influence and attenuate normative and control influence on intentions and behaviour.

The MODE model integrates automatic and controlled attitude-to-behaviour processes by specifying the conditions that promote one versus the other. According to this model, both motivation and opportunity to deliberate are a prerequisite for a controlled process to occur. The last study examines the role of involvement within the MODE model and demonstrates that the variable serves as a motivational factor determining the occurrence of controlled versus automatic attitudinal processes.

In the final chapter, the research issues are discussed in the light of the empirical findings and conclusions are drawn.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	2
ABSTRACT	4
TABLE OF CONTENTS	7
LIST OF TABLES	14
LIST OF FIGURES	17
CHAPTER 1 Overview	18
1.1 Involvement as a moderator of the attitude-behaviour relationship and the attitude formation process	19
1.2 Automatic and controlled attitude-to-behaviour processes	20
1.3 The role of involvement in the attitude-behaviour sequence	23
1.4 Structure of the thesis	24
CHAPTER 2 Attitudes and the attitude-behaviour relationship	26
2.1 Introduction	27
2.2 The concept of attitudes	27
2.2.1 Definition of attitudes	27
2.2.2 Attitude structure	29
2.2.3 Attitude measurement	30
2.3 The study of the attitude-behaviour relationship: Three generations of research	31
2.4 Moderators of the attitude-behaviour relationship	33
2.5 Summary of Chapter 2	38

CHAPTER 3	The concept and the consequences of involvement	41
3.1	Introduction	42
3.2	The conceptualisation and operationalisation of involvement	43
3.2.1	Involvement in social psychological research	43
3.2.2	Involvement in consumer research	47
3.3	The impact of involvement on attitude formation and change	51
3.3.1	Social judgement theory	51
3.3.2	The elaboration likelihood and the systematic-heuristic models of persuasion	54
3.4	The moderating impact of involvement on the attitude-behaviour relationship	61
3.5	Summary of Chapter 3	64
CHAPTER 4	The role of involvement in the attitude-behaviour sequence	66
4.1	Introduction	67
PART I	AUTOMATIC ATTITUDE-TO-BEHAVIOUR PROCESSES	69
4.2	The model of automatic attitude activation	70
4.3	Empirical tests and criticisms of the model of automatic attitude activation	73
4.4	The concept of attitude strength	77
4.5	Involvement as a determinant of attitude strength: The elaboration likelihood model of attitude strength	79
4.6	The impact of involvement on attitude accessibility	82
PART II	CONTROLLED ATTITUDE-TO-BEHAVIOUR PROCESSES	86
4.7	The theory of reasoned action	87

4.8	Predicting behaviour with the theory of reasoned action: The distinction between single acts and behavioural categories	90
4.9	Empirical tests of the theory of reasoned action	93
4.10	The theory of planned behaviour	94
4.11	Criticisms of the theory of reasoned action and proposed modifications: The role of past behaviour	98
4.12	The relative predictive weight of attitudes, subjective norms and perceived control	102
4.13	The moderating role of involvement within the theories of reasoned action and planned behaviour	105
PART III THE INTEGRATION OF AUTOMATIC AND CONTROLLED ATTITUDE-TO-BEHAVIOUR PROCESSES		108
4.14	The distinction between automatic and controlled processes	109
4.15	The MODE model	111
4.16	Empirical tests of the MODE model	112
4.17	The role of involvement in the MODE model	115
4.18	Summary of Chapter 4 and main hypotheses of the thesis	117
CHAPTER 5 Involvement as a determinant of attitude accessibility		122
5.1	Introduction	123
5.2	Study 1: The impact of involvement on attitude accessibility	123
5.2.1	Introduction	123
5.2.2	Method	128
	<i>Design and manipulations</i>	128
	<i>Subjects</i>	129
	<i>Materials and procedure</i>	130
	<i>Dependent variables</i>	132
5.2.3	Results	133

5.2.4	Discussion	136
5.3	Summary of Chapter 5	142

CHAPTER 6 The relationship between involvement, attitude accessibility and attitude-behaviour consistency 143

6.1	Introduction	144
6.2	Study 2: Involvement and attitude accessibility as dimensions of attitude strength	144
6.2.1	Introduction	144
6.2.2	Method	149
	<i>Subjects</i>	149
	<i>Product selection</i>	150
	<i>Preliminary study</i>	151
	<i>Procedure</i>	151
	<i>Questionnaire design and measures</i>	152
6.2.3	Results	154
6.2.4	Discussion	158
6.3	Summary of Chapter 6 and conclusions	162

CHAPTER 7 The moderating role of involvement within the theory of planned behaviour: The prediction of behavioural intention 163

7.1	Introduction	164
7.2	Study 3: The moderating role of involvement in the prediction of intentions	165
7.2.1	Introduction	165
7.2.2	Method	173

	<i>Subjects</i>	173
	<i>Questionnaire design and measures</i>	173
7.2.3	Results	175
7.2.4	Discussion	180
7.3	Summary of Chapter 7	183

CHAPTER 8 The moderating role of involvement

within the theory of planned behaviour:

The prediction of intention and behaviour 185

8.1	Introduction	186
8.2	Study 4: The moderating role of involvement in the prediction of intentions and behaviour	186
8.2.1	Introduction	186
8.2.2	Method	192
	<i>Subjects</i>	192
	<i>Preliminary study</i>	193
	<i>Questionnaire design and measures</i>	193
8.2.3	Results	196
8.2.4	Discussion	212
8.3	Summary of Chapter 8 and conclusions	217

CHAPTER 9 Involvement as a determinant of the process through

which attitudes influence behaviour 218

9.1	Introduction	219
9.2	Study 5: The effect of involvement on attitude-to-behaviour processes	219
9.2.1	Introduction	219
9.2.2	Method	224

	<i>Subjects</i>	224
	<i>Preliminary study</i>	224
	<i>Procedure and materials</i>	226
	<i>Measures</i>	230
9.2.3	Results	230
9.2.4	Discussion	232
9.3	Summary of Chapter 9 and conclusions	234
CHAPTER 10	Discussion and conclusions	236
10.1	Introduction	237
10.2	Summary of empirical findings	238
10.2.1	Study 1: The impact of involvement on attitude accessibility	238
10.2.2	Study 2: Involvement and attitude accessibility as dimensions of attitude strength	238
10.2.3	Study 3: The moderating role of involvement in the prediction of intentions	240
10.2.4	Study 4: The moderating role of involvement in the prediction of intentions and behaviour	241
10.2.5	Study 5: The effect of involvement on attitude-to-behaviour processes	242
10.3	Involvement as a determinant of attitude accessibility	243
10.4	Involvement and attitude accessibility as dimensions of attitude strength	247
10.5	Involvement as a moderator of the relative impact of attitudes on behaviour	248
10.6	The efficiency and sufficiency of the theory of planned behaviour: The predictive value of perceived control and past behaviour	251
10.7	Involvement as a determinant of the process through which attitudes guide behaviour	252

10.8	Limitations and suggestion for future research	253
10.9	Conclusions	256
	REFERENCES	258
	APPENDIX A:	
	Copy of the experimental advertisement used in Study 1 (Chapter 5)	282
	APPENDIX B:	
	List of the target products used in Study 2 (Chapter 6)	283
	APPENDIX C:	
	The Personal Involvement Inventory (PII; Zaichkowsky, 1985) used in Study 2 (Chapter 5), Study 3 (Chapter 6) and Study 4 (Chapter 7)	284
	APPENDIX D:	
	List of statements used in the description of companies A and B (Study 5, Chapter 9)	285

LIST OF TABLES

CHAPTER 2

Table 2.1	Moderators of the attitude-behaviour relationship and their effect	39
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CHAPTER 5

Table 5.1	Means and standard deviations of response latencies (in seconds) to the experimental and to the filler advertised products for the high and moderate involvement groups	135
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CHAPTER 6

Table 6.1	Mean response latency (in seconds) per target product for the high (HI) and low involvement (LI) groups	156
Table 6.2	Regression of behaviour on attitude, involvement, residual, attitude by involvement, attitude by residual and attitude by involvement by residual	158

CHAPTER 7

Table 7.1	Principal components analysis (with varimax rotation) of the PII and the attitude towards the behaviour items	176
Table 7.2	Regression of purchase intention on attitude, subjective norm and perceived control	178
Table 7.3	Regression of purchase intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups	180

CHAPTER 8

Table 8.1	Principal components analysis (with varimax rotation) of the PII and the attitude towards the behaviour items	198
Table 8.2	Regression of usage frequency on intention, perceived control and past behaviour	199
Table 8.3	Regression of usage variety on intention, perceived control and past behaviour	200
Table 8.4	Regression of usage frequency on intention, perceived control and past behaviour for the high (HI) and low involvement (LI) groups	202
Table 8.5	Regression of usage variety on intention, perceived control and past behaviour for the high (HI) and low involvement (LI) groups	203
Table 8.6	Regression of usage frequency intention on attitude, subjective norm and perceived control	204
Table 8.7	Regression of usage variety intention on attitude, subjective norm and perceived control	205
Table 8.8	Regression of usage frequency intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups	207
Table 8.9	Regression of usage variety intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups	207
Table 8.10	Regression of usage frequency intention on attitude, subjective norm, perceived control and past behaviour	208
Table 8.11	Regression of usage variety intention on attitude, subjective norm, perceived control and past behaviour	209
Table 8.12	Regression of usage frequency intention on attitude, subjective norm, perceived control and past behaviour for the high (HI) and low involvement (LI) groups	210
Table 8.13	Regression of usage variety intention on attitude, subjective norm, perceived control and past behaviour for the high (HI) and low involvement (LI) groups	211

CHAPTER 9

Table 9.1	Means and standard deviations of the most and least important camera attributes	225
Table 9.2	Statements used in the description of the cameras of companies A and B	228
Table 9.3	Frequencies of purchase decisions for the high and low involvement groups	231

LIST OF FIGURES

CHAPTER 4

Figure 4.1 Schematic diagram of the automatic attitude-to-behaviour model (adapted from Fazio, 1986)	71
Figure 4.2 The elaboration likelihood model of attitude strength (adapted from Petty, Haugtvedt and Smith, 1995)	80
Figure 4.3 Schematic representation of the theory of reasoned action (adapted from Ajzen and Fishbein, 1980)	87
Figure 4.4 Schematic representation of the theory of planned behaviour (adapted from Ajzen and Fishbein, 1980)	95

CHAPTER 1

Overview

1.1 Involvement as a moderator of the attitude-behaviour relationship and the attitude formation process

A common objective in both Social Psychology and Consumer Psychology is the explanation and prediction of behaviour. The concept of attitudes has been and remains central in this kind of research, as attitudes are assumed to guide behaviour and, therefore, to contribute to its explanation and prediction (Lutz, 1991; McGuire, 1986). However, the relationship between attitudes and behaviour is not simple and in many instances expressed attitudes fail to substantially relate to individuals' subsequent actions (e.g. Wicker, 1969).

As a result of such inconsistencies between attitudes and overt behaviour, a large body of research has been devoted to the study of the conditions that determine the extent and nature of the influence that attitudes have on behaviour. In this area, two distinct traditions of research can be distinguished. The first is concerned with the identification of variables that moderate attitudinal influence on behaviour. The second concentrates on the processes through which attitudes exert their impact on behaviour. In addition, research on the attitude-behaviour relationship is often complemented by the study of the processes through which attitudes are formed (or changed), as understanding these processes is sometimes necessary to understand 'when' and 'how' attitudes influence behaviour.

One variable that has attracted considerable attention, as a moderator of attitude-behaviour consistency and as a determinant of the attitude formation process, is involvement with the attitude object (e.g. Chaiken, 1980; Greenwald and Leavitt,

1984; B. T. Johnson and Eagly, 1989; Petty and Cacioppo, 1986; Petty, Cacioppo and Schumann, 1983; Sivacek and Crano, 1982). The term involvement is commonly used to refer to the perceived personal relevance and importance of an attitude object (Petty and Cacioppo, 1979). Several conceptualisations of involvement, however, appear in the literature, usually distinguishing the concept in terms of its antecedents. Despite the diversity of conceptualisations, researchers generally agree that involvement serves as a motivational variable determining the extent and depth of cognitive processing during attitude formation and the strength of the attitude-behaviour link. Findings from both social psychological and consumer research indicate that high levels of involvement promote effortful and systematic processing of information during attitude formation and increase attitude-behaviour consistency (e.g. Petty *et al.*, 1983).

Research has not yet, however, investigated the consequences of involvement in the actual processes through which attitudes guide behaviour. After reviewing theoretical approaches and research findings related to the effects of involvement on attitude formation and on attitude-behaviour consistency, this thesis argues for the importance of involvement as a variable playing a significant part in the attitude-behaviour sequence. The main objective of this thesis is to explore the role of involvement within major attitude-to-behaviour models.

1.2 Automatic and controlled attitude-to-behaviour processes

Fazio (1990a) has suggested a key distinction in the processes through which attitudes influence behaviour. In a broad sense, attitudes can influence behaviour in a rather effortless, spontaneous manner (automatic attitude-to-behaviour processes) or through

a more thoughtful and rational process (controlled attitude-to-behaviour processes). Although this distinction is not dichotomous, as both automatic and controlled elements coexist in both kinds of processes, it provides a useful heuristic for the classification of models in terms of the perspective through which they approach the attitude-behaviour sequence and as such it is adopted in this thesis.

Fazio's (1986) model of automatic attitude activation posits that attitudes can be retrieved and can influence behaviour in an automatic fashion, without any effortful thinking and without the individual becoming aware of this influence. According to this model, when individuals encounter an attitude object in any particular context, their attitudes towards this object may be spontaneously activated to 'colour' the more or less positive or negative way the object is perceived and consequently, to influence their behaviour towards this object. The model asserts that the likelihood that attitudes will be automatically activated upon mere observation of the attitude object depends on the strength of the memory association between the object and its corresponding evaluation. The strength of this association is reflected in attitude accessibility (i.e. the ease or speed of retrieval of an attitude from memory). The more accessible an attitude is, the more likely it is to be activated when the individual encounters the attitude object and, hence, the more likely it is to influence behaviour. The model of automatic attitude activation therefore assigns attitude accessibility a central role as a moderator of the attitude-behaviour relationship.

An alternative account of the attitude-behaviour sequence is provided by the theory of reasoned action (Ajzen and Fishbein, 1980) and its more recent, extended version, the theory of planned behaviour (Ajzen, 1985, 1991). These models assert that any intentional behaviour is, in part, the end result of rational and systematic

consideration of information concerning the possible consequences of performing this behaviour. When an individual anticipates that the behaviour will lead to positive (rather than negative) outcomes, he/she is more likely to evaluate the behaviour favourably and thus to form strong behavioural intentions. These models therefore assume that the attitude-to-behaviour process is initiated by the individual who consciously retrieves or creates an attitude (towards a behaviour) in order to decide on a course of action. The theories of reasoned action and planned behaviour assert that intentions and behaviour are also influenced by the social pressures exerted on the individual to perform or not to perform the behaviour (subjective norm). In addition to attitudes and subjective norms, the theory of planned behaviour introduces perceived behavioural control, a construct referring to the anticipated ease or difficulty of performing the behaviour, as a third, independent determinant of intentions and behaviour. The relative importance of each of these factors in the formation of intentions and behaviour is expected to vary across different conditions (e.g. across behaviours and individuals; Ajzen, 1991). These conditions, however, are not specified in the models.

In an attempt to conceptually integrate automatic and controlled attitude-to-behaviour processes, Fazio (1990a) recently proposed the MODE model which identifies the conditions that promote controlled versus automatic attitudinal influence on behaviour. According to this model, both motivation and opportunity to process attitudinal information are a prerequisite if attitudes are to influence behaviour in the thoughtful manner outlined by the theories of reasoned action and planned behaviour (e.g. by consideration of the probable outcomes of a behaviour). When either motivation or opportunity is missing, attitudes can influence behaviour only in an

automatic, unconscious fashion. For example, in situations where a behaviour is without serious consequences, individuals might lack the motivation to use their attitudes as a guide. Or, in situations where such motivation does exist, individuals might not have the opportunity to reflect on their attitudes in order to act (e.g. when an instant behavioural decision is required). However, in such situations, it is still possible that attitudes will influence behaviour in the spontaneous, unconscious way outlined in the model of automatic attitude activation.

1.3 The role of involvement in the attitude-behaviour sequence

In this thesis, I argue that involvement plays a significant part in the attitude-behaviour sequence and I attempt to investigate the role of the variable within each of the process models of the attitude-behaviour link described in the previous section. In respect to Fazio's (1986) model of automatic attitude activation, I suggest that involvement with the attitude object influences attitude accessibility, a crucial variable in the model that determines whether attitudes are capable of spontaneous retrieval. Specifically, I suggest that the extensive elaboration of information during attitude formation, present under high levels of involvement (Petty and Cacioppo, 1986), strengthens the object-evaluation association in memory and thus enhances attitude accessibility. In addition, I expect involvement to influence attitude accessibility by determining the frequency of attitude activation and attitude salience, factors which also underlie the ease of retrieval of cognitive constructs from memory (Higgins and G. A. King, 1981). In short, I argue that involvement serves as a determinant of attitude accessibility both during and following attitude formation.

In relation to the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991), I assert that, because high involvement is associated with stronger, more consequential attitudes, it enhances the predictive weight of attitudes relative to that of subjective norms and perceived control. In other words, I suggest that individuals who are highly involved with the attitude object are more inclined to behave in ways consistent with their personal evaluation of the situation and take social influence and behavioural control less into account.

Finally, in relation to Fazio's (1990a) MODE model, I suggest that involvement determines individuals' motivation to engage in careful consideration of specific information when making a behavioural decision (i.e. in scrutiny of the positive or negative properties of an object or the pros and cons of a behaviour) and, therefore, determines whether attitudes will influence behaviour in a controlled or in an automatic fashion. I assert that individuals who are involved with an attitude object or a behavioural decision are more likely to devote the cognitive effort required for deliberative, rather than spontaneous, attitudinal influence to occur.

1.4 Structure of the Thesis

The next chapter of the thesis discusses conceptual issues related to attitudes and reviews empirical findings demonstrating the moderating impact of several variables on the attitude-behaviour relation. In the third chapter, the conceptualisations that involvement has received in social psychological and consumer research are reviewed, and research findings related to the effects of the variable on the processes through which attitudes are formed and to its impact on attitude-behaviour consistency are

discussed. In the fourth chapter, Fazio's (1986) model of automatic attitude activation, the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991), and the MODE model (Fazio, 1990a) are presented. The potential effects of involvement within each of these models are discussed and the main hypotheses of the thesis are formulated. Chapters 5 and 6 present the findings of two studies investigating the relationship between involvement and attitude accessibility and the combined influence of these variables on attitude-behaviour consistency. In Chapters 7 and 8, two studies investigating the role of involvement within the theories of reasoned action and planned behaviour and, in particular, its moderating influence on the relative predictive weight of the models' components are presented. Chapter 9 reports the findings of a study examining the role of involvement in the MODE model and, specifically, the effect of the variable on the occurrence of controlled versus automatic attitudinal processes. In Chapter 10 the empirical findings of the thesis are discussed as a whole and conclusions are drawn.

CHAPTER 2

Attitudes and the attitude-behaviour relationship

2.1 Introduction

The concept of attitudes has dominated social psychological research since the 1920s (McGuire, 1986). The understanding of attitudes has improved substantially over the decades and the accumulation of empirical findings has led to the development of sophisticated theories dealing with attitudinal phenomena. The importance and utility of the attitude concept rests on the assumption that attitudes influence and therefore predict behaviour. This assumption, however, has been challenged by many investigators (e.g. Deutscher, 1966, 1973; LaPiere, 1934; Wicker, 1969) and the relationship between attitudes and behaviour has been and remains a central topic of attitude theory and research.

This chapter is concerned with the concept of attitudes and with the attitude-behaviour relationship. The first section of the chapter outlines the various conceptualisations and operationalisations that attitudes have received in the literature. In the following two sections, the emergence of the attitude-behaviour relationship as a major issue in the study of attitudes is discussed and empirical research into the effects of various factors moderating the consistency between attitudes and behaviour is reviewed.

2.2 The concept of attitudes

2.2.1 Definition of attitudes

Despite the long history of research on attitudes, there is no generally agreed upon definition of the term. It becomes apparent, when reviewing the various definitions,

that the concept possesses certain attributes which, according to the conceptualisation that it receives, are more or less stressed.

Some theorists view attitudes as *feelings* related to an object¹, stressing the affective nature of the concept. Greenwald (1989) defines attitudes as 'the affect associated with a mental object' (p. 432), while Petty and Cacioppo (1981) note that the term should be used to refer to 'a general and enduring positive or negative feeling about some person, object or issue' (p. 7). Other theorists place the emphasis on the *cognitive* dimension of attitudes. For example, attitudes have been characterised as 'knowledge structures' (Kruglanski, 1989) and as 'associative networks' (Fazio, 1990a). The most prominent attribute of the term, however, is its *evaluative* dimension which appears in most definitions (Olson and Zanna, 1993). For example, Eagly and Chaiken (1993) define attitudes as 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour' (p. 1), while Zanna and Fazio (1982) argue that 'an attitude is typically considered to involve categorisation of an object along an evaluative dimension' (p. 291).

Some theorists stress more than one attribute in their conceptualisation. Kruglanski (1989), for example, stresses both the evaluative and the affective attributes by defining attitudes as 'a special type of knowledge, notably knowledge of which content is evaluative or affective' (p. 139). The sociocognitive model proposed by Pratkanis and Greenwald (1989) integrates the cognitive and evaluative dimensions. According to this model, attitudes are memory representations consisting of (a) an

¹ The term object is used here to describe any entity (e.g. physical object, person, behaviour, ideology) that is discriminable and that can become the object of thought and thus of an attitude (Eagly and Chaiken, 1993).

object label, (b) an evaluative summary, and (c) a knowledge structure supporting this evaluation.

2.2.2 Attitude structure

The way attitudes are conceptualised has also been distinguished in terms of their assumed underlying structure. For example, some theorists view attitudes as multi-dimensional constructs, while others assert that attitudes are unidimensional. The most prominent example of the multi-dimensional conceptualisation of attitudes is the three-component model of attitudes (Rosenberg and Hovland, 1960). According to this model, any attitude consists of three components, defined as affect (feelings, evaluations and emotions), cognition (beliefs, perceptions, information about the attitude object) and behaviour (intentions to act and actions).

Criticisms that this model obscures the attitude-behaviour relation by viewing behaviour as a dimension of the attitude concept itself (e.g. Fishbein and Ajzen, 1975; McGuire, 1969) have led some researchers to delete the behavioural component and to regard attitudes as a two-dimensional construct consisting of an affective and a cognitive component (e.g. Bagozzi and Burnkrant, 1979; Zajonc and Markus, 1982).

Contrary to these multi-component views of attitudes, some authors consider attitudes as unidimensional constructs and regard affect, cognition and behaviour as correlates, or antecedents and consequences, of attitudes. Zanna and Rempel (1988) argue that attitudes can be based upon affective (e.g. in the case of conditioning), cognitive (e.g. in the case of knowledge-based evaluations) or behavioural (e.g. in the case of inferring one's own attitude from observation of prior behaviour) information.

Eagly and Chaiken (1993) explain how attitudes can generate affective, cognitive and behavioural responses. Fishbein and Ajzen (1975) treat the cognitive component (beliefs and perceptions) as an antecedent and the behavioural component (intentions or overt behaviours) as a consequence of the attitude itself.

Despite theoretical controversies surrounding the concept of attitudes, it seems that most investigators agree that *evaluation* is a central aspect of attitudes, and that attitudes have *affective, cognitive and behavioural antecedents and consequences* (Olson and Zanna, 1993).

2.2.3 Attitude measurement

Attitudes are latent variables or hypothetical constructs (Ajzen, 1989). As such they are not accessible to direct observation and, therefore, they must be inferred from measurable responses. Techniques to measure attitudes belong to one of three broad classes. Attitudes can be assessed through verbal self-reports, observations of non-verbal behaviour or psychophysiological measures (see Himmelfarb, 1993).

The most common technique for the measurement of attitudes in contemporary research is direct self-reports, such as ratings of the attitude object on bipolar dimensions (e.g. good/bad, favourable/unfavourable; Osgood, Suci and Tannenbaum, 1957). Attitudes can also be inferred from multiple indirect verbal responses (e.g. Likert, Thurstone attitude scales). Criticisms that self-reports may serve to crystallise or freeze the attitude (Sechrest and Belew, 1983), or even to change attitudes and behaviour (Sherman, 1980), have led to the development of alternative, less obtrusive means of attitude measurement. Implicit measures of memory (Banaji and Greenwald,

1994), the bogus pipeline technique (Jones and Sigall, 1971) and the disguised self-report techniques (Kidder and Cambell, 1970) are examples of such attempts. Finally, a number of indirect psychophysiological attitude measures have been developed, including measures of pupil dilation (Hess and Polt, 1960; Petty and Cacioppo, 1983), galvanic skin response (Petty and Cacioppo, 1983; Rankin and Campbell, 1955) and facial electromyography (Cacioppo and Petty, 1979; Petty and Cacioppo, 1983).

2.3 The study of the attitude-behaviour relationship: Three generations of research

When an individual holds an attitude towards an object, he/she experiences this object as more or less desirable, as good or bad, in a more or less positive or negative manner. The attitude therefore should predispose the individual to respond in a certain manner in relation to the attitude object. This perspective leads one to expect that people's attitudes are positively correlated with their actions; people who hold positive attitudes should engage in behaviours that approach, support or enhance the attitude object and people who hold negative attitudes should engage in behaviours that avoid, oppose or hinder the attitude object (Eagly and Chaiken, 1993).

In the early days of attitude research, it was taken for granted that attitudes could accurately predict many aspects of social behaviour. However, as research progressed, it became apparent that attitude-behaviour correlations were frequently weak (e.g. Deutscher, 1966, 1973; Festinger, 1964; LaPiere, 1934). Wicker's (1969) pessimistic review of the available literature called attention to the lack of supporting evidence for the attitude-behaviour relationship, stimulating interest and research. This

new interest generated many studies investigating whether there is a relationship between attitudes and behaviour. The resulting body of research comprised what Zanna and Fazio (1982) call the first generation of research on attitude-behaviour consistency: the 'is' question. Reviews of this first generation of research have taken a relatively optimistic position and made apparent that behaviour is 'sometimes' consistent with attitudes (Fazio and Zanna, 1981; Schuman and M. P. Johnson, 1976).

Given the range of findings obtained in this first generation of research, investigators began to ask what Zanna and Fazio (1982) characterise as the 'when' question. Instead of asking whether attitudes relate to behaviour, the question shifted to asking: under which conditions attitudes relate to behaviour. In consequence, research shifted to determining the variables that underlie and moderate the magnitude of the attitude-behaviour relation. A large number of variables, including attitudinal properties, personality characteristics and situational factors, have been found to play an important part in determining attitude-behaviour correspondence (Fazio, 1995; Fazio and Zanna, 1981; for a recent meta-analysis see Kraus, 1995). Researchers have typically used these variables as indicators of the latent construct of attitude strength (Krosnick and Petty, 1995; Raden, 1985; see Chapter 4).

A third, more recent, approach to the attitude-behaviour relationship is concerned with what Zanna and Fazio (1982) call the 'how' question. This line of research is concerned with the processes that mediate the attitude-behaviour link. In this area, a distinction has been drawn between controlled and automatic attitude-to-behaviour processes (Fazio, 1990a; see Chapter 4). In situations where individuals reflect on their attitudes in order to decide on a course of action, attitudes exert their impact on behaviour in a conscious and thoughtful manner and the process is

characterised as controlled (e.g. Ajzen and Fishbein, 1980). By contrast, in situations where attitudes influence behaviour in a more spontaneous, less effortful way, the process is characterised as automatic² (e.g. Fazio, 1986).

2.4 Moderators of the attitude-behaviour relationship

A number of studies have shown that the manner of attitude formation and, in particular, whether attitudes are formed through *direct experience* with the attitude object (versus being formed on the basis of indirect information) moderates attitude-behaviour consistency. Typical studies in this area indicate that the attitudes of people who have had direct experience with the attitude object correlate better with subsequent attitude-relevant behaviours than the attitudes of people who lack direct experience (Doll and Mallu, 1990; Fazio and Zanna, 1978a, 1978b, 1981; Fazio, Zanna and Cooper, 1978; Manstead, Proffitt and Smart, 1983; Regan and Fazio, 1977). For example, Regan and Fazio (1977) found that college students with direct prior experience of a housing crisis demonstrated greater consistency between their attitudes and behavioural attempts to alleviate the crisis (e.g. sign a petition) compared to students with similar attitudes but without prior experience. In a subsequent laboratory experiment, subjects who indicated their attitude toward a variety of puzzle types after working on examples of each, displayed greater consistency between these attitudes and subsequent behaviour in a free play situation than subjects with attitudes formed on

² Shiffrin and Dumais (1981) characterise as automatic any process that leads to the activation of some response 'whenever a given set of external initiating stimuli are presented, regardless of a subject's attempt to ignore or bypass the distraction' (p. 117). By contrast, controlled processes are effortful and require the active attention of the individual.

the basis of information provided by the experimenter (Regan and Fazio, 1977). Similarly, R. E. Smith and Swinyard (1983) found that product attitudes based on product trial predicted subsequent purchase behaviour better than attitudes based on product advertising.

Fazio and Zanna (1978a) suggest that the impact of direct versus indirect experience with the attitude object on attitude-behaviour consistency might be mediated by the degree of *certainty/confidence* with which an attitude is held. In a study on attitudes towards psychological research, the consistency between subjects' attitudes towards participating in psychological experiments and the number of experiments in which they volunteered to participate was shown to be significantly related to both the amount of direct experience upon which subjects' attitudes were based and the degree of certainty with which those attitudes were held. These two attitudinal qualities were significantly intercorrelated, suggesting that direct experience with an attitude object may produce an attitude that is more confidently held than an attitude that is formed through indirect means (Fazio and Zanna, 1978a, 1978b).

However, attitude certainty/confidence can also have a direct, independent effect on attitude-behaviour consistency. For example, Fazio and Zanna (1978b, experiment 2) found that, regardless of the manner of attitude formation, subjects who were led to believe that they held their attitudes towards various intellectual puzzles confidently (by means of bogus physiological feedback on their own rating of attitude confidence) displayed greater attitude-behaviour consistency than subjects led to believe that they held their attitudes with little confidence. Similarly, Warland and Sample (1973) found that subjects' certainty in their responses to several Likert items

about voting for a student government moderated the relationship between these responses and several criterion variables.

Research has also revealed that attitudes based on a substantial *amount of information* about the attitude object are strong predictors of subsequent behaviour (Davidson, 1995). Kallgren and Wood (1985) demonstrated that positive attitudes towards preservation of the environment led to more consistent subsequent preservation behaviours (e.g. participating in a recycling project, signing a pro-environmental petition) for individuals with greater amounts of relevant knowledge. In a study comparing intention-behaviour correlations among participants with varying amounts of information relevant to behaviours in the political domain and in the health domain (operationalisations of amount of information comprised of either actual listing of information available in memory or self-reports of how well informed respondents considered themselves to be), Davidson, Yantis, Norwood and Montano (1985) demonstrated that correlations were significantly higher for respondents who were more informed about the issue concerned (or those who reported being more informed). Importantly, the effect of the amount of information was significant even after the effect of direct experience and attitude certainty had been partialled out.

The *temporal stability* of attitudes has also been found to moderate the attitude-behaviour relationship. Attitudes that are stable over time are better predictors of behaviour than less stable attitudes. Schwartz (1978) found that a specific attitude towards altruistic actions (e.g. tutoring blind children) and its corresponding behaviour correlated more strongly among those whose general set of altruistic attitudes showed high rather than low temporal stability, although stability of the specific attitude did not moderate this correlation. Similarly, Davidson and Jaccard (1979), in a study on

contraceptive use and attempted conception, found large moderating effects of attitude stability.

Consistency between the affective and cognitive components of an attitude (Rosenberg and Hovland, 1960) has been thought to be indicative of a well-thought-out attitude (Rosenberg, 1960) and has been associated with high attitude-behaviour correspondence. For example, R. Norman (1975) found *affective-cognitive consistency* to have a moderating effect on the relation between subjects' attitudes towards participating in psychological experiments and their actual behaviour when presented with an opportunity to volunteer as subjects.

Attitude ambivalence, defined as the degree to which an attitude object is evaluated both positively and negatively by the same individual (Thomson, Zanna and Griffin, 1995), has also been found to regulate the consistency between attitudes and behaviour. For instance, Moore (1973) found that the correlation between subjects' attitudes toward capital punishment and whether or not they would vote to have capital punishment reinstated was moderated by the ambivalence of these attitudes. Subjects with attitudes classified as highly ambivalent demonstrated behaviour that was less predictable than that of subjects with attitudes of low ambivalence.

Also, *attitude extremity*, i.e. the degree of favourableness or unfavourableness towards the attitude object, has been shown to moderate attitude-behaviour consistency. In a study on attitudes towards withdrawal of the USA from Vietnam (conducted during September 1966 through December 1969), Petersen and Dutton (1975) found that respondents' actual participation in demonstrations against USA military policy varied as a function of the extremity of their attitudes.

Furthermore, various personality factors, such as *need for cognition* (Cohen, Stotland and Wolf, 1955) and *self-monitoring* (Snyder, 1974), have been found to moderate the consistency between attitudes and behaviour. For example, Cacioppo, Petty, Kao and Rodriguez (1986) found that individuals high in need for cognition (i.e. individuals with a tendency to engage in and enjoy cognitive endeavours) held attitudes that were more predictive of their voting intentions and subsequent reports of voting behaviour than individuals low in need for cognition. Evidence also suggests that individuals who do not tend to engage in self-presentation, that is, individuals who are low in self-monitoring, show greater attitude-behaviour consistency than individuals high in self-monitoring (Snyder and Gangestad, 1986; Zanna, Olson and Fazio, 1981).

Among the many factors that enhance or attenuate the impact of attitudes on behaviour two variables are of particular relevance to this thesis: involvement with the attitude object and attitude accessibility. *Involvement* is commonly defined as the perceived personal relevance and importance of the attitude object (Petty and Cacioppo, 1979). Empirical evidence shows that high involvement with the attitude object enhances the consistency between attitudes and behaviour (e.g. Budd and Spencer, 1984; Petersen and Dutton, 1975; Petty, Cacioppo and Schumann, 1983). The importance of involvement in the study of the attitude-behaviour relationship stems, at least partly, from the fact that involvement determines the extent of cognitive elaboration of information during attitude formation (Chaiken, 1980; Petty and Cacioppo, 1986). The moderating impact of involvement on attitude-behaviour consistency will therefore be examined after reviewing the effects of the variable on attitude formation (Chapter 3).

Attitude accessibility reflects the strength of the memory link between the attitude object and its corresponding evaluation. Several studies have established the importance of attitude accessibility as a moderator of attitude-behaviour consistency (e.g. Fazio, Powell and Williams, 1989; Fazio and Williams, 1986). The impact of this variable on the attitude-behaviour relationship will be examined after discussing Fazio's (1986) model of automatic attitude activation in which attitude accessibility is assigned a critical role (Chapter 4, Part I).

2.5 Summary of Chapter 2

The conceptualisations that attitudes have received focus on the nature and structure of the concept. Attitudes have been defined as affective reactions towards objects, as cognitive structures related to objects and as object evaluations. Also, attitudes have been viewed as multi-dimensional constructs, consisting of affective, cognitive and behavioural components, or as unidimensional constructs, correlated with affect, cognition and behaviour. Contemporary approaches to attitudes centre on the evaluative nature of the concept and view affect, cognition and behaviour as antecedents or consequences of attitudes. Further, attitudes are typically assessed by means of direct self-reports, although a variety of measurement techniques are available.

The importance of attitudes for social scientists stems from the assumption that attitudes are important determinants and predictors of social behaviour. The study of the attitude-behaviour relationship emerged as a major issue in the area when empirical findings failed to demonstrate a strong link between expressed attitudes and overt

Table 2.1. Moderators of the attitude-behaviour relationship and their effect

Moderating variables and related studies	Effect
Direct versus indirect experience with the attitude object Doll and Mallu, 1990; Fazio and Zanna, 1978a, 1978b, 1981; Fazio <i>et al.</i> , 1978; Manstead <i>et al.</i> , 1983; Regan and Fazio, 1977; R. E. Smith and Swinyard, 1983	Attitudes formed through direct interaction with the attitude object are better predictors of behaviour than attitudes based on indirect information.
Attitude certainty/confidence Fazio and Zanna, 1978a, 1978b; Sample and Warland, 1973; Warland and Sample, 1973	Attitudes held with greater certainty/confidence are more predictive of behaviour.
Amount of information about the attitude object available in memory Davidson <i>et al.</i> , 1985; Kallgren and Wood, 1985	Attitudes that are based on substantial amounts of information are better predictors of behaviour.
Temporal stability Davidson and Jaccard, 1979; Schwartz, 1978	Attitudes that are stable over time have a strong impact on behaviour.
Affective-cognitive consistency R. Norman, 1975	Consistency between the affective and cognitive component of an attitude strengthens the attitude-behaviour link.
Attitude ambivalence Moore, 1973	Attitude ambivalence reduces the impact of attitudes on behaviour.
Attitude extremity Petersen and Dutton, 1975	Extreme attitudes are better predictors of behaviour.
Involvement with the attitude object Budd and Spencer, 1984; Fazio and Zanna, 1978a; Krosnick, 1988b; Petersen and Dutton, 1975; Petty <i>et al.</i> , 1983; Regan and Fazio, 1977; Sivacek and Crano, 1982; Verplanken, 1989	High involvement with the attitude object enhances attitude-behaviour consistency.
Attitude accessibility Fazio <i>et al.</i> , 1989; Fazio and Williams, 1986	More accessible attitudes are better predictors of behaviour.
Need for cognition Cacioppo <i>et al.</i> , 1986	Individuals high in need for cognition demonstrate more attitude-consistent behaviour.
Self-monitoring Snyder and Gangestad, 1986; Zanna <i>et al.</i> , 1981	Individuals who are low in self-monitoring show greater attitude-behaviour consistency than individuals high in self-monitoring.

behaviour. Three generations of research have been distinguished in the study of attitude-behaviour consistency. Early studies in the area were mainly concerned with whether there is a relation between attitudes and behaviour and indicated that attitude-behaviour correlations can range from very strong to very weak. The second generation of research concentrated on the identification of conditions that enhance attitudinal impact on behaviour. This stream of research has revealed a large number of variables that intervene to moderate the impact of attitudes on behaviour (see Table 2.1). The review of the relevant literature indicates that, when certain conditions are met, attitudes can be strong determinants and valid predictors of behaviour. The third, most recent generation of research on the attitude-behaviour relation deals with the specific processes through which attitudes exert their influence on behaviour.

CHAPTER 3

The concept and the consequences of involvement

3.1 Introduction

This chapter is concerned with the concept of involvement and with the consequences of the variable on attitude formation and on attitude-behaviour consistency. The concept of involvement was developed in the 1940s' by M. Sherif and Cantril (1947) to describe the state of an organism when presented with any stimulus which is either consciously or subconsciously related to the ego (ego-involvement). Ego-involvement is a central variable of social judgement theory and has been used to predict variations in susceptibility to attitude change (M. Sherif and Hovland, 1961). Since then, many investigators have relied on involvement-related constructs in their efforts to understand the processes through which attitudes are shaped to influence behaviour. The multiplicity of conceptualisations stems from the fact that involvement has been examined as a potential mediator of different attitudinal phenomena. For example, some researchers have been concerned with the impact of involvement on the resistance of attitudes to counterpersuasion (e.g. C. W. Sherif, M. Sherif and Nebergall, 1965), others have focused on the impact of the variable on the specific processes through which attitudes are formed or changed (e.g. Petty and Cacioppo, 1986), while others have concentrated on the effects of the variable on attitude-behaviour consistency (e.g. Fazio and Zanna, 1978a).

The first section of the chapter outlines the various conceptualisations and operationalisations that involvement has received in social psychological and consumer research. This review of conceptual approaches to involvement is necessary in order to simplify the integration of findings from different areas and research traditions. The

second section is concerned with the impact of involvement on attitude formation and change. In this section, social judgement theory (M. Sherif and Hovland, 1961), the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986) and the systematic-heuristic model of persuasion (Chaiken, 1980) are presented and empirical findings are reviewed. The third section of the chapter concentrates on the moderating effects of involvement on the attitude-behaviour relation.

3.2 The conceptualisation and operationalisation of involvement

3.2.1 Involvement in social psychological research

Social psychologists have been mostly concerned with the impact of involvement on attitude formation and change. In their recent meta-analysis of empirical findings related to the role of involvement in persuasion processes, B. T. Johnson and Eagly (1989) propose that, in its social psychological usage, the term involvement refers to at least three qualitatively different motivational states, each of which activates a different aspect of the self-concept and has different effects on information processing and persuasion.

The first type of involvement, *value-relevant involvement*, refers to a psychological state synonymous to what social judgement theorists call ego-involvement (M. Sherif and C. W. Sherif, 1967). Such a state is created when an attitude is linked to an individual's personal values and standards. Researchers working within this tradition of research use different operationalisations of involvement. In some studies, involved subjects are members of groups, actively supporting a particular

stand on an issue, and less involved subjects are not members of such groups. Because group members' attitudes differ from those of non-members and in order to avoid this confound, some investigators use the width of attitudinal latitudes (see following section) as a measure of involvement, wider latitudes of rejection indicating high involvement (e.g. Sereno, 1968). Other researchers assess value-relevant involvement by self-reports of the perceived importance and personal relevance of an issue. The main prediction of social judgement theory is that high ego-involvement inhibits persuasion, as involved individuals tend to protect their ego-involving attitudes and to resist counterpersuasion (C. W. Sherif *et al.*, 1965; M. Sherif and Hovland, 1961). B. T. Johnson and Eagly's (1989) meta-analytic findings support this prediction, as high involvement subjects are less persuaded than low involvement subjects.

The second type of involvement, according to B. T. Johnson and Eagly (1989), is *outcome-relevant involvement* which applies to contexts where the individual is motivated to attain desirable outcomes or avoid unpleasant ones. Much of the research related to outcome-relevant involvement has been conducted within the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986), in which this construct has been termed 'issue involvement' and 'personal relevance' (Petty and Cacioppo, 1979). In this line of research, manipulations of involvement generally involve varying the perceived consequences of an issue, for example, by varying the time or location of implementation of a policy. Although the elaboration likelihood model will be examined in more detail in the following section, it should be noted that B. T. Johnson and Eagly's (1989) meta-analysis supports the model's main prediction that high involvement enhances elaboration of communicated information and thus strong persuasive arguments are more effective for highly involved recipients.

In the tradition of the elaboration likelihood model, no distinction between different types of involvement is drawn and, instead, outcome-relevant and value-relevant involvement are treated as synonymous concepts. However, B. T. Johnson and Eagly (1989) contend that the operational definitions of involvement employed in implementations of the elaboration likelihood model are substantially different from those of social judgement theory to justify a different involvement construct. This distinction between value-relevant and outcome-relevant involvement has been questioned by Petty and Cacioppo (1990), who argue that, since both types of involvement have similar consequences in persuasion settings (i.e. as both types of involvement increase, so does systematic and effortful processing of persuasive communications), two distinct theoretical constructs are not warranted. To substantiate this view, they appeal to the result of the meta-analysis that shows that argument strength interacts with both forms of involvement. Yet, maintaining their earlier conclusion, B. T. Johnson and Eagly (1990) argue that any attempt to reduce value-relevant and outcome relevant involvement to a single construct is premature, as research has yet to establish that similar processes underlie the persuasive effects of the two forms of involvement (see Maio and Olson, 1995).

B. T. Johnson and Eagly (1989) further distinguish *impression-relevant involvement*, referring to situations where individuals are primarily concerned with formulating opinions that will facilitate favourable social impressions (i.e. please potential evaluators, and maintain their own self-esteem). Researchers usually manipulate this type of involvement, frequently labelled as 'response involvement' (e.g. Leippe and Elkin, 1987), by varying whether subjects expect to discuss the message issue with another person of unknown views on the issue. Consistent with predictions,

B. T. Johnson and Eagly's (1989) meta-analysis shows that high involvement subjects are motivated to maintain neutral, easily defensible positions and, thus, are slightly less persuaded than low involvement subjects.

Chaiken and Stangor (1987) suggest that a multifaceted view of involvement might be necessary to fully capture the concept and agree with B. T. Johnson and Eagly (1990) that the extent to which different types of involvement have a differential impact on information processing and persuasion needs to be further examined. In their discussion of different involvement-related terms, they make reference to *issue involvement* (i.e. outcome-relevant involvement or value-relevant involvement) and *response involvement* (i.e. impression-relevant involvement; also termed relational, social identity or self-identity involvement). In addition, these authors distinguish *content involvement*, referring to the extent to which individuals pay attention to and engage in extended processing of persuasive messages (also termed message processing involvement; Petty and Cacioppo, 1981), a state which, although not synonymous to value-relevant and outcome-relevant involvement, may stem from these latter types of involvement. Further, Chaiken and Stangor (1987) refer to *validity involvement*, a construct based on the idea that individuals might be more motivated to process information, irrespective of the personal relevance of the message, because they are made to feel more or less accountable for the accuracy of their judgements (e.g. fear of invalidity; Kruglanski, 1989) or more or less responsible to others for whom the topic may be of extreme importance.

Chaiken and Stangor (1987) also refer to involvement-like constructs that have been studied in non-persuasive contexts, i.e. in the study of the attitude-behaviour relation. Such constructs include *vested-interest*, reflecting the perceived personal

consequences of an issue for the individual (Crano, 1995; Sivacek and Crano, 1982), and *attitude importance*, referring to how deeply people care about an attitude and how personally invested they are in an attitude (Boninger, Krosnick, Berent and Fabrigar, 1995; Krosnick, 1988a). Vested interest is operationalised by the 'known group' method and by asking respondents to indicate their stake in the consequences of an attitude-relevant action, the salience of these consequences, the certainty that specific consequences will follow from the action, the immediacy of the consequences and the self-efficacy of subjects to bring about the desired consequences. Attitude importance is usually assessed by asking respondents how important they perceive an attitude to be, how concerned they are about it and how important they perceive it to be in comparison with other attitudes.

3.2.2 Involvement in consumer research

In consumer research, several qualifiers accompany the term involvement, to define one or more of the particular properties assigned to the concept: direction, persistence and antecedents (Andrews, Durvasula, and Akhter, 1990). Direction refers to the target of involvement (stimulus, e.g. product class versus purchase decision). Persistence refers to the duration of involvement (e.g. stable versus temporary). Also, involvement can stem from relatively stable characteristics of the person or from relatively temporary factors (e.g. ego values, personal needs versus situational and decision factors).

From this perspective, two major types of consumer involvement can be distinguished: product and purchase involvement. *Product involvement* refers to the relatively stable over time perceived importance of and interest in a product class,

stemming from the individual's values, personal needs and interests. Individuals highly involved with a product class are concerned with it, as they perceive it as important and relevant to themselves. High levels of product involvement are relatively rare. Product involvement has been contrasted with *purchase involvement* which refers to a temporary interest in a brand selection task stemming from situational factors (e.g. risk associated with a purchase decision, degree of irrevocability of a purchase decision; Laurent and Kapferer, 1985; M. J. Houston and Rothschild, 1978). This distinction between product and purchase involvement can accommodate several other distinctions that have been proposed in the literature (e.g. enduring and instrumental involvement; Bloch and Richins, 1983; product and brand-decision involvement; Mittal and Lee, 1989; Celsi and Olson, 1988; enduring and situational involvement; M. J. Houston and Rothschild, 1978).

It is apparent that product and purchase involvement resemble the types of involvement employed in social psychological research. Specifically, product involvement resembles value-relevant involvement, in that both types of involvement derive from relatively stable characteristics of the individual (e.g. personal values and interests). Purchase involvement is conceptually related to outcome-relevant involvement; both types of involvement stem from a desire to attain or to avoid an outcome (e.g. to reach an optimal behavioural decision).

Product and purchase involvement can exist as separate entities. For example, a consumer may have a rather permanent interest in a product class without being involved in a purchase decision at that time, or a consumer may temporarily be involved in a decision task without holding a particular interest for that product class (Mittal and Lee, 1989). However, when both types of involvement are present, they

determine an individual's overall level of involvement in an additive manner (Richins, Bloch and McQuarrie, 1992).

Further, it is possible that product involvement can influence purchase involvement. For example, consumers with a persistent interest in a product class are likely to become involved in a brand-decision task (in order to make an appropriate brand-selection), because of the importance they attach to this product class, and irrespective of situational factors, such as the risk associated with the specific purchase.

Several conceptualisations, similar to that of content involvement (Chaiken and Stangor, 1987), have been used in the study of consumer behaviour to denote the interest raised at the presentation of an advertising message and the attention and cognitive effort devoted to it. Such conceptualisations are common in the study of advertising effectiveness. The most common of these conceptualisations is *advertising message involvement*, referring to the levels of involvement evoked at the presentation of an advertising message (Laczniak and Muehling, 1993a; also termed audience involvement; Greenwald and Leavitt, 1984). Advertising message involvement, although conceptually distinct, is closely related to product and purchase involvement, as product and purchase involvement are expected to have a direct impact on it. For example, when an advertisement features a brand from a product class in which the individual has a persistent and/or temporary interest, it is expected that heightened levels of advertising message involvement will occur, increasing message attention and cognitive elaboration (Laczniak and Muehling, 1993a). Nevertheless, other factors, apart from consumers' pre-existing levels of product or purchase involvement, can increase or decrease advertising message involvement (e.g. executional features of the advertisement).

Like social psychologists, consumer researchers have also mostly concentrated on the effects of involvement on persuasion processes. Studies in this area typically employ manipulations of involvement by means of experimental instructions. High levels of involvement are usually induced by informing subjects that they will select a particular product (from the experimental product category) at the end of the experimental session and/or that the experimental product is available in their local area (e.g. Petty, Cacioppo and Schumann, 1983).

However, some concern has been expressed in relation to the external validity of such manipulations. For example, Laczniak and Muehling (1993a) argue that experimental instructions cannot always override innate predispositional factors, i.e. pre-existing product or purchase involvement. Although manipulation checks employed in such studies show that instructions significantly differentiate participants' levels of attention and cognitive effort, from a practical perspective such differences represent only relatively high and low levels, as opposed to definitive high and low involvement occurring in natural settings (Kamins, Assael and Graham, 1990). In other words, if we view involvement as a continuous variable, the induced differences would not be as extreme as they naturally occur among consumers. Some investigators therefore suggest that it is preferable if subjects are assigned to groups according to their actual involvement with a product class or a brand decision process. In such studies, involvement is assessed, either by one of the inventories provided (e.g. Laurent and Kapferer, 1985; Zaichkowsky, 1985) or by including specific questionnaire items (e.g. Beatty and S. M. Smith, 1987; Richins and Bloch, 1991; Venkatraman, 1989).

The inventories developed to measure consumer involvement also reflect the multiplicity of the construct's conceptualisations. For example, Laurent and Kapferer

(1985; see also Kapferer and Laurent, 1993) view consumer involvement as a hypothetical, multidimensional construct that can only be inferred from its antecedents. These investigators introduced a four-faceted profile of consumer involvement consisting of (a) perceived product importance, (b) perceived risk associated with the product's purchase, (c) symbolic or sign-value, and (d) hedonic or pleasure value (Laurent and Kapferer, 1985). In contrast with Laurent and Kapferer's approach, Zaichkowsky views involvement as an independent and self-existing situation and not merely as a hypothetical construct. The scale she developed measures product, purchase or advertising involvement (depending on the context) as a single index (Zaichkowsky, 1985).

3.3 The impact of involvement on attitude formation and change

3.3.1 Social judgement theory

According to social judgement theory, attitudes provide an internal frame of reference for judging and reacting to stimuli (i.e. information) related to the attitude and the attitude object (C. W. Sherif *et al.*, 1965; M. Sherif and Hovland, 1961; M. Sherif and C. W. Sherif, 1967). In this research tradition, attitudinal positions are divided into three ranges or latitudes: (a) the *latitude of acceptance*, containing a person's own position and other positions that he/she finds acceptable; (b) the *latitude of rejection*, containing positions that are objectionable; and (c) the *latitude of noncommitment*, containing positions that are neither acceptable nor unacceptable. The width of these latitudes is determined by the individual's ego-involvement with the attitude object.

High involvement is associated with wider latitudes of rejection and narrower latitudes of noncommitment. The width of these latitudes then determines the effectiveness of a persuasive message. For messages advocating positions located beyond the latitude of acceptance, persuasion becomes increasingly less likely the more discrepant these messages are from the individual's own position, with very little persuasion produced by messages advocating positions located in the latitude of rejection. In addition, the theory assumes that a persuasive communication relatively close to the individual's view will be perceived as more congruent with the established attitude than it really is. In such cases, the individual will be less likely to mount strong defences against it (the assimilation effect). By contrast, if the message is distant from the individual's view, it will be viewed as more antagonistic to the established attitude than it really is and strong defences will be mounted against it (the contrast effect). In simple terms, the theory posits that individuals highly involved with a given issue tend to exhibit an extended 'latitude of rejection' and to evaluate in a more negative manner counterattitudinal persuasive attempts thereby defending their existing attitudes. In other words, the theory predicts that attitudes of low ego-involvement are easier to change than highly ego-involving attitudes.

In a well-known study on prohibition attitudes Hovland, Harvey and M. Sherif (1957) tested ego-involvement's effects on persuasion. In this study, three subject groups were recruited according to their involvement in the prohibition issue: 'pro-prohibition' ego-involved subjects (e.g. members of Women's Christian Temperance Union groups), 'anti-prohibition' ego-involved subjects (acquaintances of the researchers known for their anti-prohibition stance) and 'moderate' uninvolved subjects (unselected college students). In the main phase of the study, subjects listened to either

an extreme anti-prohibition message, an extreme pro-prohibition message or a moderately pro-prohibition message. Subsequently, subjects were asked to indicate their perceptions of the positions advocated in the experimental messages, their global evaluations of the messages and their post-message attitudes. The message perception data, which were collected only in relation to the study's moderately pro-prohibition message, proved consistent with the predictions of social judgement theory. Whereas subjects with moderate positions perceived the message accurately, involved subjects contrasted it: anti-prohibition subjects judged it to be more pro-prohibition than it really was and pro-prohibition subjects judged it to be more anti-prohibition. Subjects' evaluations of the messages also conformed to predictions. For example, the anti-prohibition message was evaluated most positively by anti-prohibition subjects and least positively by pro-prohibition subjects. Finally, although the attitude change data were somewhat weak, they too proved consistent with theoretical expectations: anti-prohibition involved subjects were less persuaded by the extreme pro-prohibition message than moderate subjects and pro-prohibition involved subjects were less persuaded by the extreme anti-prohibition message than moderate subjects. Although this study appears to offer strong support for social judgement theory, it has been criticised on several methodological grounds, the most notable of which is the confound between subjects' ego-involvement and the extremity of their prior attitudes. As has already been discussed, to avoid such confounds other investigators devised alternative procedures for assessing or manipulating ego-involvement.

Although social judgement theory's assumption that processes of assimilation and contrast play an important part in persuasion has met with less success in subsequent research (e.g. Eagly, 1967; Eagly and Telaak, 1972), the idea that ego-

involved recipients evaluate persuasive messages in a biased manner has provided a plausible explanation for findings indicating that ego-involvement inhibits persuasion in the case of counterattitudinal messages but can enhance persuasion in the case of proattitudinal messages that advocate positions more extreme than recipients' own attitudes.

3.3.2 The elaboration likelihood and the systematic-heuristic models of persuasion

Unlike social judgement theory, which is related to the more or less positive or negative acceptance of a persuasive message, more recent approaches to persuasion are concerned with the effectiveness of different methods of inducing persuasion and the different processes in which recipients might be engaged when presented with a persuasive communication. In this respect, two very general accounts of how people influence each other's attitudes continue to dominate the theoretical picture (Tesser and Shaffer, 1990). The first approach is illustrated by Petty and Cacioppo's (1986) central route to persuasion and Chaiken's (1980) systematic processing. In this approach, persuasion is induced by careful processing and elaboration of communicated arguments. The second approach emphasises factors other than argument-based thinking that may induce attitude change, as reflected in Petty and Cacioppo's (1986) peripheral route to persuasion and Chaiken's (1980) heuristic processing.

Empirical research has specified a fairly large number of variables that motivate and/or enable individuals to engage in thoughtful scrutiny of message arguments. The

most prominent variable determining recipients motivation to elaborate on message arguments is involvement with the topic or issue of the message (e.g. Haugtvedt, Petty, Cacioppo and Steidley, 1988; Petty and Cacioppo, 1979; 1984a). Involvement, along with other motivational variables (e.g. need for cognition, positive mood when the message is proattitudinal, presentation of each argument by a different source) and enabling variables (e.g. absence of external distractions, comfortable body posture, comprehensibility of the message, repeated exposure, extensive prior knowledge about the message topic), determines the depth and extent of cognitive processing of information and, therefore, the process through which attitudes are formed or changed (see Petty and Cacioppo, 1986; Petty, Haugtvedt and S. M. Smith, 1995; Tesser and Shaffer, 1990).

The major framework in the study of persuasion under different levels of involvement has been provided by the elaboration likelihood model of persuasion (Petty and Cacioppo, 1981, 1986). According to this model, individuals who perceive an attitude object as important and personally relevant are more motivated to devote cognitive effort, in order to evaluate the information contained in a related message and, thus, are more likely to engage in effortful consideration of message arguments. In such cases, elaboration likelihood is high and the most effective communication strategy is through the central route, by providing high quality arguments (Petty and Cacioppo, 1979; 1984a; Petty, Cacioppo and Goldman, 1981; Petty and Wegener, 1991). In contrast, when involvement is low, elaboration likelihood is also low and people tend to form their attitudes on the basis of peripheral cues surrounding the message (such as expertise, credibility, likability or attractiveness of the message source, number of arguments contained in the message), which are considered

independently of message content (Chaiken, 1980; Maheswaran, Mackie and Chaiken, 1992; Petty and Cacioppo, 1984b). In such cases, people are less affected by argument quality.

In a direct test of the elaboration likelihood model of persuasion, undergraduate students expressed their attitudes on a student issue (the introduction of comprehensive senior exams) after exposure to a message containing either strong or weak arguments that emanated from a source of either high or low expertise. The results revealed that under high involvement conditions (the exams to be instituted in the following year), attitudes were influenced primarily by the quality of the arguments in the message, whereas under low involvement (the exams to be instituted in ten years), attitudes were influenced primarily by the expertise of the source (Petty *et al.*, 1981). In a different experiment, undergraduate students were exposed to a message that contained either 3 or 9 arguments that were either all cogent or all specious, under conditions of either high or low involvement. The manipulation of argument number had a greater impact under low than under high involvement, whereas the manipulation of argument quality had a greater impact under high than low involvement (Petty and Cacioppo, 1984a).

Support for the elaboration likelihood model has also been provided in advertising research. For example, Petty *et al.* (1983) exposed subjects to an advertisement for a consumer product under high or low involvement conditions. The product was endorsed either by a relatively likable or a neutral endorser and contained either strong or weak arguments in support of the product. In the high involvement condition, subjects were led to believe that the product would soon be available in their local area and that they would soon have to make a decision about the product category. In the low involvement condition, subjects were led to believe that the

product would not be available in their local area and that they would soon have to make a decision about a different product category. Argument strength was more important in influencing high than low involvement subjects' product attitudes, whereas source likability was more important for low than for high involvement subjects.

These studies indicate that involvement has an important consequence in persuasion: as involvement increases so do perceived costs and benefits related to the issue or product under consideration and, therefore, individuals are more willing to try harder to improve the quality of their decision and to devote cognitive effort in processing a message. The induction of more effortful processing under high involvement is indicated by the number of message related thoughts generated during message exposure (Petty and Cacioppo, 1979). For example, Howard-Pitney, Borgida and Omoto (1986) had subjects watch a debate on drinking age legislation and complete a thought-listing task. Subjects more involved with the issue generated more message-related thoughts and fewer unrelated thoughts. Similarly, Celsi and Olson (1988) found that high involvement increased the proportion of product-related thoughts generated during advertising exposure (as well as the amount of time spent viewing the advertisement).

In a meta-analytic study ($N = 31$), Stiff (1986) found support for the elaboration likelihood model prediction that strong arguments are more persuasive than weak arguments for high compared to low involvement subjects. However, Stiff's test of another prediction of the model, that peripheral cues play a larger role for low involvement than high involvement subjects, met with less support. Specifically, Stiff found that the credibility-persuasion effect was small at both high and low levels but stronger (and positive) at a moderate level of involvement (i.e. no manipulation of

involvement). Because this prediction was not supported, Stiff concluded that his findings 'refute the basic assumptions of Petty and Cacioppo's elaboration likelihood model' (p.87). In a reply to Stiff (1986), Petty, Kasmer, Haugtvedt and Cacioppo (1987) criticised his meta-analysis on several grounds, such that it failed to include all relevant studies, it did not acknowledge the fact that certain message characteristics can serve both as central and as peripheral cues and it did not use appropriate meta-analysis techniques. Although Stiff and Boster (1987) argued that Petty *et al.*'s (1987) critique was 'unconvincing' (p. 250), B. T. Johnson (1991) contends that Stiff's (1986) meta-analysis was flawed in the respects specified above and that the specific conditions under which message strength and source credibility influence persuasion will remain unclear until further meta-analyses are conducted.

The systematic-heuristic model of persuasion (Chaiken, 1980) asserts that many persuasion cues are processed by means of simple schemata or decision rules. According to this model, people who lack sufficient motivation or ability to process a persuasive communication use rules, such as 'statements by experts can be trusted,' in judging the validity of persuasive communications without fully absorbing the semantic content of the message. Consequently, persuasion cues, such as communicator expertise, may often influence persuasion without engendering much message or issue relevant thinking. Unlike systematic processing, which is effortful and may generally be avoided in the interest of cognitive economy, heuristic processing is relatively effortless and, thus, may predominate in many persuasion settings.

The systematic-heuristic model asserts that persuasion is often mediated by simple decision rules (e.g. length implies strength) that associate certain persuasion cues (e.g. message length) with message validity (Chaiken, 1980; Chaiken, Liberman

and Eagly, 1989). However, heuristic processing is not synonymous with the peripheral route to persuasion, which is a rather broader term integrating not only heuristic processing but other approaches to attitude change, specifying factors or motives that induce persuasion without issue-relevant thinking. Such approaches include affective mechanisms in attitude change (e.g. classical and operant conditioning; see Batra and Ray, 1986; Petty, Cacioppo and Kasmer, 1988), attributional reasoning (Bem, 1972; Eagly, Chaiken and Wood, 1981; Kelley, 1967; Petty, Gleicher and Baker, 1991; Petty, Schumann, Richman and Strathman, 1993) and social-role perspectives (e.g. Kelman's (1958, 1961) identification and compliance modes of opinion change).

Nevertheless, although not identical, Petty and Cacioppo's elaboration likelihood model and Chaiken's systematic-heuristic model both posit that *careful consideration and elaboration of persuasive information (systematic processing or central route to persuasion) is likely to occur when recipients are both motivated and able to scrutinise the message*. By contrast, recipients who lack motivation or ability to process the message will adopt opinions that are relatively insensitive to the quality of message arguments.

This view of involvement as a motivator of message and issue-relevant thinking suggests an image of the systematic information processor as open-minded and unbiased and contrasts sharply with earlier views suggesting that ego-involved individuals are resistant to counterattitudinal messages (M. Sherif and Hovland, 1961). One possible explanation for this discrepancy in message receptivity under high and low involvement might lie in the different attitudinal objects employed in each research tradition. The studies conducted within the framework of social judgement theory use social policy issues with which subjects were more knowledgeable and (ego-) involved

(e.g. the morality of the Vietnam war), whereas more recent persuasion theories tend to employ issues with which subjects are not very knowledgeable and/or involved (e.g. the institution of comprehensive exams for college seniors; see Zanna, 1993; B. T. Johnson and Eagly, 1989). Several studies suggest that, although high involvement leads to more effortful processing of information, at more extreme levels of involvement, processing becomes biased (or even terminates; Petty and Cacioppo, 1986; see also Howard-Pitney *et al.*, 1986; Schul and Burnstein, 1988). Zanna (1993) suggests that the critical determinant of open-minded versus biased message receptivity is whether a message is perceived to advocate a position within the individual's latitude of acceptance or rejection. When a message position is perceived to be located within the individual's latitude of rejection, biased processing will occur. Because high involvement is associated with wider latitudes of rejection, biased processing is more likely under high involvement conditions.

Regardless of any biasing effects of involvement on attitude change, the majority of empirical findings show that involved recipients scrutinise a persuasive message and base their final evaluations of it on rational and thoughtful analysis of its content. By contrast, individuals who do not perceive message content as personally relevant do not engage in deep information processing and rather base their attitudes on peripheral cues present in the message. Because attitudes of involved individuals are based on more elaborate processing, they are expected to predict subsequent behaviour better than the attitudes of uninvolved individuals. The following section examines the consequences of involvement on attitude-behaviour consistency.

3.4 The moderating impact of involvement on the attitude-behaviour relationship

Several studies, employing diverse conceptualisations of involvement, demonstrate that high involvement with an attitude object enhances the impact of attitudes on behaviour towards this object. Evidence from the persuasion literature suggests that *attitudes that have been formed through elaborate processing of information have a stronger impact on behaviour than attitudes that have been formed through peripheral processes*. For example, in the Petty *et al.* (1983) study, subjects who had formed their product attitudes under high involvement conditions displayed more attitude-consistent purchase intentions ($r = .59$) than subjects who had formed their attitudes under low involvement conditions ($r = .36, p < .07$). In a similar study, Shavitt and Brock (1986) exposed subjects to a detergent advertisement under high or low involvement conditions. Subjects were either instructed to relate the advertisement to their own experiences and to try to remember as much of it as possible (high personal relevance) or were given no processing instructions (low personal relevance). Subjects returned a week later and were asked to choose a free detergent sample. The attitudes of the high personal relevance subjects were more predictive of their product choice than were the attitudes of the low personal relevance subjects.

Evidence on the moderating effect of involvement on attitude-behaviour consistency has also been provided by studies not directly concerned with the persuasion process. Consistent with social judgement theory's definition of ego-involving attitudes as 'attitudes that the individual identifies with and makes a part of

himself' (M. Sherif and Cantril, 1947, pp. 126-127), Fazio and Zanna (1978a) used latitude of rejection to operationalise involvement in the topic of psychological research, greater latitudes indicating higher involvement. In this study, students reported their attitudes toward volunteering to participate in psychological experiments. The number of experiments in which each subject volunteered to participate was used as a measure of behaviour. Results indicated that attitude-behaviour consistency was significantly moderated by subjects' involvement with the topic.

Similarly, Regan and Fazio (1977) took advantage of the housing shortage at Cornell University to study the moderating effect of involvement. Students assigned to temporary housing were more involved in the issue in comparison to students who had been assigned to permanent housing. Correlations between attitudes and behavioural attempts to alleviate the crisis were significantly stronger among respondents who were highly involved than among less involved respondents. Regan and Fazio (1977) attribute these differences in attitude-behaviour correlations to the method of attitude formation (i.e. direct versus indirect, for involved and uninvolved subjects, respectively). The conceptualisation of involvement employed in this study resembles that of vested interest.

Attitudes of high vested interest (i.e. of high perceived personal consequences) have been found to be more predictive of behaviour than attitudes of low vested interest. Sivacek and Crano (1982, study 1) studied the effects of vested interest on students' intentions to act on their (negative) attitudes towards a referendum on the increase of legal drinking age from 18 to 21 years. Students were categorised into three vested interest groups, on the basis of their age and, therefore, of the consequences

that a law's change would have for them. Although respondents' attitudes did not differ in direction or extremity, vested interest had a major impact on the likelihood that respondents would join a group constituted to oppose the referendum and make telephone calls to persuade citizens to vote against it. Similar results were obtained in a second study, examining students' attitudes and behaviours toward the establishment of a new system of senior comprehensive exams. Students' estimates of the extent to which the imposition of a comprehensive examination would affect them personally were used as an index of vested interest. In addition, they indicated their inclination to engage in certain behaviours designed to reduce the possibility that the examinations would become a reality (e.g. sign a petition, join a group dedicated to fighting the establishment of the exams). Attitude-behaviour correlations were significantly higher for the high vested interest group than for the low and moderate vested interest groups (Sivacek and Crano, 1982, study 2; see also Crano and Prislin, 1995).

Similar findings come from field studies. Parker, Perry and Gillespie (1974) found that the consistency between attitudes and action against air pollution (signing a petition, circulating a petition, giving money, etc.) was moderated by the perceived importance of the air pollution issue. Verplanken (1989) obtained stronger correlations between attitudes toward nuclear energy and intentions to support (or to oppose) its usage in the case of respondents involved with the issue of nuclear energy. Similarly, Krosnick (1988b) found that attitudes on specific policy issues were more likely to shape candidate preferences and voting behaviour, when these attitudes were considered as more important. Also, Petersen and Dutton (1975) found that individuals who perceived 'keeping up to date with political affairs' as central (i.e. important) to themselves, behaved in ways more consistent with their attitude towards the issue of

'withdrawal of the USA from Vietnam' (i.e. participated in demonstrations 'against USA military policy') than individuals who perceived 'keeping up to date with political affairs' as less central.

3.5 Summary of Chapter 3

The term involvement has received numerous conceptualisations and operationalisations and several forms of involvement have been distinguished in the literature. The most prevalent types of involvement in social psychological research are: value-relevant involvement, a state emanating from individuals' values and standards; outcome-relevant involvement, stemming from individuals' desire to attain or avoid certain outcomes; and impression-relevant involvement, stemming from individuals' desire to facilitate favourable social impressions. In addition, several other types of involvement, such as vested interest and content involvement, have also been distinguished. In consumer research, a major distinction has been drawn between product involvement, reflecting the perceived importance of and interest in a product category, and purchase involvement, referring to situations where the individual is concerned with a purchase decision. In addition, the term advertising message involvement has been used to denote interest evoked at the presentation of an advertising message.

According to social judgement theory, individuals highly involved with an issue tend to exhibit an extended latitude of rejection and to evaluate in a more negative manner counterattitudinal persuasive attempts. Their attitudes, therefore, are more resistant to counterpersuasion. The elaboration likelihood and the systematic-heuristic

models of persuasion are concerned with the nature and extent of processing that occurs during exposure to a persuasive communication. Both models posit that careful consideration and elaboration of message arguments (central route to persuasion or systematic processing) is likely to occur when message recipients are involved with the message topic or issue. In contrast, recipients who are not sufficiently involved form their attitudes on the basis of simple decision rules and peripheral cues present in the message and, therefore, are relatively insensitive to the quality of message arguments.

Several studies, employing diverse conceptualisations and operationalisations of involvement, have investigated the moderating effects of the variable on the attitude-behaviour relationship. The review of empirical findings indicates that high involvement with an attitude object enhances attitudinal impact on behaviour.

CHAPTER 4

The role of involvement in the attitude-behaviour sequence

4.1 Introduction

Chapter 3 examined the consequences of involvement on attitude formation and on attitude-behaviour consistency. The reviewed empirical research indicated that high levels of involvement induce more extensive processing of information during attitude formation and are associated with more attitude consistent behaviour. Despite the extensive investigation of the effects of involvement on attitude formation and on attitude-behaviour consistency, research has not addressed the issue whether involvement plays a part in the actual processes through which attitudes exert their impact on behaviour. This is mainly because the investigation of attitude formation processes has proceeded independently from research on the attitude-behaviour relation and findings from these areas have not yet been integrated. This is particularly true for the more recent, third generation of research on attitude-behaviour consistency whose focus is on attitude-to-behaviour processes.

This chapter is concerned with the role of involvement in the attitude-behaviour sequence and discusses the potential effects of the variable within the most prominent attitude-to-behaviour models. In the first part of the chapter, Fazio's (1986) model of automatic attitude activation is outlined and the potential role of involvement within this model is discussed. The second part concerns controlled attitude-to-behaviour processes. The theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991) are presented here and suggestions regarding the role of involvement within these models are made. In the third part, Fazio's (1990a) MODE model, which conceptually integrates automatic and controlled attitude-to-behaviour

processes, is presented and the potential consequences of involvement within this model are discussed. In the last part of the chapter, the main hypotheses of the thesis are outlined.

PART I

AUTOMATIC ATTITUDE-TO-BEHAVIOUR PROCESSES

4.2 The model of automatic attitude activation

Fazio (1986) argues that social behaviour is not always rational and that *attitudes can influence behaviour through automatic, unconscious processes*. A process is characterised as automatic when it is unintentional, involuntary, effortless, autonomous and occurs outside of awareness (Bargh, 1989). Many daily social behaviours appear to be of this sort, in that individuals do not consciously reflect on their attitudes in order to behave. For instance, selecting a specific brand of toothpaste from a supermarket shelf does not necessarily involve conscious and intentional consideration of one's attitude towards this product. Instead, this attitude can be activated and guide behaviour in an automatic manner (e.g. by attracting one's visual attention against competing products; see Roskos-Ewoldsen and Fazio, 1992).

According to the model of automatic attitude activation proposed by Fazio and his associates (Fazio, Chen, McDonel and Sherman, 1982; Fazio, Powell and Herr, 1983), detailed in Fazio (1986), any attitude is viewed as an association between an object and its evaluation stored in memory. Attitudes can guide behaviour in a spontaneous fashion by biasing the more or less positive or negative way an attitude object is perceived in the specific context it is encountered. These immediate perceptions of the attitude object, congruent as they are with the attitude, can prompt attitudinally consistent behaviour. According to the model, whether such differential perceptions occur depends on whether the attitude is retrieved from memory. Unless the attitude is activated, it cannot produce selective perception of the object in the

immediate situation and, therefore, cannot in any sense guide subsequent behaviour (Fazio, 1990a).

In summary, the model (Figure 4.1) proposes the following steps: (1) Upon observation of the attitude object, one's attitude might be accessed from memory. That is, the particular evaluative categories with which one has associated the object might become salient; (2) These evaluations, through a process of selective perception, may 'colour' one's perception of the object in the immediate situation; (3) These immediate perceptions may then determine the definition of the event that is occurring; (4) The definition of the event, filtered as it is through the attitude, can influence the individual's behavioural response in a manner congruent with the attitude.

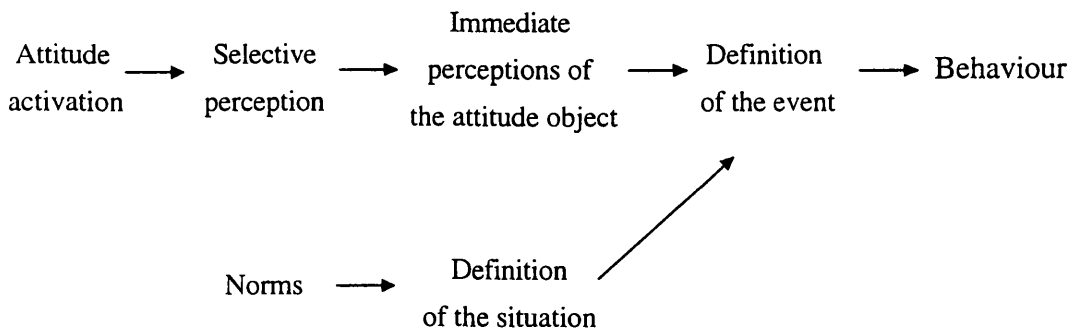


Figure 4.1. Schematic diagram of the automatic attitude-to-behaviour model (adapted from Fazio, 1986)

The model asserts that this automatic influence of attitudes is more evident in situations where social stimuli are ambiguous. For example, when an individual has a negative attitude towards a target person, he/she is likely to interpret any ambiguous comments or behaviours of that person in a negative manner (see Darley and Fazio,

1980). These negative interpretations are likely to lead to a negative, hostile response from the part of the individual. The end result, thus, is behaviour consistent with the attitude that initiated the entire process even though this attitude was not deliberately used as a 'guide' (see Zanna and Fazio, 1982).

The model involves an additional component, that of norms, that can also contribute to the definition of the event that is occurring. The individuals' knowledge regarding what behaviours are or are not normatively appropriate in any given situation may sometimes exert greater impact on the definition of the event than their own attitudes. For example, regardless of individuals' personal views, their knowledge regarding the preferences of their friends, may influence strongly a decision to purchase and serve a particular wine at a dinner party. Thus, normative information regarding appropriate behaviour in a given situation may affect one's definition of the situation and hence definition of the event and, therefore, guide behaviour in ways not necessarily consistent with one's attitude.

Irrespective of normative influence, behaviour will not be consistent with attitudes unless the attitude-to-behaviour process postulated by the model is initiated. That is, the attitude must be activated from memory in order to guide the definition of the event and thereby to influence behaviour. According to the model, the likelihood that the attitude will be activated upon mere observation of the attitude object, without any cognitive effort by the individual, depends on the *strength of the object-evaluation association* in memory. In other words, only if the attitude object and its corresponding evaluation are strongly associated, it is likely that the attitude will be activated spontaneously upon encountering the attitude object.

The strength of this association is assumed to be reflected in the ease or speed with which the attitude is retrieved from memory, in other words, the chronic *accessibility* of the attitude (Fazio, 1986). It has been demonstrated that repeated attitude activation, which should have the consequence of strengthening the object-evaluation association, enhances the accessibility of an attitude. Subjects who had been induced to express their attitudes repeatedly were capable of responding faster to direct inquiries about their attitudes (Fazio *et al.*, 1982, experiment 3 and 4; Powell and Fazio, 1984).

4.3 Empirical tests and criticisms of the model of automatic attitude activation

A number of studies have provided evidence supporting the model of automatic attitude activation and the moderating role of attitude accessibility in automatic attitude activation. In a study concerning attitudes towards capital punishment, D. A. Houston and Fazio (1989) found that the extent to which subjects' attitudes biased their judgements of attitude relevant information was moderated by the accessibility of those attitudes. Consistent with the model, more accessible attitudes were more likely to be activated to 'colour' the way the information was perceived.

To demonstrate that attitude activation in the presence of an attitude object may occur automatically, that is without any conscious, intentional cognitive processing, Fazio, Sanbonmatsu, Powell and Kardes (1986) selected individuals who manifested either fast or slow response times in a preliminary task that assessed their attitudes towards various objects (e.g. music). In a subsequent task, these attitude

objects were briefly presented to subjects just before they made evaluative judgements (positive/negative) about unrelated adjectives (e.g. appealing). Response latencies for these latter judgements served as the dependent measure. Priming subjects with objects towards which their attitudes matched the evaluative valence of the target adjective facilitated response times with respect to the latter judgements, but only for subjects who were assumed to have a strong object-evaluation association (i.e. subjects who had responded fast in the preliminary task). Moreover, because this priming effect was observed at very short prime-target intervals (0.3 seconds) and not at longer intervals (1 second), Fazio and his colleagues concluded that the activation of these subjects' attitudes had occurred automatically.

In a more recent experiment, Sanbonmatsu and Fazio (1986) used brand names as primes. As in the previous research, brands towards which subjects possessed positive attitudes facilitated their responding to positive evaluative adjectives. That is, subjects were able to indicate the connotation of a positive evaluative adjective relatively quickly when such an adjective was preceded by a positively valued brand name. Likewise, negatively valued brand names facilitated subjects' responding to adjectives that were negative in connotation. Again, this pattern was observed only for attitudes involving strong object-evaluation associations, as indicated by latency of response to a preliminary direct attitudinal inquiry. Only brand names for which subjects were able to respond relatively quickly were able to facilitate responses in the adjective connotation task.

However, Bargh, Chaiken, Gollwitzer and Pratto (1992; see also Chaiken and, 1993) have questioned whether idiosyncratic differences in the strength of the object-evaluation association (rather than normative differences constant across individuals) is

the principal determinant of this automaticity effect. Instead, these investigators argue that evaluations existent in memory become automatically active on the mere presentation of the object irrespective of individuals' evaluation latencies. Thus, the priming effects observed in previous studies (Fazio *et al.*, 1986; Sanbonmatsu and Fazio, 1986) should be generalisable across a very wide range of attitude objects (i.e. objects for which most people hold an evaluation). In addition, Bargh *et al.* (1992) argue that the effects observed in these studies might be attributed to the activation of attitude primes directly prior to the adjective connotation task (necessitated by the collection of response latency data). To substantiate this argument, they conducted an experiment (Chaiken and Bargh, 1993) in which half the subjects reported their attitudes immediately before the priming phase, while the other half reported their attitudes two days before the priming task. Under no delay, the automaticity effect was reliable, as was its moderation by response latency. In the delay condition, by contrast, the automaticity effect was reliable, but its moderation by response latency was not.

Fazio (1993) responded to these criticisms by presenting the results of an experiment (utilising colour images, rather than words, as primes) involving a 3 month delay between the assessment of evaluation latencies and the connotation task (i.e. the assessment of automatic activation). The findings of this experiment were consistent with those of Fazio *et al.* (1986), as attitudinally congruent facilitation during the adjective connotation task was moderated significantly by the response latency variable. The faster subjects had indicated their attitudes during the first session, the greater the evidence of automatic attitude activation when that object was used as a prime three months later.

Several studies have established the moderating role of attitude accessibility on attitude-behaviour consistency. Fazio *et al.* (1982, experiment 4) manipulated the accessibility of subjects' attitudes towards a series of puzzle types by having them express their attitudes either once or three times. The experiment showed that correlations between attitudes towards the puzzles and behaviour in a free play situation were higher for the high accessibility (repeated attitude expression) group than for the low accessibility group.

In a subsequent study, Fazio, Powell and Williams (1989) examined the relationship between respondents' attitude towards a number of consumer products and their actual product selection behaviour. At the conclusion of an experimental session, in which subjects' attitudes and attitude accessibility regarding 10 consumer products had been assessed, subjects were allowed to select 5 of these 10 products to take as a gift for having participated in the study. Both within-subject and between-subject analyses showed that the more accessible subjects' attitudes were the more consistent their selection behaviour was with those attitudes.

In another study concerning the 1984 presidential election in the United States, Fazio and Williams (1986) found that the individuals' global attitudes towards the candidates biased their perception of the candidates' performance during pre-election debates. That is, people with positive attitudes towards a candidate perceived his performance in the debates as more positive. It was also found that correlations between attitude measures and actual voting behaviour were higher for individuals whose attitudes were highly accessible than for individuals whose attitudes were difficult to access. Thus, attitude accessibility was found to moderate both the attitude-perception and the attitude-behaviour relationships.

One question that arises when studying the effects of attitude accessibility on automatic attitude activation and on attitude-behaviour consistency is what makes some attitudes more accessible than others, in other words, what determines the accessibility of an attitude and why attitude accessibility differs across individuals and attitude objects. It is argued in this thesis that involvement is one factor responsible for variations in the accessibility of attitudes and, more specifically, that attitude accessibility is a positive function of involvement. Before suggesting possible ways in which involvement might influence attitude accessibility, the concept of attitude strength is introduced and the interrelationships among its dimensions are discussed.

4.4 The concept of attitude strength

Raden (1985) suggests that variables moderating the impact of attitudes on behaviour should be integrated as multiple facets of the more general construct of *attitude strength*. Attitude strength is defined in terms of the qualities that strong attitudes possess: strong attitudes are persistent over time, are resistant to change, have an impact on information processing and *have an impact on behaviour*¹ (Krosnick and Petty, 1995). Several variables have been proposed as dimensions of attitude strength. For example, Raden (1985) described seven such variables: accessibility, evaluative-

¹ Although these qualities are expected to covary, this definition of attitude strength does not imply that strong attitudes necessarily have all these qualities. For instance, it is possible that factors that enhance the influence of attitudes on behaviour leave the persistence or resistance properties of attitudes unaffected. However, as the focus of this thesis is on the attitude-behaviour relationship, the term attitude strength will be used mainly to refer to the behavioural consequences of attitudes.

cognitive consistency, certainty, direct behavioural experience, importance, latitude of acceptance and rejection and vested interest (see also Scott, 1968). Factor analytic studies indicate that attitude strength is a multi-factorial construct and that strength related factors are distinct, but in most cases interrelated (Krosnick, Boninger, Chuang and Carnot, 1993; Pomerantz, Chaiken and Tordesillas, 1995; Prislin, 1996). Krosnick and Petty (1995) suggest that there might be a considerable overlap among some of the factors that constitute attitude strength, reflecting a smaller set of higher order constructs. In other words, it is possible that strength related factors influence each other, and that some factors do not have a direct effect on attitude strength, but exert their moderating influence through other factors.

From this perspective, Fazio (1989) has suggested that strength related variables might moderate attitude-behaviour consistency by virtue of their relation to attitude accessibility. For example, direct experience with the attitude object (Fazio and Zanna, 1981) and repeated attitude expression (Powell and Fazio, 1984) have been found to increase attitude accessibility. To support the argument that these variables produce more accessible attitudes that are capable of automatic activation and therefore are more likely to influence behaviour in an automatic way, Fazio *et al.* (1983) conducted a priming experiment. First, they increased the accessibility of experimental subjects' attitudes towards a series of intellectual puzzles (through either repeated attitude expression or direct experience). Control subjects did not have their attitudes strengthened. Then subjects participated in an 'unrelated' experiment involving rating of ambiguous stimuli. Presentation of these stimuli was primed with one of the puzzles. As predicted, subjects whose attitudes had been strengthened

subsequently rated the ambiguous stimuli in the direction of the valence of their attitudes towards the puzzle that had been used as a prime.

The manipulations of direct experience and repeated expression utilised in the Fazio *et al.* (1983) and other experimental studies of attitude accessibility may function, however, at least in part, through other aspects of attitudes (Eagly, 1992). For example, direct experience with the attitude object can increase not only the accessibility of an attitude, but its temporal stability (Doll and Ajzen, 1992), as well as the amount of knowledge about the attitude object (Kallgren and Wood, 1986), and repeated expression of an attitude can increase attitude extremity (Downing, Judd and Brauer, 1992; Judd and Brauer, 1995), as well as lack of ambivalence (see Bargh *et al.*, 1992), variables that might be responsible for the increased attitude-behaviour consistency. Fazio *et al.*'s (1983) study is therefore inconclusive as to whether attitude accessibility mediates the influence of direct experience and repeated attitude expression on the attitude-behaviour relation.

4.5 Involvement as a determinant of attitude strength: The elaboration likelihood model of attitude strength

Petty, Haugtvedt and S. M. Smith (1995) have proposed an elaboration likelihood model of attitude strength in which involvement is viewed as an antecedent condition of attitude strength (Figure 4.2). A key postulate of this model, which approaches attitude strength from a persuasion perspective, is that the strength of an attitude is based on the amount of elaboration the person has done about the attitude object. That is, when an attitude is formed or changed as a result of careful thinking about the

attributes of the attitude object (central route to persuasion), this attitude is stronger than if it were formed or changed through peripheral processes. Therefore, if a variable increases the likelihood that an attitude is based on careful thinking rather than on simple cue processes, this variable should also increase the likelihood that the resulting attitude is strong (i.e. consequential) rather than weak.

According to the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986), the likelihood of elaboration depends on the person's ability and motivation to think about the information he/she receives. When presented with information on an involving topic, people engage in greater message scrutiny than when they perceive a message as of little personal relevance or importance (see Chapter 3).

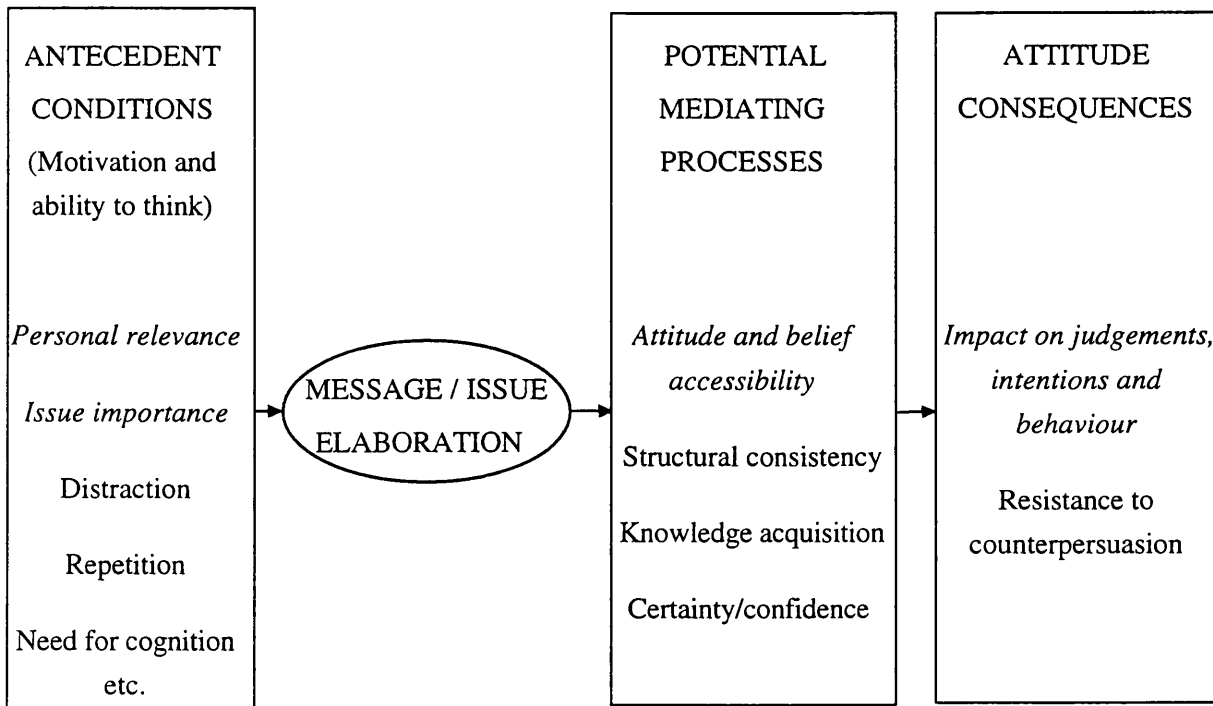


Figure 4.2. The elaboration likelihood model of attitude strength (adapted from Petty *et al.*, 1995)

Petty *et al.* (1995) posit that the extent of cognitive elaboration of information has a causal impact on four immediate determinants of attitude strength: attitude accessibility, certainty/confidence, structural consistency and knowledge on which the attitude is based. These factors, in turn, are responsible for variability in the strength of an attitude. This conceptualisation is consistent with Fazio's (1989) suggestions that attitude accessibility mediates the impact of other moderators of attitude-behaviour consistency. However, in the elaboration likelihood model of attitude strength, attitude accessibility is not viewed as a unique mediating factor. The propositions of this model suggest a causal sequence between involvement and attitude strength, mediated by elaboration. For example, high involvement should generate attitudes that are held with greater certainty and confidence, are related with more information in memory and are more structurally consistent and accessible. These attitudes, in turn, should be more consequential. Although the model has not been fully tested, some of the predictions deriving from its postulates are supported by empirical findings.

For instance, evidence suggests that high involvement produces attitudes that are held with greater certainty/confidence. In a study on the effects of advertising message involvement, Laczniak and Muehling (1993a) exposed subjects to an advertisement for a fictitious brand of stereo speaker. Subjects were assigned to groups of high and low advertising message involvement on the basis of their pre-existing levels of involvement with the particular product category. Involvement determined the extent of message processing (as indicated by cognitive responses in a thought-listing task) and significantly moderated subjects' confidence in their beliefs that the product possessed the advertised attributes. Presumably, belief confidence is reflected in attitude confidence, as beliefs about the attitude object underlie attitudes (Ajzen and

Fishbein, 1980). Furthermore, Berscheid, Graziano, Monson and Dermer (1976) demonstrated that judgements about a person who had some control over the perceiver's personal outcomes (high involvement) were more confidently given than when the person had no control over personal outcomes.

Involvement is also associated with greater amounts of information available in memory (Berent and Krosnick, 1992), although this relation might be the result of more extensive search and exposure to information, rather than elaboration. In a factor analytic study examining the relations among various facets of attitude strength and their impact on the predictive value of attitudes and their resistance properties, Pomerantz *et al.* (1995) found support for a two dimensional structure of attitude strength. One of these dimensions, which these investigators call 'embeddedness', resembles involvement. Items traditionally used to assess attitude importance, involvement and knowledge about the attitude object loaded on this factor, suggesting that knowledge might in fact be a property of involvement.

4.6 The impact of involvement on attitude accessibility

The elaboration likelihood model of attitude strength (Petty *et al.*, 1995) postulates a causal relation between involvement and accessibility, mediated by elaboration. According to this model, the multiple operations performed on an attitude schema during extensive and deep information processing strengthen the memory link between the object and the related evaluative information, thereby enhancing the readiness with which an attitude is retrieved (see also Petty and Cacioppo, 1986). High involvement

increases elaboration during attitude formation and, therefore, enhances attitude accessibility.

Extensive elaboration is not the only mechanism through which high involvement might enhance attitude accessibility. Involvement may still increase attitude accessibility once attitudes have been formed. Involvement, as a motivational variable, is associated with the frequency with which people think about and discuss issues and objects (Howard-Pitney, Borgida and Omoto, 1986; Lavine, Sullivan, Borgida and Thomsen, 1996). Involved individuals often think and talk about the attitude object, their attitudes thus are more frequently activated in the course of social interaction. This frequent attitude activation enhances the strength of the object-evaluation link in memory, rendering the attitude more accessible (Fazio *et al.*, 1982; Powell and Fazio, 1984; see Higgins, 1989). In fact, operationalisations of attitude accessibility often employ self-reports of how often one thinks or talks about an attitude object (e.g. Krosnick *et al.*, 1993). In addition, attitude accessibility depends on the salience of the attitude (Higgins and G. A. King, 1981). Among the numerous attitudes that an individual holds at any time, those concerning personally significant, involving objects are more salient and distinct and thereby more accessible.

Furthermore, it is possible that involvement enhances attitude accessibility by determining the manner of attitude formation. Individuals who perceive an object as important and relevant to themselves are more likely to have direct experience with it. For instance, individuals who perceive a political issue as significant are likely to engage in relevant activities and, therefore, to base their attitudes on behavioural,

rather than indirect information². Direct experience with the attitude object enhances attitude accessibility (Fazio and Zanna, 1981). In a field study concerning attitudes towards several political issues, Krosnick (1989) demonstrated that people tend to report their attitudes faster when they consider these issues and their attitudes as important, and showed that attitude accessibility can be accurately predicted by involvement with the attitude object (i.e. perceived importance of the object).

On these theoretical and empirical grounds, it can be expected that involvement has a causal impact on attitude accessibility; as involvement with an attitude object increases so does the accessibility of the corresponding attitude. By determining attitude accessibility, involvement should also determine the likelihood of automatic attitude activation; as involvement with an attitude object increases so does the likelihood that the corresponding attitude will be automatically activated. This mechanism should be partly responsible for the enhanced attitude-behaviour consistency observed in high involvement conditions. However, because the impact of involvement on the predictive value of attitudes may also be mediated by attitude certainty/confidence, structural consistency and knowledge about the attitude object, it can be expected that the moderating effect of involvement on the attitude-behaviour relationship is not completely mediated by attitude accessibility and, therefore, that involvement has an independent impact on the consistency between attitudes and behaviour. However, previous research has not examined the combined influence of involvement and attitude accessibility on attitude-behaviour correspondence and,

² However, the relation between involvement and direct experience can be reciprocal, as having direct experience with the attitude object can enhance involvement. For example, engaging in political activities might enhance the perceived importance and personal relevance of implicated political issues.

therefore, the relation between these variables and the attitude-behaviour link remain unclear.

The interrelationships between involvement, attitude accessibility and attitude-behaviour consistency are examined in this thesis. This investigation is conducted in the context of consumer behaviour. In situations where consumers are temporarily or persistently concerned with a product class, they are expected to be highly motivated to hold accurate evaluations of the various brands falling within this product class. Such a motivational state is expected to enhance consumers' search for and exposure to information, in order to learn more about the specific positive and negative attributes of various brands. Involved consumers are expected to invest more cognitive effort in processing this information, in order to hold accurate product and brand evaluations. Following the predictions of the elaboration likelihood model of attitude strength (Petty *et al.*, 1995), such heightened levels of involvement should enhance attitude accessibility. High involvement should also enhance attitude accessibility by increasing the frequency with which people think and talk about products and brands. In addition, because consumers attach great importance to an involving product class, their product and brand attitudes should be more salient, in relation to those of less involved consumers and to their own attitudes concerning other products they perceive as less important and, therefore, should be more accessible. Thus, high involvement should increase the likelihood that attitudes will be activated to influence behaviour. However, the impact of involvement on the attitude-behaviour relationship should not be completely mediated by attitude accessibility, as, for example, involvement might enhance attitude-behaviour consistency by increasing the amount of information product and brand attitudes are based upon.

PART II

CONTROLLED ATTITUDE-TO-BEHAVIOUR PROCESSES

4.7 The theory of reasoned action

The theory of reasoned action (Ajzen and Fishbein, 1973, 1980; Fishbein, 1967; Fishbein and Ajzen 1975) has provided one of the most influential contributions to the study of attitudes and is the dominant theoretical framework against which new theories are compared (Olson and Zanna 1993). The major assumption underlying this model is that *individuals are rational and make systematic use of the information available to them as a guide to behaviour*. The model postulates a causal chain from beliefs to attitudes to behaviour which, unlike automatic attitude activation, is conscious and requires some attentive effort on the part of the individual. The theory of reasoned action has therefore been characterised as a model of controlled attitude-to-behaviour processes (Fazio, 1990a).³

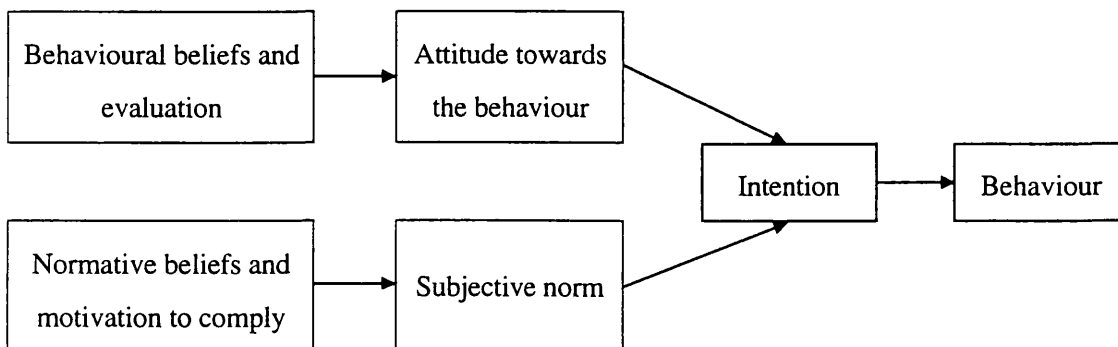


Figure 4.3. Schematic representation of the theory of reasoned action (adapted from Ajzen and Fishbein, 1980)

³ A process is characterised as controlled when it is under the intentional control of the individual, that he/she is consciously aware of and is effortful and constrained by the amount of attentional resources available at the moment (Bargh, 1989)

The theory of reasoned action was developed in order to accommodate the fact that behaviour is not always consistent with attitudes, which made apparent that attitudes are not the sole determinant of behaviour and that other factors should be taken into account in the prediction of behaviour. This model (Figure 4.3) assumes that most actions of social relevance are under volitional control and, thus, views 'a person's *intention* to perform (or not to perform) a behaviour as the immediate determinant of the action' (Fishbein and Ajzen, 1980, p. 5, italics added). Thus, instead of looking for the determinants of behaviour, the goal shifts to the identification of the determinants of behavioural intentions. According to the model, the first determinant of a person's intention is personal in nature and concerns his/her evaluation of performing the behaviour; this factor is termed 'attitude towards the behaviour'⁴. The second factor reflects a person's perception of the social pressures put on him/her to perform or not to perform the behaviour; this factor is termed 'subjective norm'. Hence, behavioural intention is a linear regression function of (a) attitude towards the behaviour and (b) subjective norm. The model can be stated algebraically as follows:

$$B \approx BI = w_1 A_B + w_2 SN \quad (4.1)$$

where B is the behaviour; BI is the behavioural intention; A_B is the attitude towards the

⁴ It should be noted that the class of attitudes taken into account in the theory of reasoned action is attitudes towards behaviours, not attitudes toward objects (i.e. targets of the behaviour). However, more recent conceptualisations integrate both classes of attitudes in the prediction of behaviour and view attitudes toward targets as antecedents of attitudes towards behaviours (see the composite model of the attitude-behaviour relation; Eagly and Chaiken, 1993)

behaviour; SN is the subjective norm; w_1 and w_2 are empirical weights indicating the relative importance of the first and second term.

At a more detailed level, the model attempts to explain *why* people hold certain attitudes and subjective norms. Attitudes are assumed to be a function of beliefs. A person who believes that the behaviour will lead mostly to positive outcomes will hold a favourable attitude towards the behaviour, while a person who believes that a behaviour will lead mostly to negative outcomes will hold an unfavourable attitude. The beliefs that underlie an individual's attitude towards the behaviour are termed 'behavioural beliefs'. In addition, attitudes towards the behaviour are determined by the evaluation of these beliefs, in an expectancy-value manner. Any attitude, thus, is the sum of the products of behavioural beliefs multiplied by their evaluations. The following equation depicts this relation:

$$A_B = \sum_{i=1}^n b_i m_i \quad (4.2)$$

where A_B is the attitude towards the behaviour; b_i is the behavioural belief that performing the behaviour leads to some consequence i (i.e. subjective probability that the behaviour has the consequence i); e_i is the evaluation of the consequence i ; n is the number of salient consequences.

Subjective norms are also a function of beliefs, namely a person's beliefs that significant social referents (individuals or groups whose preferences about a person's behaviour are important to him/her) think he/she should or should not perform the behaviour. These beliefs are called 'normative beliefs'. Subjective norms are also

determined by the individual's motivation to comply with these social referents. Subjective norms are, thus, the sum of the products of normative beliefs multiplied by the individual's motivation to comply. This relation is depicted in the following equation:

$$SN = \sum_{j=1}^r b_j m_j \quad (4.3)$$

where SN is the subjective norm; b_j is the normative belief (i.e. subjective probability) that some referent j thinks the individual should perform the behaviour; m_j is the motivation to comply with referent j ; r is the number of relevant referents.

It should be stressed that attitudes and subjective norms are a function of beliefs that are salient for the individual, and only those *salient beliefs* are assumed to have a causal impact on attitudes and subjective norms. In applications of the theory, it is essential that the set of salient beliefs (i.e. possible outcomes of the behaviour and social referents that are important to the individual in respect to the specific behaviour) is elicited from the respondents themselves, or in pretesting, from a sample that is representative of the research population (Ajzen, 1991).

4.8 Predicting behaviour with the theory of reasoned action: The distinction between single acts and behavioural categories

Fishbein and Ajzen (1975, 1976, 1977; Ajzen and Fishbein, 1980) argue that when studying behaviour the following specification elements can be distinguished: the *action*; the *target* to which the action is directed; the *context* in which the action is

performed; the *time* at which the action is performed; in certain occasions, the *actor* of the behaviour. Furthermore, on the basis of these elements two types of behaviour can be distinguished: *single acts* and *behavioural categories*, the latter being a set of single acts that are similar in at least one element. Distinguishing between single acts and behavioural categories is important, since many behaviours that social scientists are interested in are in fact behavioural categories (i.e. sets of behaviours rather than single behaviours towards an attitude object). Fishbein and Ajzen (1975) argue that the low correlations between attitudes and behaviour reported in the early days of attitude research were often the result of measuring attitudes and behaviour at different levels of generality or specificity (Fishbein and Ajzen, 1975). In other words, researchers attempted to determine specific actions from indicators of general attitudes and, therefore, the object of the attitude did not correspond to the object of the behaviour.

In order to predict behaviour from intentions, attitudes and subjective norms, it is essential to ensure that all measures correspond to the measure of behaviour, in regard to the specification elements described above (Fishbein and Ajzen, 1975). In other words, strong links between beliefs, attitudes, intentions and behaviour can be expected only by maintaining equivalent levels of generality or specificity in all variables (Ajzen, 1989). That is, a specific attitude is expected to predict a single act, whereas a global attitude should predict a global behaviour (or a behavioural category criterion as described below; Ajzen and Fishbein, 1977).

The theory of reasoned action has been criticised on the grounds that it deals only with very specific actions and only under strictly limited conditions, which, in practice, are never obtained (Foxall, 1984a, 1984b). Ajzen and Fishbein (1980) note that it is sometimes mistakenly assumed that the theory of reasoned action involves

highly specific attitudes that are relevant for a single, unique behaviour. On the contrary, the theory can be applied at any level of generality, as long as all dispositional measures are compatible with each other. Thus, one may use the theory to predict a single action or, alternatively, to predict more global behaviours. In both cases, attitudes, norms and intentions should be measured in relation to the specification elements of the behaviour under consideration, however specific or general these might be. In addition, general attitudes can be used for the prediction of a set of different specific actions, that is the prediction of behavioural categories. In this case, the measures of intention and behaviour should be the aggregate of these actions (Ajzen, 1988, 1991). For example, assessing the general attitudes and norms towards religiosity can be used for the prediction of a number of specific actions (e.g. praying before meals, attending services etc.), as long as the aggregate of these specific actions comprises the intention and behaviour measures.

Further, Fishbein and Ajzen (1975) suggest that the actual measurement of attitudes and intentions should be taken in close temporal proximity to the behaviour that is to be predicted. The longer the time interval between the attitude measurement and the behaviour measurement, the larger the probability that the individual will obtain new information or certain events will occur and change the attitude or the behavioural intention. In addition, it has been suggested that prediction is best when one takes into account not only the target behaviour (e.g. smoking), but the alternative as well (e.g. not smoking; Ajzen and Fishbein, 1980; Kendzierski and Lamastro, 1988; see also Sheppard, Hartwick and Warshaw, 1988).

4.9 Empirical tests of the theory of reasoned action

The theory of reasoned action has received extensive empirical support and has predicted intentions and behaviours in various settings and domains with considerable success, especially when the terms of the model are carefully operationalised. For example, the model has been applied to the prediction of strategy choices in Prisoner's Dilemma games (Ajzen, 1971), blood donation (Pomazal and Jaccard, 1976), voting (Ajzen and Fishbein, 1980; Fishbein, Middlestadt and Chung, 1986), church attendance (G. W. King, 1975), smoking (N. M. Norman and Tedeschi, 1989), infant breast feeding versus bottle feeding (Manstead, Proffitt and Smart, 1983), marijuana use by college students (Ajzen, Timko and White, 1982), seat belt usage (Stasson and Fishbein, 1990) and applying for a nursing programme (Strader and Katz, 1990).

In reviews of this research, Fishbein and Ajzen maintain that intentions to engage in volitional acts are usually well predicted by the combination of attitude towards the behaviour and subjective norm (Ajzen, 1984; Ajzen and Fishbein, 1973, 1980; Fishbein, 1980). In an early review of ten studies, Ajzen and Fishbein (1973) report a mean R of .81. Later meta-analytic evidence ($N = 87$ studies) shows that both the relation of intentions to behaviours (mean $R = .53$, $p < .001$) and the simultaneous impact of attitudes and subjective norms on intentions (mean $R = .66$, $p < .001$) are quite strong (Sheppard *et al.*, 1988; see also Farley, Lehmann and Ryan, 1981). Van den Putte (1991) has provided a more extensive meta-analysis based on 113 studies and reports a mean multiple R of .68 for predicting intention from attitude and subjective norm and a mean R of .62 for predicting behaviour from intention. Van den Putte (1991) also reports a mean R of .53 for the relation between attitude and

behavioural beliefs and a mean R of .53 for the relation between subjective norm and normative beliefs. In addition, this meta-analysis shows the relation between intention and attitude to be stronger than the relation between intention and subjective norm.

Within the area of consumer research, the theory has received considerable support in predicting purchase intentions and behaviour (e.g. Farley *et al.*, 1981; Ryan, 1982; Ryan and Bonfield, 1975; Shimp and Kavas, 1984) and has been influential not only in academic research but also in marketing practice (e.g. Lutz, 1991), as it provides a relatively simple basis for identifying where and how to target consumers' behavioural change attempts (Sheppard *et al.*, 1988).

4.10 The theory of planned behaviour

In formulating the theory of reasoned action, Fishbein and Ajzen have explicitly acknowledged that behaviours determined by factors beyond individuals' voluntary control fall outside the boundary conditions of the model. The theory of planned behaviour (Ajzen, 1985, 1991; Ajzen and Madden, 1986; Schifter and Ajzen, 1985) was developed to extend these conditions to include behaviours that are under incomplete volitional control.

The theory (Figure 4.4) introduces a third, conceptually independent determinant of intentions and behaviour termed 'perceived behavioural control'. The concept of perceived control is most compatible with Bandura's (1977, 1982) self-efficacy, which 'is concerned with judgements of how well one can execute courses of action required to deal with prospective situations' (Bandura, 1982, p.122). This factor refers to the perceived ease or difficulty of performing the behaviour and is assumed to

reflect past experience as well as anticipated obstacles. As can be seen in Figure 4.4, the impact of perceived control on behaviour can be indirect, through behavioural intentions, as well as direct. Perceived control might not correspond to actual control over the behaviour, as for example, when the individual has limited information about the behaviour (Ajzen, 1985; Ajzen and Madden, 1986; Ajzen, 1989). The stronger the correspondence between perceived control and actual control, the more likely perceived control is to influence behaviour directly.

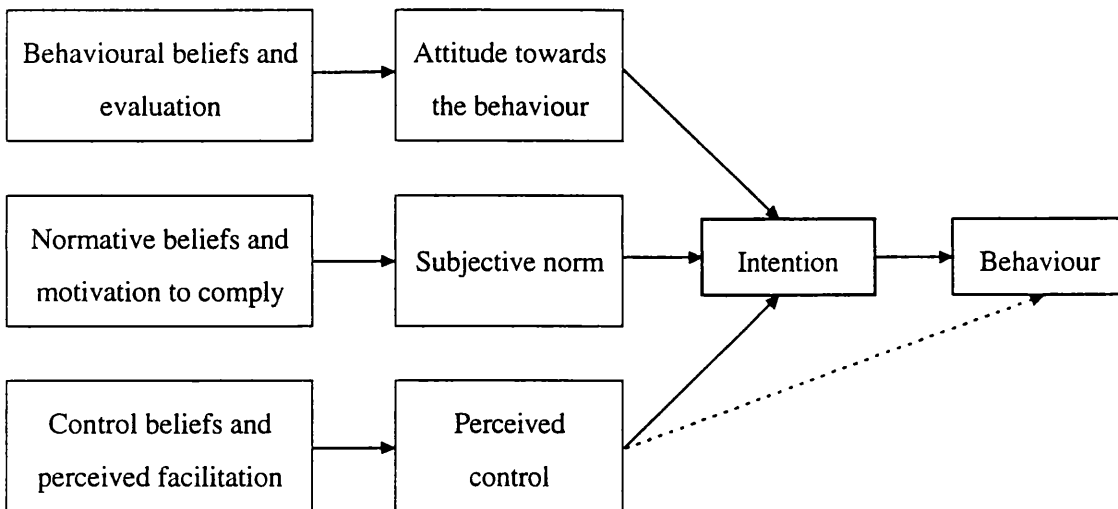


Figure 4.4. Schematic representation of the theory of planned behaviour (adapted from Ajzen, 1991)

The relations between behaviour, intention and perceived control, and between intention, attitude towards the behaviour, subjective norm and perceived control, postulated in the theory, are depicted in equations 4.4. and 4.5:

$$B \approx w_1BI + w_2PC \quad (4.4)$$

and

$$BI = w_3A_B + w_4SN + w_5PC \quad (4.5)$$

where B is the behaviour; BI is the behavioural intention; PC is perceived control over the behaviour; A_B is attitude towards the behaviour; SN is subjective norm; w_1 , w_2 , w_3 , w_4 and w_5 are empirical weights indicating the relative importance of the model's components.

At the most basic level of explanation, perceived control is determined by a set of beliefs that concern the availability of control factors (resources, skills and opportunities required for the successful performance of the behaviour), namely 'control beliefs'. Specifically, each control belief is multiplied by the perceived facilitating (or inhibiting) effect of each control factor and the resulting products are summed to obtain an estimate of perceived behavioural control. Thus, just as behavioural beliefs determine attitudes towards the behaviour, normative beliefs determine subjective norms, so control beliefs determine perceived behavioural control (Ajzen, 1989). The relation between control beliefs and perceived control can be expressed algebraically as follows:

$$PC = \sum_{k=1}^c cb_k pf_k \quad (4.6)$$

where PC is perceived control; cb_k is the control belief (i.e. subjective probability) that the individual has good control over the factor k ; pf_k is the perceived facilitating power of factor k in performing the behaviour; c is the number of salient control factors.

It should be mentioned that as with the variables of the theory of reasoned action, only a limited set of salient control beliefs are expected to influence perceived control. Moreover, in order to accurately predict intentions and behaviour with the theory of planned behaviour a number of conditions must be met. First, measures of intention and perceived control must correspond to (Ajzen and Fishbein, 1977), or be compatible with, the behaviour to be predicted (Ajzen, 1988, 1991). That is, the specified context must be the same as that in which the behaviour is to occur. Second, intentions and perceptions of control must remain stable over the time interval between their assessment and observation of the behaviour. Intervening events may produce changes in intentions and perceived control. The third condition has to do with the accuracy of perceived behavioural control. Prediction of behaviour from perceived control should improve to the extent that perceptions of behavioural control realistically reflect actual control.

Ajzen (1991) provides an extensive list of studies confirming the effects of perceived control on intentions and on behaviours, such as losing weight (Schifter and Ajzen, 1985), attending college lectures and getting an 'A' in a college course (Ajzen and Madden, 1986), playing video games (Doll and Ajzen, 1992), problem drinking (Schlegel, d'Averna, Zanna, DeCourville and Manske, 1990), various leisure activities (Ajzen and Driver, 1991), participation in elections and voting (Netemeyer, Burton and Johnston, 1991) and giving a gift (Netemeyer, Andrews and Durvasula, 1990). The multiple correlations predicting behaviour from intentions in these studies range from .20 to .78 with an average of .51. The prediction of behaviour improves by adding perceived control as a predictor in most of these studies. In addition, the prediction of intention improves by taking perceived control into account (mean $R = .71$). Several

other studies comparing the theories of reasoned action and planned behaviour have revealed a predictive advantage for the latter theory (Beck and Ajzen, 1991; Madden, Ellen and Ajzen, 1992; Borgida, Conner and Mantfeufel, 1992; DeVillis, Blalock and Sandler, 1990; Giles and Cairns, 1995). Some researchers, however, argue and provide evidence suggesting that the older theory performs just as well as the new one (e.g. Fishbein and Stasson, 1990; Hinsz and Nelson, 1990; Chan and Fishbein, 1993; Morojele and Stephenson, 1994).

One of the issues addressed in this thesis concerns the validity of the theories of reasoned action and planned behaviour in predicting behaviours that differ in their degree of volitional control. According to the theory of planned behaviour, the effects of perceived control on a target behaviour are expected to be stronger when the behaviour presents strong problems of control (Madden *et al.*, 1992). It follows that the predictive superiority of the theory of planned behaviour is more pronounced in the case of behaviours that present strong problems of control. This superiority, however, should decrease as target behaviours become more volitional and less liable to control problems.

4.11 Criticisms of the theory of reasoned action and proposed modifications: The role of past behaviour

The theory of reasoned action has been challenged in its assumption that it provides a sufficient description of the causes of behaviour and that, therefore, other variables influence behaviour only through their impact on the components of the model (Eagly and Chaiken, 1993). However, the theory does not specify how behavioural and

normative beliefs are formed and treats the variables that affect these beliefs as external to the model. These external variables are sometimes of great interest to social scientists (e.g. what is the impact of economic status and social identity on criminal behaviours and how are these factors related to beliefs, attitudes and subjective norms?). The information provided by the model's components is sometimes insufficient or too general to create a clear picture of why people behave in certain ways and, therefore, depending on the specific research questions, the model might or might not provide an appropriate research tool.

The theory of reasoned action was not developed as a general theory of behaviour, but rather as a theory of the proximal causes of behaviour (i.e. of the determinants of behaviour that *mediate* the effects of several external variables). In particular, in respect to the study of consumer behaviour, Ajzen and Fishbein (1980) proposed their theory as an alternative to the existent models of consumer behaviour (e.g. Engel, Kollat and Blackwell, 1975; Howard and Sheth, 1969), which they criticised in that they incorporate 'virtually every feature of human information processing, attitude formation and change, and decision making' and in that they suffer from untestability and 'are likely to generate confusion rather than real understanding' (p. 150). The popularity of the theory of reasoned action among social psychologists and consumer researchers lies exactly in its clarity and ease of implementation.

Despite the success of the theory of reasoned action in predicting behaviour in various domains and settings, several modifications and extensions, including the theory of planned behaviour, have been proposed. For example, some investigators suggest that variables, such as personal norms and the related construct of moral obligations, referring to what the individual thinks he/she should do (e.g. personal

beliefs about right and wrong; Gorsuch and Ortberg, 1983; Schwartz and Tessler, 1972; Pomazal and Jaccard, 1976), and situational influence (e.g. unanticipated extraneous events; Cote, McCullough and Reilly, 1985; Lutz, 1991; Pieters, 1988; Sarver, 1983), should be added in the theory as predictors of intentions and behaviour. It has also been suggested that behavioural expectations, referring to what individuals expect, rather than intend, to do, provide a more valid predictor of behaviour than intentions (Warshaw and Davis, 1985; Gordon, 1989; see Sheppard *et al.*, 1988).

Moreover, some researchers contend that the prediction of behaviour can be improved by including measures of past behaviour and habit. Habit or past behaviour are not explicitly modelled in the theory of reasoned action. The theory asserts that past behaviour is reflected in attitudes and subjective norms, as beliefs underlying these constructs are, at least in part, based on past experience and that, therefore, the impact of past behaviour is mediated by intentions. It appears however, that the effects of past behaviour are not always completely mediated by intentions and that habit and past behaviour can significantly improve the prediction of behaviour and sometimes even bypass intention and its theoretical antecedents to directly and independently influence behaviour (Ajzen and Madden, 1986, study 1; Bentler and Speckart, 1979, 1981; Landis, Triandis and Adamopoulos, 1978; Wittennbraker, Gibbs and Kahle, 1983; Bagozzi, 1981; Echabe, Rovira and Garate, 1988; Budd, North and Spencer, 1984; Mittal, 1988; Sutton and Hallett, 1989; Charng, Piliavin and Callero, 1988).

Triandis (1977, 1980) offers a theoretical rationale for the impact of past behaviour by arguing that for frequently performed, overlearned behaviours, one might act more or less automatically, as a consequence of habit alone. In other words, behaviours sometimes become so routinised through repetition that a person ceases to

make any conscious decisions to act, yet still behaves in the accustomed way. As a result, when one repeatedly executes a specific act, behaviour will be determined more by habit and less by intentions, which means that the frequency of prior performance of a behaviour determines the sufficiency of intentions to predict it. However, the empirical tests of Triandis' approach offer mixed support as the inclusion of a habit measure does not predict behaviour consistently better than the theory of reasoned action (Brinberg, 1979; Davidson, Jaccard, Triandis, Morales and Diaz-Guerrero, 1976; Jaccard and Davidson, 1975; see reviews by Triandis, 1977, 1980).

Although Triandis was mainly concerned with the effects of past behaviour on subsequent behaviour and did not address the dependence of intentions on past behaviour *per se*, other researchers have shown that past behaviour can also have a direct influence on intentions, unmediated by attitudes and subjective norms (Bagozzi, 1981; Bagozzi and Kimmel, 1995; Bentler and Speckart, 1979, 1981; Fredricks and Dossett, 1983; Sutton, Marsh and Matheson, 1987).

Past experience with a behaviour is the most important source of information about perceived behavioural control (Bandura, 1986). Ajzen (1991) argues that the insufficiency of the components of the theory of reasoned action to account for the influence of past behaviour on later behaviour might be attributed to the fact that the theory lacks the construct of perceived control. Perceived control can play an important role in mediating the effect of past on later behaviour. This suggestion implies that, when perceived control is taken into account, past behaviour should no longer add to the prediction of intentions and behaviour. However, in a recent application of the theory of planned behaviour in the prediction of exercising and dieting, it was found that past behaviour (frequency and recency of past performance of

the behaviour) adds significantly to the prediction of both intentions and behaviour (Bagozzi and Kimmel, 1995).

Ajzen (1991) states that 'the theory of planned behaviour is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of variance in intention or behaviour after the theory's current variables have been taken into account' (p. 199). However, he concludes that the addition of further variables in the theories of reasoned action and planned behaviour has so far been shown to improve their predictive power only slightly and suggests that empirical evidence is still too limited to be conclusive (see also Eagly and Chaiken, 1993).

The additional contribution of past behaviour in the prediction of intentions and behaviour under the theories of reasoned action and planned behaviour is one of the issues addressed in this thesis. Following Triandis' (1977, 1980) suggestions, it is expected that the contribution of past behaviour varies according to the frequency of performance of the target behaviour and that, therefore, in the case of discrete, infrequently performed behaviours, past behaviour does not improve prediction.

4.12 The relative predictive weight of attitudes, subjective norms and perceived control

In the applications of the theories of reasoned action and planned behaviour, the relative predictive weight of attitudes, subjective norms and perceived control is empirically determined, usually by means of multiple regression analyses (Fishbein and Ajzen, 1975). However, the theories of reasoned action and planned behaviour do not

assume that behavioural determinants function in a uniform manner under any circumstances, and the relative contribution of attitudes, subjective norms and perceived control to the prediction of intentions is expected to vary across individuals, behaviours and situations (Ajzen 1991). Determining *a priori* conditions that moderate the relative impact of the models' variables on intentions and behaviour is an issue that has only recently started to receive attention. Research, however, has exclusively focused on the components of the theory of reasoned action, and perceived control has not been included in this kind of investigations.

The relative importance of attitudes and subjective norms in the prediction of intentions has been shown to vary as a function of the type of behaviour under consideration. For a given population, some behaviours are more under attitudinal control, while others are more under normative control. In order to test the assumption that the type of behaviour moderates the relative importance of attitudes, Trafimow and Fishbein (1994a) first manipulated subjects' attitudes towards a behaviour, and then primed them with either attitudinally or a normatively controlled behaviour that was irrelevant to the behaviour in question. They found that manipulating subjects' attitudes had a much greater effect on intentions to perform the behaviour in the presence of an attitudinally controlled behaviour prime than a normatively controlled behaviour prime. Subsequently, subjects were presented with either an attitudinally controlled or a normatively controlled behaviour (i.e. seat belt use under different conditions) and were told to imagine that they liked or disliked performing the behaviour (this was the attitude manipulation). Participants given an attitudinally controlled behaviour were more affected by the attitude manipulation than participants given a normatively controlled behaviour. In summary, the attitude-behaviour

relationship was stronger for attitudinally controlled than for normatively controlled behaviours.

In a subsequent study, Trafimow and Fishbein (1994b) examined the moderating effect of behaviour type on the subjective norm-behaviour relationship. In the first experiment of the study, subjects were presented with an attitudinally or normatively controlled behaviour (i.e. going to a Korean restaurant under different circumstances) and were instructed to suppose that the person most affected by the behaviour approved or disapproved of them performing that behaviour. This manipulation had a greater effect on intentions to perform the normatively controlled behaviour than on intentions to perform the attitudinally controlled behaviour. The following two experiments of the study attempted to replicate this interaction by using a manipulation of the subjective norm (rather than a manipulation of the normative prescriptions of a specific other). Although somewhat less consistently, these experiments also supported the hypothesised moderating effect of behaviour type.

Other researchers have been concerned with the moderating effects of individual difference factors. Bagozzi, Baumgartner and Yi (1992) examined the moderating effect of state versus action orientation, a variable referring to a person's tendency to approach or avoid things in a static (passive) or dynamic (active) fashion (Kuhl, 1985), on consumers' intentions to use coupons. Action orientation, reflecting readiness to act, increased the impact of attitudes on intentions, while state orientation, reflecting inertia to act, increased the importance of normative influence. Bearden and Rose (1990) showed that attention-to-social-comparison information, a construct proposed by Lennox and Wolfe (1984) as an alternative to Snyder's (1974) self-monitoring, moderated normative influence on intentions concerning product purchase

and usage behaviours. In a series of studies, involving several products and brands, it was shown that individuals who are more attentive to social comparison information are more likely to comply with normative pressures.

Skinner and Cattarello (1989) demonstrated the moderating effect of behavioural commitment (operationalised as the length of time an individual has engaged in a behaviour) in the theory of reasoned action. They found that as behavioural commitment increased, subjective norms became more important relative to attitudes.

4.13 The moderating role of involvement within the theories of reasoned action and planned behaviour

One of the major issues addressed in this thesis concerns the role of involvement within the theories of reasoned action and planned behaviour and, specifically, the moderating effect of the variable on the relative predictive weight of attitudes, subjective norms and perceived control. Involvement has been consistently shown to increase the strength of attitudes and to enhance their impact on intentions and behaviour. A question that arises, when one thinks in terms of the theories of reasoned action and planned behaviour, is what happens to the predictive value of the remaining components of the models, when the impact of attitudes is enhanced. Since research so far has mainly focused on the moderating role of involvement on attitude-behaviour consistency, and as other determinants of behaviour are not explicitly included in this research, it is difficult to extend any conclusions to the relationship of subjective norm and perceived control with intentions and behaviour (Pieters, 1988).

It is possible, however, that individuals whose behaviour is strongly influenced by their attitudes, take less into account other, non-personal considerations. It is possible, therefore, that involvement moderates the relative importance of attitudes, subjective norms and perceived control by determining the strength and impact of attitudes on intentions and behaviour. It is suggested here that, because involved individuals hold stronger, more consequential attitudes, they base their intentions and behaviour mostly on these attitudes, and are less inclined to take social influence and control problems into consideration when deciding on a course of action. By contrast, less involved individuals, because their attitudes are weaker, are more likely to be influenced in their behavioural decisions by the anticipated ease or difficulty of performing a behaviour, or by the expectations of significant social referents.

The moderating role of involvement within the theories of reasoned action and planned behaviour is examined in this thesis in a consumer behaviour context. The main issue addressed concerns how consumers' product involvement, in other words, the perceived importance and personal relevance of a product class and their interest in this product class, moderates the relative impact of attitudes, subjective norms and perceived control on their intentions to engage in product related behaviours. It is assumed that the importance individuals attach to a product class is also reflected in the importance attached to a product related action (e.g. purchase, usage of the product). It is expected that individuals involved with a product category hold strong attitudes and base their intentions to perform product related behaviours mostly on these attitudes, rather than on their subjective norms and perceived control. By contrast, low involvement is expected to be associated with the opposite pattern of relations between the variables. Furthermore, following recent findings indicating that high involvement

strengthens the intention-behaviour relation (Pieters and Verplanken, 1995), it is expected that high involvement also enhances the impact of intentions on behaviour.

PART III

THE INTEGRATION OF AUTOMATIC AND CONTROLLED ATTITUDE-TO-BEHAVIOUR PROCESSES

4.14 The distinction between automatic and controlled processes

The model of automatic attitude activation (Fazio, 1986) and the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991) might at first appear to represent two contrasting accounts of the attitude-behaviour sequence. However, an absolute distinction between automatic and controlled processes of attitudinal influence on behaviour is not possible, as most processes are complex enough to involve both automatic and controlled components.

An attitude-to-behaviour process that is mainly deliberative in nature may still involve some components that are automatic. For example, in forming an attitude towards a behaviour, the chronic accessibility of individuals' beliefs about the behaviour and the chronic accessibility of evaluations of those beliefs are relevant. More accessible beliefs and evaluations are more likely to be salient and thus to influence attitudes towards the behaviour. An additional manner in which automatic processes may operate in the formation of an attitude towards a behaviour stems from the potential influence of the attitude towards the object in question. According to the composite model of the attitude-behaviour relation (Eagly and Chaiken, 1993), an attitude towards an attitudinal object (the target of a behaviour) may function as a determinant of attitudes towards behaviours that involve this object. The more accessible the attitude towards this object is from memory, the more likely it is that it will influence, not only the sort of outcomes that one believes accrue from performance of the behaviour, but also the valence with which these outcomes are regarded (Fazio, 1990a).

According to the theory of reasoned action, attitudes and subjective norms are typically computed anew each time an individual encounters an attitude object, since the specification elements of the behavioural situation change (e.g. context, time). However, Ajzen and Fishbein (1980) note that the theory of reasoned action does not imply that prior to performing each and every action, people systematically scrutinise the determinants of their behaviour. Instead, the processes involved can be viewed as largely automatic or implicit; only in rare cases we become fully aware of these processes. Attitudes and subjective norms may be solidified and activated every time an individual encounters the behavioural object in an automatic manner. Such reliance on pre-developed attitudes and subjective norms is more likely when past and current behavioural situations are quite similar (Fazio, 1990a).

Likewise, the essentially spontaneous process described by Fazio (1986) may itself sometimes involve some components that are controlled. For example, situations sometimes provide contextual cues that prompt individuals to access and consider their attitudes before acting. In an experiment by Snyder and Kendzierski (1982), individuals with favourable attitudes towards psychological research were exposed to a sign requesting volunteers to participate in a particular experiment. The subjects overheard two confederates discuss the request. In the experimental condition, one of the confederates said that the decision is 'really a question of how worthwhile you think experiments are'. In the control condition, the confederate said: 'beats me - it's up to you'. Although all subjects felt positive about psychological research, significantly more volunteered in the experimental condition than in the control condition. Apparently, the confederate's cue was sufficient to prompt subjects to consider their own attitudes towards volunteering. Such activation as a result of prompting may

occur regardless of whether the individual's attitude is one that involves a strong object-evaluation association, that is, even in cases where the attitude would not be automatically activated upon encountering the attitude object. In such cases, the accessibility of the attitude is irrelevant. Yet, once the attitude is activated, it may colour individuals' definition of the event and affect subsequent behaviour in a fairly automatic manner, that is, without consideration of the potential consequences of the behaviour. Thus, an otherwise automatic attitude-to-behaviour sequence may be initiated by a controlled activation of the relevant attitude.

Although an absolute distinction between automatic and controlled processes is not feasible, it is still possible to distinguish between processes that are predominantly controlled versus automatic. The critical distinction between Fazio's (1986) approach to the attitude-behaviour sequence and Ajzen and Fishbein's (1980; Ajzen, 1985, 1991) approach centres on the extent to which they assert that the behavioural decision involves effortful reasoning, as opposed to spontaneously flowing from an individual's definition of the event that is occurring.

4.15 The MODE model

Following the logic of the dual-process models of persuasion (see Chapter 3, section 3.3.2), Fazio (1990a; Sanbonmatsu and Fazio, 1990) recently proposed the integration of automatic and controlled attitude-to-behaviour processes under the premises of the MODE model (emphasising *Motivation* and *Opportunity* as *Determinants* of how attitudes influence behaviour). The MODE model integrates the automatic impact of attitudes on behaviour, that is inherent in the model of spontaneous attitude activation

proposed by Fazio (1986), and the deliberative impact, that is central in the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991), by defining the conditions that promote one versus the other.

According to the model, when individuals are highly motivated to think deliberately about an attitude object (e.g. when the behavioural decision is important and consequential) and when they have the opportunity to do so (e.g. the time to deliberate), attitudes will affect behaviours in the manner outlined in the theories of reasoned action and planned behaviour, that is, through effortful reasoning. In such cases, individuals are likely to consider the specific attributes of the attitude object or the possible consequences of the behaviour, before taking a behavioural decision. However, when either motivation or opportunity is missing any effect of attitude on behaviour will operate only through the automatic processing mode (Fazio, 1990a). In such situations, people may rely more on global attitudes that are spontaneously retrieved from memory, rather than on consideration of specific, attribute relevant information.

4.16 Empirical tests of the MODE model

A direct test of the MODE model is provided by an experiment conducted by Sanbonmatsu and Fazio (1990). This research concerned the degree to which individuals' decisions would be based on their overall evaluation of two alternatives versus careful consideration of the specific attributes that had earlier been ascribed to these two alternatives. More specifically, while under instructions to form general evaluations of each of two stores, subjects were exposed to a series of statements

describing various departments of two fictitious department stores. One such store was described in generally favourable terms; two thirds of the statements mentioned desirable attributes. The other store was described predominantly in unfavourable terms; two thirds of the statements concerned undesirable attributes. However, the specific attributes ascribed to the camera departments of the two stores were designed to reverse the direction of this general preference. At a later point, subjects were asked to imagine that they needed to buy a camera and to consider which store they would buy it from. The critical concern was how the decision strategy would be affected by the variables postulated to be important by the MODE model - motivation and opportunity. Prior to the introduction of the camera buying scenario, both time pressure and fear of invalidity (Kruglanski, 1989) were manipulated. The data provided support to the model. Only subjects under fear of invalidity (motivation) and in no time-pressure (opportunity) displayed a significantly greater preference for buying the camera from the department with the best camera store, indicating that, only when subjects have the time and desire, do they retrieve specific bits of information from memory, in a manner consistent with Ajzen and Fishbein's theory of reasoned action. In all other cases, they are more likely to rely on their more global evaluations.

According to the MODE model, the role of attitude accessibility is presumed to differ as a function of processing mode. The impact of accessibility is much more direct in the case of spontaneous processes. Given sufficient motivation and opportunity, individuals are hypothesised to deliberate about the attributes of the attitude object and to deliberately retrieve evaluative information from memory. In such conditions, any influence of attitude accessibility on subsequent behaviour is relatively indirect in nature (Fazio, 1995). In this respect, attitude accessibility should have its maximum

impact on attitude-behaviour consistency in situations where either motivation or opportunity is missing.

In a more recent test of the MODE model, Schuette and Fazio (1995) manipulated both motivation and attitude accessibility. Subjects expressed their attitudes towards capital punishment either once (low accessibility) or repeatedly (high accessibility). Subsequently, they were asked to evaluate two studies with conflicting conclusions regarding the efficacy of capital punishment as a crime deterrent. Motivation was manipulated via fear of invalidity (Kruglanski, 1989). Half of the subjects were told their evaluations of the studies should be publicly compared to an expert panel's conclusions (high motivation), while the other half did not receive any specific instructions (low motivation). The relation between attitude and judgement was found to depend on both attitude accessibility and motivation. Judgements were more attitudinally congruent (or biased) in the low motivation/high accessibility condition than in the other conditions (see also Jamieson and Zanna, 1989).

Indirect evidence for the MODE model has also been provided from research conducted within the framework of the theory of reasoned action. Bagozzi and Yi (1989) manipulated the formation of students' intention to read a written follow-up of a case analysis that had been discussed in the class by varying their opportunity to consider the perceived consequences of the action. In the well-formed intention condition, subjects were given a task relevant to the target behaviour, so as to stimulate the process of decision making asserted by the theory of reasoned action. Subjects were explicitly instructed to write down the positive and negative aspects of performing the target behaviour. Subjects in the ill-formed intention condition were asked to write down the positive and negative aspects of marketing simulation games,

a task designed to distract subjects from a deliberate consideration of the consequences of the behaviour. Results indicated that the impact of attitudes on intentions was stronger in the well-formed (high opportunity) condition. In addition, when intentions were well-formed the effects of attitudes on behaviour were fully mediated by intentions. When intentions were poorly formed, however, the mediating role of intentions was absent and attitudes had a direct (strong) effect on behaviour. The explanation for these findings offered by the authors is consistent with the MODE model. Attitude-intention and intention-behaviour relations follow the sequence hypothesised by the theory of reasoned action (i.e. intentions mediate the effect of attitudes on behaviour) only when opportunity (and motivation) to deliberate is high. In contrast, when opportunity (or motivation) is low, overall evaluations and affective reactions to objects, when sufficiently strong (i.e. when highly accessible), can influence behaviour directly, without following the cognitive sequence presumed by the theory.

4.17 The role of involvement in the MODE model

The MODE model assigns motivation to access and utilise detailed information in order to reach an accurate decision a central role as a determinant of the process through which attitudes influence behaviour. When motivation is low, attitudes are more likely to guide behaviour in the spontaneous fashion outlined by Fazio's (1986) model of automatic attitude activation. By contrast, when motivation is high, attitudes are more likely to influence behaviour in a thoughtful manner (i.e. by careful

consideration of the specific positive and negative attributes of the object or of the specific consequences of the action).

Empirical tests of the model have focused on fear of invalidity (Kruglanski, 1989) as a motivational factor. It seems reasonable, however, to expect motivation to think carefully in order to reach an accurate behavioural decision to vary more generally as a function of the perceived importance and personal relevance of the object or action under consideration. When an attitude object is perceived as important and personally relevant, individuals are motivated to hold an accurate object evaluation and, therefore, to engage in extensive cognitive processing of information during attitude formation. By the same token, it can be expected that high relevance and importance of an attitude object or of a behavioural decision motivates individuals to engage in extensive processing during decision making. Hence, high involvement should motivate individuals to deliberate when deciding on a course of action.

The role of involvement in the MODE model is one of the issues addressed in this thesis. It is expected that involvement will function in a manner similar to that of fear of invalidity. In other words, high involvement is expected to promote effortful, deliberate attitudinal impact on behaviour.

More specifically, the role of involvement within the MODE model is examined here in the context of consumer decision making. It is expected that individuals involved with a purchase decision are more motivated to carefully consider product related information, in order to optimise this decision, and that, therefore, in such cases, attitudes influence behaviour in the thoughtful manner outlined by the theory of reasoned action. By contrast, less involved individuals are expected to be less motivated to scrutinise information and, thus, their behaviour is expected to be guided

by their overall evaluations, in the manner outlined in Fazio's model of automatic attitude activation.

4.18 Summary of Chapter 4 and main hypotheses of the thesis

The model of automatic attitude activation (Fazio, 1986) posits that attitudes can be spontaneously retrieved upon encountering the attitude object to influence behaviour in an unconscious, automatic manner. The likelihood that an attitude will be automatically activated depends on the strength of the object-evaluation association in memory, which is reflected in attitude accessibility. More accessible attitudes are more likely to be retrieved and to influence behaviour and, therefore, are better predictors of behaviour than less accessible attitudes.

According to some theorists (Krosnick and Petty, 1995; Raden, 1985), attitude accessibility, along with other moderators of attitude-behaviour consistency, can be viewed as a dimension of the multi-faceted construct of attitude strength, which reflects the resistance, persistence and predictive properties of attitudes. The elaboration likelihood model of attitude strength (Petty *et al.*, 1995) postulates that the critical determinant of attitude strength is the degree of elaboration of information during attitude formation, which has a causal impact on the immediate determinants of attitude strength (i.e. attitude accessibility, structural consistency, certainty/confidence and object-related knowledge). The extent of elaboration, in turn, depends on motivational factors, such as the perceived personal relevance and importance of the object, and ability factors, such as lack of distraction. This perspective leads to the prediction that high involvement produces attitudes that are more accessible from

memory and therefore more likely to exert a spontaneous, unconscious impact on behaviour. Outside the persuasion context (i.e. once an attitude has been formed or changed), high involvement can still enhance accessibility by increasing the frequency with which people think and talk about the attitude object (i.e. the frequency of attitude activation) and the salience of the attitude, in relation to attitudes concerning other, less involving objects. The relationship between involvement and attitude accessibility and the combined influence of both variables on attitude-behaviour consistency is the first major issue addressed in this thesis.

The theory of reasoned action (Ajzen and Fishbein, 1980) postulates a causal sequence from beliefs to attitudes to behaviour that involves rational information processing. According to this model, the performance of volitional behaviours depends on behavioural intention. Intention, in turn, is determined by the attitude towards the behaviour (i.e. the evaluation of the behaviour) and the subjective norm (i.e. the perceived social pressures put on the individual to perform or not to perform the behaviour). Attitudes are determined by a set of beliefs concerning the anticipated consequences of the behaviour and subjective norms are determined by beliefs concerning what specific social referents think the individual should do. The theory of planned behaviour (Ajzen, 1985, 1991) extends the theory of reasoned action by integrating perceived control as an additional determinant of intentions and behaviour. Perceived control is determined by a set of beliefs concerning control over factors required for the successful performance of the behaviour.

The theories of reasoned action and planned behaviour assert that the relative predictive weight of attitudes, subjective norms and perceived control varies across situations. However, the theories do not specify the exact conditions that promote or

restrain the impact of the variables on intentions. High involvement has been consistently shown to enhance attitude strength and thus to increase the impact of attitudes on behaviour. It seems, therefore, reasonable to assume that involvement also influences the impact of attitudes, relative to that of subjective norms and perceived control, on intentions. The moderating role of involvement within the theories of reasoned action and planned behaviour is the second major issue addressed in this thesis.

According to the MODE model (Fazio, 1990a), whether attitudes influence behaviour in the deliberate fashion, outlined in the theories of reasoned action and planned behaviour, or in the spontaneous fashion, outlined in the model of automatic attitude activation, depends on an individual's motivation and opportunity to engage in effortful cognitive processing of available information. When both motivation and opportunity are high, attitudes are likely to guide behaviour in a thoughtful manner (i.e. by careful consideration of the attributes of an attitude object or of the outcomes of a behaviour). When either motivation or opportunity is missing, attitudes can influence behaviour only in an effortless, unconscious manner.

Involvement has been shown to determine the extent of cognitive processing during attitude formation. Involved individuals are motivated to scrutinise information, in order to hold an accurate evaluation of the object in question. In a similar manner, involved individuals can be expected to be motivated to scrutinise information, in order to reach an accurate behavioural decision involving this object. It is possible, therefore, that involved individuals' attitudes are more likely to influence their behaviour in a thoughtful manner. By contrast, uninvolved individuals' behaviour is more likely to be spontaneously guided by their attitudes, as such individuals lack motivation to engage

in extensive information processing. The third major issue addressed in this thesis concerns the role of involvement within the MODE model, i.e. in the specific process through which attitudes influence behaviour.

In summary, the main issues addressed in this thesis concern the effects of involvement on the attitude-behaviour sequence and, specifically, the role of the variable in the model of automatic attitude activation (Fazio, 1986), the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991) and the MODE model (Fazio, 1990a).

With reference to the role of involvement in the model of automatic attitude activation, this thesis examines the following basic hypotheses:

High involvement with a persuasive message increases the accessibility of resulting attitudes.

The moderating impact of involvement on attitude-behaviour consistency is, at least partly, independent from that of attitude accessibility.

In regard to the role of involvement in the theories of reasoned action and planned behaviour, the main hypothesis tested is the following:

High involvement increases the relative importance of attitudes and decreases the importance of subjective norms and perceived control in the formation of intentions and behaviour.

In relation to the role of involvement in the MODE model, the following hypothesis is tested:

High involvement increases the likelihood that behavioural decisions are based on careful consideration of attitude related information, rather than on global evaluations of alternatives.

In parallel with the investigation of these hypotheses, several other hypotheses, concerning the effects of and the relations between specified variables, are also tested.

CHAPTER 5

Involvement as a determinant of attitude accessibility

5.1 Introduction

This chapter is concerned with the role of involvement in Fazio's (1986) model of automatic attitude activation. The following sections present a study designed to examine the effect of involvement on attitude accessibility. Based on the premises of the elaboration likelihood model of attitude strength (Petty, Haugtvedt and S. M. Smith, 1995), the study tests the assumption that the level of involvement with a persuasive message serves as a motivational factor affecting the extent of cognitive elaboration of message content, thereby determining the accessibility of resulting attitudes. It is hypothesised that attitudes formed under high involvement conditions are more accessible than attitudes formed under lower levels of involvement. More specifically, it is expected that high involvement with an advertising message increases the accessibility of product attitudes.

5.2 Study 1: The impact of involvement on attitude accessibility

5.2.1 Introduction

The model of automatic attitude activation (Fazio, 1986, 1989; Fazio, Powell and Herr, 1983; see Chapter 4, part I) views attitudes as associations between objects and their evaluative summaries stored in memory (Fazio, Chen, McDonel and Sherman, 1982), and posits that attitudes can guide behaviour in a relatively unconscious, spontaneous way by influencing the more or less positive or negative way an object is perceived in

the context it is encountered (Fazio and Williams, 1986). These biased perceptions of objects, consistent as they are with the attitude, can induce attitudinally consistent behaviour, without any effortful thinking. In other words, an attitude can be spontaneously retrieved to influence the way an object is perceived and hence to guide behaviour towards this object without any intentional and conscious deliberation. However, for such differential perceptions to occur and to influence behaviour, it is essential that an attitude is first activated from memory. According to the model, the likelihood of attitude activation depends on the strength of the object-evaluation association (Fazio, Sanbonmatsu, Powell and Kardes, 1986). This associative strength is reflected in the chronic accessibility of an attitude (i.e. the readiness with which an attitude is retrieved from memory, usually operationalised as response latency to an attitudinal query). Several studies have shown that more accessible attitudes are more likely to be retrieved and to influence behaviour, indicating the importance of attitude accessibility as a moderator of attitude-behaviour consistency (e.g. Fazio and Williams, 1986, Fazio, Powell and Williams, 1989; for a review see Fazio, 1989).

A number of variables, other than attitude accessibility, have been found to moderate the relationship between attitudes and behaviour (see Zanna and Fazio, 1982; Kraus, 1995). Such variables include situational and attitudinal variables such as direct experience with the attitude object (Fazio and Zanna, 1981; Regan and Fazio, 1977), attitude extremity (Judd and J. T. Johnson, 1981), attitude certainty (Fazio and Zanna, 1978a, 1978b), affective-cognitive consistency (R. Norman, 1975), and amount of knowledge about the attitude object available in memory (Davidson, Yantis, Norwood and Montano, 1985). The concept of involvement, usually defined as the personal relevance or importance of an object (Petty and Cacioppo, 1979), is central in this area

as it is linked to the amount of cognitive effort individuals expend when forming their attitudes and, therefore, with the process through which attitudes are formed.

A large body of evidence, stemming from Petty and Cacioppo's (1986) elaboration likelihood model of persuasion, has shown that individuals with a high degree of involvement with a certain object are motivated to engage in elaborate processing of relevant information (Johnson and Eagly, 1989). Such individuals, when presented with a persuasive message, base their attitudes on extensive processing of the arguments contained in it. By contrast, individuals who perceive the same object as less involving engage in limited information processing and form their attitudes on the basis of peripheral cues surrounding the message (e.g. credibility of the source, number of arguments). Attitudes that have been created or changed as a result of extensive processing (central route to persuasion) have a strong impact on behaviour, whereas attitudes based on little thought (peripheral route to persuasion) are less predictive of behaviour (Petty, Cacioppo and Schumann, 1983).

Recent conceptualisations integrate involvement, accessibility and several other moderators of the attitude-behaviour relationship as multiple dimensions of the more general construct of attitude strength (Krosnick and Petty, 1995; Raden, 1985). Strong attitudes are more influential and, therefore, are better predictors of behaviour. Evidence from factor analytic studies suggests that strength related factors are distinct but, in most cases, related to one another (Krosnick, Boninger, Chuang, Berent and Carnot, 1993; see also Pomerantz, Chaiken and Tordesillas, 1995; Prislín, 1996). However, the exact nature of these interrelationships is not yet clear. It is possible that some strength dimensions are causally interrelated and, thus, that some dimensions act as antecedents of others. For example, it is possible that 'once such a dimension is

elevated (e.g. an individual comes to perceive the personal relevance of the attitude object and begins to think about it; Petty and Cacioppo, 1979) various cognitive and behavioural processes are set in motion to elevate some or even most of the other dimensions (e.g. accessibility, extremity)' (Krosnick and Petty, 1995, p. 10).

The elaboration likelihood model of attitude strength, recently advanced by Petty *et al.* (1995), approaches attitude strength from an attitude formation perspective and proposes a comprehensive view of the interrelationships between (certain) strength related variables. This model views cognitive elaboration as the critical determinant of attitude strength. According to the model, motivational factors, such as perceived personal relevance and importance of an attitude object (and ability factors, such as lack of distraction) determine the extent of cognitive elaboration of information during attitude formation. Cognitive elaboration, in turn, has a causal impact on four more immediate determinants of attitude strength: attitude accessibility, certainty/confidence, structural consistency and knowledge about the attitude object. In other words, the model asserts that high involvement with an attitude object leads to more extensive elaboration which results in attitudes that are more accessible and structurally consistent, are held with greater certainty/confidence and are associated with more extensive object-related knowledge. These attitudes, in turn, are more consequential.

The present study is based on these propositions and attempts to investigate the causal impact of involvement on attitude accessibility. The investigation is conducted in a persuasion context. Involvement and attitude accessibility are viewed as two dimensions of attitude strength, the former variable as a motivational factor determining the extent of cognitive processing during attitude formation and the latter as a proximal determinant of attitude strength. The conceptualisation of involvement

employed in the study parallels that of content involvement, referring to the extent to which an individual pays attention to and engages in extensive processing of message content (Chaiken and Stangor, 1987). More specifically, the study focuses on advertising message involvement, a construct reflecting the amount of attention and cognitive effort directed towards an advertising message (Greenwald and Leavitt, 1984; Krugman, 1965; Muehling, Laczniak and Stoltman, 1991). According to Laczniak and Muehling (1993a), individuals highly involved with an advertising message are likely to pay particular attention to claims made about the product, to exert more mental effort in examining these claims and to persist in this mental activity, more so than would individuals lower in involvement (see also Celsi and Olson, 1988). Although in the present study high advertising message involvement is induced by means of experimental instructions, high levels of advertising message involvement are expected to occur in more natural settings as a result of high product involvement or purchase involvement. Individuals with a persistent interest in a product class or a temporary interest in a brand decision involving this product class are more likely to pay attention to and to expend cognitive effort in processing the message of relevant advertisements.

Following the predictions of the elaboration likelihood model of attitude strength, it is expected that the deep and more extensive elaboration present under conditions of high advertising message involvement will enhance the accessibility of resulting product attitudes. In other words, it is hypothesised that product attitudes formed under conditions of high advertising message involvement will be more accessible than product attitudes formed under lower levels of involvement.

5.2.2 Method

Design and manipulations

In order to examine the impact of advertising message involvement on the accessibility of product attitudes, subjects were randomly assigned to one of two experimental conditions: high versus moderate involvement. Advertising message involvement was manipulated by means of experimental instructions. In the high involvement condition, and in order to enhance attention and processing effort, subjects were explicitly told that the study was about their attitudes towards the products featured in the advertisements they would be presented with. They were instructed to pay close attention to the information provided in the advertisements and to the claims made about the products and while evaluating each product to try to think as if they actually needed to buy a product of this kind and they wanted to acquire information about various brands so that they could make the right purchase decision (Laczniak and Muehling, 1993b). Attention and elaboration were also expected to be enhanced by increasing the personal relevance of the products (Petty *et al.*, 1983). Subjects were therefore informed that the products are either already marketed in or are just about to be introduced to their local area. It was expected that these instructions would provide sufficient motivation for subjects to process product information evaluatively and to elaborate on advertising claims. In the moderate involvement condition, subjects were instructed to look at the advertisements as they would normally do while reading a magazine. These instructions were expected to result in lower involvement/elaboration due to the nature of the experimental product. Subjects were not expected to become

involved with the advertisement either as a result of a permanent interest in the product category or as a result of a temporary interest in a purchase decision involving this product category. Although this condition might be considered by some researchers as of low involvement, I prefer to refer to it as of moderate involvement. The fact that subjects were participating in a laboratory study should motivate them to allocate some minimum amount of attention and effort to the experimental task, even when they did not receive explicit instruction to do so. Attempts to induce a state of low involvement during a pilot phase of the experiment, by explicitly instructing subjects to attend to peripheral executional features of the advertisements (see Laczniak and Muehling, 1993b), failed. These subjects reported allocating no less attention to the message than high involvement subjects did. Subjects in both conditions were instructed to look at the advertisements for as long as they wished.

Subjects

Participants in the study were 62 students at the University of London, 31 male (50 per cent) and 31 female (50 per cent), who were randomly assigned to the two experimental conditions (31 in each). They ranged in age from 19 to 50 years (mean age 25.12 years, SD = 5.17). Twenty-six (42 per cent) of the subjects were undergraduate students and 36 (58 per cent) were postgraduate students. Subjects came from a wide range of specialisations, including engineering (6 subjects, 10 per cent), economics (5 subjects, 8 per cent), classics (5 subjects, 8 per cent), psychology (3 subjects, 5 per cent) and computer science (3 subjects, 5 per cent). Subjects were recruited by means of advertising notices and were paid £2 for their participation.

Materials and procedure

Three criteria for selecting an experimental product for the study were adopted. First, that the product selected should not strongly differentiate subjects in their pre-existing levels of product or purchase involvement. This was necessary because the experimental manipulation might interact (in unknown ways) with pre-existing levels of involvement to influence the resulting level of involvement with the advertising message. Second, that the product selected should be associated with low levels of involvement, so that the moderate involvement manipulation would be effective. Third, that the product should be relevant to the specific population, and relatively simple and common, so that subjects would not differ in their ability (i.e. prior knowledge) to process advertising claims. The single product category of moisturising lotion was thought to satisfy these criteria and was selected. An advertisement for a brand of moisturising lotion, unfamiliar to the specific population (i.e. not marketed in Britain at the time the experiment took place), primarily factual in nature (i.e. based on product attributes), was drawn from a foreign (American) magazine (see Appendix A). In this way it was ensured that subjects would not hold any pre-existing attitudes either towards the specific brand, or towards the specific advertisement. Three statements were used in the advertisement to promote the product: that it is a water, rather than oil based formula; that it works hard and does not feel greasy; and that it is the leading moisturiser among those most recommended by dermatologists.

Two booklets were prepared for the study. The first contained the experimental advertisement together with four filler advertisements of equally unfamiliar products from diverse product categories, also factual in nature, which were included in order to avoid drawing undue attention to the experimental advertisement. Specifically, the filler

advertisements featured a personal stereo, a swimming suit, a pain killer and a washing machine (none of which was marketed in Britain at that time). The position of the experimental advertisement in the booklet was randomised. The first page of the booklet informed subjects that the study concerned magazine advertisements. To simulate the quality of real magazine advertisements, all the advertisements included in the booklet were high quality colour copies of the originals. The first page also provided the experimental instructions which the subjects were asked to read carefully. At the bottom of the first page, it was noted that after finishing viewing the first booklet, subjects should carry on to the second booklet. The second booklet contained a questionnaire including measures of product attitudes. In the first page of the second booklet, subjects were asked not to go back to the first booklet and were informed that their task was to complete the following questionnaire. Instructions were also provided on the use of bipolar attitude scales, as most of the questionnaire items employed this format. Demographic information was obtained in the last part of the questionnaire.

Completion of the questionnaire was followed by the attitude accessibility measure. It was essential that subjects completed this task after having completed the questionnaire, in order to ensure that both high and moderate involvement subjects would have formed an evaluation of the experimental product. Subjects were informed that their task would be to report their attitude towards a number of products on a computer. A C++ programme was compiled for the needs of this experiment. The list of products presented to the subjects contained the experimental product, the four other products featured in the advertising booklet and 20 (common, familiar) filler products, a total of 25 products. The experimental product was presented in the 11th position and after two of the products featured in the advertising booklet (presented in

the 6th and 9th position), in order to ensure that subjects would be aware that they would be asked about their attitudes towards the products of the advertising booklet. A dichotomous response (like/dislike) was obtained by instructing subjects to press one of two keys on the computer keyboard (labelled as +/-) that best represented their feelings towards the product presented on the computer screen. It was emphasised that they should 'respond as quickly and, most importantly, as accurately as possible'. A three second interval separated each trial. Both responses and response latencies were recorded. To familiarise subjects with the procedure, a series of 5 practice trials, involving different products to those used in the experimental list, preceded the presentation of the target and filler items. All subjects were individually tested. At the end of the session subjects were debriefed and thanked for their participation.

Dependent variables

Product *attitudes* were measured using the mean of four 7-point scales scored from 7 to 1 and anchored by like/dislike, appealing/unappealing, attractive/unattractive, desirable/undesirable (Cronbach's alpha = .88). Because response latencies to the experimental and filler products in the computerised task were positively skewed, all analyses were performed on the reciprocal transformation of the raw latencies ($1/(1+x)$) and after correcting for individual differences in average latency to respond. Product *attitude accessibility* was therefore operationalised as the difference between the reciprocal response latency to the target product and the reciprocal mean response latency to the 20 filler items (Berger, 1992; Fazio, 1990b). The response latencies to the filler products of the advertising booklet were not used in the computation of attitude accessibility. In order to assess the effectiveness of the involvement

manipulation, subjects were asked to indicate how much attention they had paid to the advertisements, how much attention they had paid to the message in the advertisements, and how much they had concentrated on the message in the advertisements, on three 7-point scales ranging from 'very much' (7) to 'not at all' (1). In addition, subjects were asked to indicate whether they had paid attention to the advertisements as though they were actually considering buying products of the kinds featured in the booklet on a 7-point scale anchored by 'strongly agree' (7) and 'strongly disagree' (1) (Laczniak and Muehling, 1993b).

5.2.3 Results

The results of the manipulation checks indicate that subjects in the high involvement condition paid more attention to the advertisements than subjects in the moderate involvement condition (mean response = 5.64, SD = 1.17 versus 4.67, SD = 1.24, $t(60) = -3.15, p < .01$), paid more attention to the written message in the advertisements (mean response = 5.54, SD = 1.50 versus 4.61, SD = 1.78, $t(60) = -2.23, p < .05$) and concentrated more on the written message in the advertisements (mean response = 5.19, SD = 1.53 versus 4.35, SD = 1.76, $t(60) = -2.00, p \leq .05$) than did subjects in the moderate involvement condition. In addition, high involvement subjects paid attention to the advertisements as though they were considering buying the products more than moderate involvement subjects (mean response = 5.00, SD = 1.84 versus 3.87, SD = 1.89, $t(60) = -2.38, p < .05$). These results indicate that the involvement

manipulation was successful in differentiating subjects' motivation to attend to and concentrate on the advertising message¹.

As expected, the involvement manipulation did not affect the valence of product attitudes (mean attitude = 3.97, SD = 1.51 versus 3.95, SD = 1.40 in the high and moderate involvement conditions, respectively). Response latencies in the evaluation of the filler products of the computerised task ranged from 0.748 to 2.765 seconds (mean response latency across all filler products 1.464 seconds, SD = 0.422). Subjects in the high and moderate involvement condition did not differ significantly in their mean response latencies to the filler products (mean response latency across all filler products 1.399, SD = 0.421 versus 1.529, SD = 0.420 for the high and moderate involvement groups, respectively).

Table 5.1 presents the means and standard deviations of raw response latencies to the experimental product and to the filler products of the advertising booklet (filler products are presented in the table in the same order in which they were presented in the computerised task). As mentioned in the previous section, response latencies to the four filler advertised products were not used in the computation of the experimental product's attitude accessibility. Inspection of these latencies, however, indicates that subjects in the high involvement condition consistently reported their attitudes towards these products faster than subjects in the moderate involvement condition. Nevertheless, no comparisons can be performed on these untransformed latencies as they concern products which, unlike the experimental product, might considerably differentiate subjects in their pre-existing level of involvement (which might interact

¹ Although significant, the relatively small differences in these means also suggest that the distinction should be drawn between high and moderate, rather than low, involvement.

with the experimental instructions) and, therefore, cannot be used in drawing any inferences. The relatively slow response latency to the product (of the advertising booklet) presented first in the computerised task might be attributed to subjects' unawareness that this task also concerned their evaluation of the products they had previously seen advertised.

Table 5.1. Means and standard deviations of response latencies (in seconds) to the experimental product and to the filler advertised products for the high and moderate involvement groups

	High involvement		Moderate involvement	
	Mean	SD	Mean	SD
Experimental product	1.178	0.455	1.529	0.630
1st product (personal stereo)	2.037	1.130	2.114	1.119
2nd product (washing machine)	1.542	0.713	1.807	0.659
3rd product (swimming suit)	1.397	0.610	1.781	1.261
4th product (pain killer)	1.266	0.413	1.553	0.596

As can be seen in Table 5.1, subjects in the high involvement condition reported their attitudes towards the experimental product faster than subjects in the moderate involvement condition. A comparison of the (transformed and corrected) attitude accessibility scores revealed that high involvement subjects' attitudes were more accessible than moderate involvement subjects' attitudes ($t(60) = -2.5, p < .01$). Because previous research has shown attitude accessibility to be strongly related to attitude extremity (the distance of an attitude from the middle of the scale) and because the two variables were found to be substantially, though not significantly, correlated (r

= .21), an analysis of covariance was also carried out in order to examine the impact of involvement on accessibility, when controlling for the effect of extremity. This analysis showed that involvement had a significant main effect on accessibility ($F(1, 59) = 5.67, p < .05$), whereas attitude extremity was not a significant covariate. These results support the hypothesised effect of involvement on attitude accessibility and indicate that high involvement during attitude formation enhances the readiness with which attitudes are retrieved from memory.

5.2.4 Discussion

The present study was designed to examine the role of involvement, a determinant of the process through which attitudes are formed, in the model of automatic attitude activation (Fazio, 1986) and, in particular, the impact of the variable on attitude accessibility. According to the model of automatic attitude activation, attitude accessibility, which reflects the strength of the object-evaluation link in memory, moderates the consistency between attitudes and behaviour by determining the readiness with which an attitude is retrieved from memory. The present study, conducted in a persuasion framework, viewed involvement and accessibility as two dimensions of attitude strength and tested the hypothesis that the level of involvement with a persuasive message (as a motivational factor determining the extent of elaboration during attitude formation) determines the accessibility of resulting attitudes. The findings of the study supported the hypothesis and indicated that high involvement increases attitude accessibility. These findings are consistent with previous research concerned with the impact of involvement on attitude formation and change (Petty and

Cacioppo, 1986) and support the suggestions of the elaboration likelihood model of attitude strength (Petty *et al.*, 1995) regarding the effects of motivational factors on immediate determinants of attitude strength.

One mechanism through which involvement might influence attitude accessibility is by determining the strength of the object-evaluation association. According to the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986), when an individual is involved with a persuasive message, he/she is motivated to form an accurate judgement of the information and, therefore, is more willing to devote cognitive effort in processing the content of the message. The process of elaborating on message arguments involves accessing the related attitude schema repeatedly in order to evaluate each new argument (e.g. by comparing it to information previously stored in memory). When an attitude is formed through the peripheral route, the schema may be accessed only once to incorporate the affect or inference elicited by a salient peripheral cue. According to Petty and Cacioppo (1986), when a message recipient scrutinises and elaborates on a message, the underlying 'attitude schema may be accessed, rehearsed, and manipulated more times, strengthening the interconnections among the components and rendering the schema more internally consistent, *accessible*, enduring and resistant than under the peripheral route' (p. 176, italics added).

At a more basic level of explanation, it is possible that less involved message recipients are not only insufficiently motivated to form an accurate evaluation of persuasive information but, in fact, are insufficiently motivated to form any evaluation of the information. Relevant to this idea is the *attitude-nonattitude* distinction (Converse, 1970; or continuum; Fazio, 1989) which is based on the observation that a

person may respond to an attitudinal query even though that particular attitude does not exist *a priori* in the individual's memory. It is possible that uninvolved message recipients do not shape an attitude during message exposure and, therefore, have to create one (i.e. to retrieve and consider relevant information from memory) at the point of the attitudinal query. The time that elapses between exposure to information and attitude formation should cause some of the information to become inaccessible from memory. Thus, an attitude created after, rather than during, exposure to information should be based on less information and hence on less cognitive manipulations. Consequently, the object-evaluation association should be weaker and the attitude less accessible.

This explanation is particularly apt in the present study, in which high involvement subjects were explicitly instructed to form an evaluation of the experimental product. Moderate involvement subjects did not receive similar instructions and presumably had no reason to evaluate the products presented in the advertising booklet. They therefore had to create an attitude or, in Fazio's (1989) terms, to move on the continuum from a nonattitude to an attitude, only when they were asked for one (i.e. when completing the questionnaire) and on the basis of whatever information they could retrieve. This process of attitude formation should reduce attitude accessibility. Such an explanation does not contradict the basic findings of the elaboration likelihood model of persuasion. It is possible that uninvolved individuals base their attitudes on peripheral information because this information is more easily retrieved at a later point in time (i.e. when an attitude is required). Peripheral cues typically concern some simple, general characteristics of the message

(e.g. length, source) which should be easier to retrieve from memory than complex argumentation.

The above argument makes more sense in the message dense context of everyday life. For example, do people evaluate all the products they see advertised? It seems most likely that they do not, unless they have a permanent or temporary interest in the product or unless there is something in the product (e.g. innovation) or in the executional cues of the advertisement that prompts them to. However, when one needs to use a product attitude (e.g. in a future purchase situation), one may then create one on the basis of information available in memory.

The results of the study indicate that involvement acts as an antecedent of attitude accessibility and that high levels of involvement increase the ease with which attitudes are retrieved from memory. These results suggest that involvement plays an important part in the automatic activation of attitudes. Since high involvement enhances attitude accessibility, it should also increase the likelihood that an attitude is spontaneously activated to influence behaviour. These findings have important implications for advertising practice, as they offer a suggestion as to how advertising might be more effective in producing product and brand attitudes that are capable of automatic activation at the point of purchase. The findings suggest that increasing consumers' motivation to elaborate on advertising messages enhances product attitude accessibility. It is, therefore, in the interest of advertisers to increase consumers' advertising message involvement. In the present study, high levels of advertising message involvement were induced by the experimental instructions. However, such heightened levels of advertising message involvement are expected to occur in more

natural settings as a result of high levels of product involvement or purchase involvement.

Enhancing product and purchase involvement is one possible way to enhance involvement with an advertising message. However, little can be done to increase these types of involvement, as they depend on individuals' values, interests, consumption needs etc. Yet, it is exactly in low involvement situations (e.g. concerning trivial, low-risk products and 'small', routine purchases) that attitude accessibility becomes of particular importance, as such situations are more likely to be associated with automatic, unconscious attitude activation (Herr and Fazio, 1993). It is in such situations that product attitudes need to be accessible in order to influence purchase behaviours.

Research indicates that certain executional cues of an advertisement can enhance advertising message involvement, irrespective of pre-existing levels of product or purchase involvement and thereby increase consumers' motivation to process product information (see MacInnis, Moorman and Jaworski, 1991). For example, rhetorical questions (versus declarative statements) asking recipients to think for themselves (e.g. to evaluate the brand, to consider its benefits or to compare it with other brands; Burnkrant and Howard, 1984; Swasy and Munch, 1985), message sources similar to the recipient (Rossiter and Percy, 1983) and fear appeals (Sternthal and Craig, 1974) all increase cognitive responses to an advertisement. Further, enhancing curiosity about the brand (e.g. surprise or suspense; Stewart and Furse, 1986; incongruity between brand attributes and product category schema; M. J. Houston, Childers and Heckler, 1987; humour; Lammers, Liebowitz, Seymour and Hennessey, 1985) and illustrating brand attributes in the form of a story (Deighton,

Romer and McQueen, 1989) also increase motivation to process brand information. Since the utilisation of such cues increases involvement and processing effort, it should also enhance brand attitude accessibility.

Alternatively, however, brand attitude accessibility can be enhanced by means other than extensive elaboration of advertising claims. For example, Herr and Fazio (1993) suggest that the use of multiple explicit product evaluation statements throughout the advertisement (Powell and Fazio, 1984), repeated advertising exposure (Berger and Mitchell, 1989), the use of empathy (e.g. inducing consumers to imagine how it would feel to use the product; Fazio, Zanna and Cooper, 1978) and actual product trial (versus advertising exposure; Berger and Mitchell, 1989) also increase attitude accessibility.

The results of the present study support the hypothesised relationship between involvement and attitude accessibility and provide corroboration for the elaboration likelihood model of attitude strength. However, the use of a single product category and the use of a convenience student sample limit the generalisability of findings. Further research, involving other products and other kinds of attitudinal objects (e.g. social issues) and using more representative samples, is required before findings can be generalised. In addition, future research should examine the explanations offered here for the effect of involvement on attitude accessibility, i.e. the specific mechanisms that underlie this effect.

5.3 Summary of Chapter 5

The study presented in this chapter concerned the role of involvement within the model of automatic attitude activation (Fazio, 1986). According to this model, the likelihood that an attitude is retrieved from memory to influence behaviour in a spontaneous and effortless way depends on attitude accessibility. The elaboration likelihood model of attitude strength (Petty *et al.*, 1995) postulates that attitude accessibility depends on the extent of information scrutiny during attitude formation. The study examined the hypothesis that involvement functions as a motivational factor determining the extent of elaboration during attitude formation and, thus, serves as an antecedent of attitude accessibility. The results supported this hypothesis and indicated that high involvement enhances accessibility. These findings show that involvement plays an important part in automatic attitude-to-behaviour processes. By increasing attitude accessibility, involvement should also increase the likelihood that an attitude is capable of influencing behaviour spontaneously and without any effortful thinking from the part of the individual. The findings of the study might also suggest that, at least in the case of automatic attitude-to-behaviour processes, the moderating impact of involvement on the attitude-behaviour relation might be mediated by attitude accessibility. However, it is also possible that the influence of involvement on attitude-behaviour consistency is partly independent from that of accessibility (i.e. mediated by other strength related factors). Additional research in non-persuasive, naturalistic contexts, including measures of actual behaviour, is necessary to provide more valid evidence concerning the relationship between involvement and attitude accessibility and the influence of these factors on attitude strength.

CHAPTER 6

The relationship between involvement,
attitude accessibility
and attitude-behaviour consistency

6.1 Introduction

Study 1 (Chapter 5) examined the impact of involvement on attitude accessibility and showed that high involvement during attitude formation enhances accessibility. The study presented in this chapter extends the findings of Study 1 by examining the relationship between involvement and attitude accessibility in a non-persuasive context and the combined influence of these variables on attitude strength. The investigation is conducted in a consumer product choice context. Following the predictions of the elaboration likelihood model of attitude strength (Petty, Haugtvedt and S. M. Smith, 1995) it is hypothesised that high product involvement is associated with more accessible product attitudes, and that the moderating effect of involvement on attitude-behaviour correspondence is, at least partly, independent from that of accessibility.

6.2 Study 2: Involvement and attitude accessibility as dimensions of attitude strength

6.2.1 Introduction

As has already been discussed (Chapter 4, part I), Fazio's model of automatic attitude activation (Fazio, 1986, 1989; Fazio, Powell and Herr, 1983) views attitudes as associations between objects and evaluative summaries stored in memory (Fazio, Chen, McDonel and Sherman, 1982). The strength of the object-evaluation association is assumed to be reflected in the chronic accessibility of attitudes (the speed or ease of

retrieval of an attitude from memory). Attitude accessibility is an important moderator of attitude-behaviour consistency; highly accessible attitudes are more predictive of behaviour than attitudes that are less readily retrieved (e.g. Fazio, Powell and Williams, 1989; Fazio and Williams, 1986).

Recent conceptualisations integrate attitude accessibility and other moderators of the attitude-behaviour relation (e.g. involvement with the attitude object (Petty, Cacioppo and Schumann, 1983; Shavitt and Brock, 1986; Sivacek and Crano, 1982), direct experience with the attitude object (Fazio and Zanna, 1981; Regan and Fazio, 1977), attitude importance (Krosnick, 1988b), attitude certainty (Fazio and Zanna, 1978), attitude extremity (Judd and J. T. Johnson, 1981) and amount of knowledge about the attitude object (Davidson, Yantis, Norwood and Montano, 1985)) as dimensions of attitude strength (Krosnick and Petty, 1995; Raden, 1985). However, as in most studies strength related factors and their consequences have been examined in isolation, their interrelations and their combined influence on the attitude-behaviour link are not yet clear.

Fazio (1989) suggests that strength related variables might exert their moderating effect on attitude-behaviour consistency through their relation to attitude accessibility. In other words, such variables might influence accessibility which, in turn, regulates attitude-behaviour consistency. Such a conceptualisation views attitude accessibility as a central moderator of attitude-behaviour correspondence, mediating the moderating influence of other variables. Research has demonstrated a link between attitude accessibility and certain other variables. For example, direct experience with the attitude object enhances the accessibility of an attitude (Fazio *et al.*, 1982; Fazio *et al.*, 1983) and low self-monitoring individuals hold more accessible attitudes (Kardes,

Sanbonmatsu, Voss, and Fazio, 1986). Similarly, attitudes that people perceive as important are more accessible than unimportant attitudes and attitude importance is a significant predictor of attitude accessibility (Krosnick, 1989; see also Krosnick 1988b; but see Roese and Olson, 1994).

Fazio's suggestions are consistent with the elaboration likelihood model of attitude strength (Petty *et al.*, 1995). This model posits that motivational factors, such as the perceived personal relevance and importance of an attitude object (and ability factors, such as lack of distraction), determine the extent of cognitive elaboration of information during attitude formation. Cognitive elaboration has a causal impact on four more proximal determinants of attitude strength: attitude accessibility, knowledge about the attitude object, attitude certainty/confidence and structural consistency of the attitude. In other words, the model asserts that high involvement with an attitude object leads to more extensive elaboration which results in attitudes that are more accessible and structurally consistent, are held with greater certainty/confidence and are associated with more extensive object-related knowledge. These attitudes, in turn, are more consequential.

Study 1 (Chapter 5) demonstrated that the level of involvement with a persuasive message determines attitude accessibility; attitudes formed under high involvement are more accessible than attitudes formed under lower levels of involvement. It is possible that extensive elaboration during attitude formation is not the only mechanism through which high involvement might enhance attitude accessibility and that involvement might still influence accessibility once attitudes have been formed. For example, involvement is also associated with the frequency with which people think about and discuss issues and objects (e.g. Howard-Pitney, Borgida

and Omoto, 1986; Lavine, Sullivan, Borgida and Thomsen, 1996). Involved individuals often think and talk about the attitude object, their attitudes are therefore more frequently activated in the course of social interaction. Frequent attitude activation enhances accessibility (Fazio *et al.*, 1982; Powell and Fazio, 1984). In fact, operationalisations of attitude accessibility often employ self-reports of how often one thinks or talks about an attitude object (e.g. Krosnick, Boninger, Chuang, Berent and Carnot, 1993). In addition, the accessibility of an attitude depends on its salience (Higgins and G. A. King, 1981). Among the numerous attitudes that an individual holds at any time, those concerning personally significant, involving objects are more salient and distinct and, thereby, more accessible. Previous research conducted in non-persuasive contexts, has shown attitude accessibility to be a function of attitude importance (the extent to which individuals care about an attitude), a concept closely related to involvement (Krosnick, 1989; see also Krosnick 1988b; but see Roese and Olson, 1994).

The objective of the present study is twofold: first to examine the relationship between involvement and attitude accessibility in a non-persuasive, non-experimental context; second to examine the combined impact of both variables on attitude strength (i.e. the magnitude of the attitude-behaviour relation). Previous research has not examined the simultaneous impact of involvement and accessibility on attitude-behaviour consistency and, therefore, the combined influence of the variables on the predictive value of attitudes is unclear. Following the suggestions of Fazio (1989), one would expect the moderating influence of involvement on attitude-behaviour consistency to be fully mediated by accessibility. However, according to the elaboration likelihood model of attitude strength, the moderating impact of involvement should

also be mediated by other factors (i.e. amount of knowledge about the attitude object, attitude certainty/confidence, structural consistency) and, therefore, one would expect the impact of involvement to be, at least partly, independent from that of attitude accessibility.

The study, following Fazio *et al.* (1989), is conducted in a consumer product choice context. In this context, involvement refers to the (relatively stable over time) perceived importance and personal relevance of a product category, a conceptualisation resembling M. J. Houston and Rothschild's (1978) enduring product involvement. Under this conceptualisation, involvement is viewed as an individual difference variable. In other words, it is the personal meaning or significance that an individual attributes to a product category that precedes and generates involvement (Zaichkowsky, 1985). A distinction can be therefore drawn between involved and uninvolved individuals. Product involvement is a motivational variable reflecting the amount of interest evoked by a product category (Mitchell, 1979). The cognitive effort individuals expend when processing product related information, the extent of information search and the frequency with which they think and talk about this product category, all reflect this underlying motivation.

Because of the motivational nature of involvement and in accordance with the findings of Study 1 (Chapter 5) and with Krosnick's (1989) findings, I expect that involvement with the more general, underlying product category will be reflected in the ease of retrieval of product attitudes and that more involved individuals will hold more accessible attitudes than less involved individuals. Also, consistent with previous findings (e.g. Petty *et al.*, 1983), I expect individuals who perceive a product category as important and relevant to themselves to demonstrate more attitude-consistent

product choice behaviour than individuals who view the product category as uninvolved and trivial. I also expect more accessible product attitudes to be more predictive of subsequent behaviour than less accessible attitudes (e.g. Fazio *et al.*, 1989). Further, following the predictions of the elaboration likelihood model of attitude strength, I expect the impact of involvement on attitude-behaviour consistency to be partly independent from that of attitude accessibility. Although the model does not include a direct path from involvement to attitude-behaviour consistency, it asserts that other factors, apart from attitude accessibility (i.e. knowledge about the attitude object, attitude certainty/confidence and attitude structural consistency) also intervene to mediate the impact of involvement on the strength of the attitude-behaviour link.

6.2.2 Method

Subjects

Ninety students at the University of London participated in the study. Thirty-six (40 per cent) of the subjects were male and 54 (60 per cent) were female. They ranged in age from 18 to 47 years (mean age 22.24 years, SD = 5.11). Seventy-six (84 per cent) of the subjects were undergraduate students and 14 (16 per cent) were postgraduate students. The vast majority of subjects were psychology students (63 subjects, 70 per cent). The remaining subjects came from a wide range of backgrounds including humanities (5 subjects, 6 per cent), geography (4 subjects, 4 per cent), engineering (4 subjects, 4 per cent) and economics (3 subjects, 3 per cent). All subjects were recruited by means of advertising notices and classroom announcements. In order to obtain a behavioural measure, subjects were falsely informed that they would receive a number

of products of their choice as a compensation for participating in the study. All subjects were paid £4 for their participation.

Product selection

A number of criteria were used in selecting product categories and products for the study. Product categories were sought that would (a) be familiar to the subjects, (b) provide a measurable and realistic behavioural opportunity, and (c) differentiate respondents in their level of product involvement within each category. Three product categories were thought to satisfy these criteria: soft-drinks, beer and chocolate bars. Although a number of other product categories were expected to generate a wider range of involvement levels across respondents, they were not selected because of anticipated difficulties in obtaining a behavioural measure. In particular, a behavioural manipulation employing more expensive products that might more strongly differentiate respondents in their level of involvement, would have been unrealistic. For example, it would have been difficult to convince respondents that they would receive a durable, technical product (e.g. car, computer) as a gift for participating in the study. In addition, because of the trivial nature of the selected product categories, product choice involving these categories was thought to be most likely to be guided by subjects' spontaneous activation of their overall evaluation of each product (as opposed to careful consideration of product attributes) and, therefore, to involve spontaneous attitude activation and to provide an appropriate context for the study of the effects of attitude accessibility (see Fazio *et al.*, 1989).

Preliminary study

In order to ensure that target products from each product category would be familiar to respondents and to avoid potential confounding of involvement with variables such as product knowledge, familiarity and direct experience, a preliminary study was conducted with a similar sample. Subjects in the pretest study were 22 second year undergraduate Psychology students at University College London (14 female, mean age 21 years). They were asked to provide six familiar brands from each product category, to rate their degree of familiarity with them (on 7-point scales ranging from very familiar (7) to very unfamiliar(1)) and to indicate whether they had tried them in the past. Six of the most frequently mentioned, most familiar and most frequently tried brands from each product category were selected to serve as target products. Caution was taken to ensure that target products within each category were of similar value. The actual list of products presented to the subjects consisted of 18 target products (see Appendix B) and 60 filler (common, everyday) products.

Procedure

Following a procedure similar to that of the Fazio *et al.* (1989) study, subjects were informed that their initial task would be to report their attitude towards a number of products on a computer. The order in which product names were presented was randomised across subjects by the computer programme controlling the experiment. Micro Experimental Laboratory (MEL) 1.0 was used for the development of this programme. A dichotomous response (like/dislike) was obtained by instructing subjects to press one of two keys on the computer keyboard (labelled as +/-) that best represented their feelings towards the product presented on the computer screen. For

half of the subjects the order in which keys were labelled was reversed. It was emphasised that they should 'respond as quickly and, most importantly, as accurately as possible'. A three second interval separated each trial. Both responses and response latencies were recorded. To familiarise subjects with the procedure, a series of 10 practice trials, involving different products to those used in the experimental list, preceded the presentation of the target and filler items. After the computerised task, participants completed a questionnaire containing measures of involvement and product attitudes.

Completion of the questionnaire was followed by the choice behaviour. Subjects were asked to select three products from each product category to later receive as a gift for participating in the study. The names of all 18 products were grouped by product category and were presented on a sheet of paper. Subjects were asked to indicate their three most preferred products from each product category by placing a number (1-3, in order of preference) next to the product name.

At the end of the session the purpose of the study and of the behavioural manipulation were explained to the subjects and they received the experimenter's apologies for not receiving a gift. They were also asked not to talk to their fellow students about what the study involved.

Questionnaire design and measures

The first part of the questionnaire assessed product involvement using Zaichkowsky's (1985) Personal Involvement Inventory (PII). The reported problems of the PII concerning required level of vocabulary (Munson and McQuarrie, 1987) were thought to be irrelevant in the present study, as it involved a student population. The scale

consists of 20 7-point bipolar items scored from 7 to 1 (e.g. important/unimportant, of concern to me/of no concern to me, interesting/uninteresting; see Appendix C; for certain items scoring is reversed), and is not product specific and thus is suitable to assess involvement across different products. A single index of product *involvement* for each product category was computed as the sum of these items (Cronbach's alpha = .95, .97 and .96, for soft-drinks, beer and chocolate bars, respectively). The next section concerned attitude measurement. Product attitudes were measured with two 7-point scales ranging from 'good' (7) to 'bad' (1) and from 'like' (7) to 'dislike' (1). Responses were averaged to comprise a single index of product *attitude* (Cronbach's alpha = .90 across all target products). Demographic information was obtained in the last part of the questionnaire.

Because target response latencies were positively skewed and because inter-item correlations among the 18 response latencies were substantial (average $r = .18$), all analyses were performed on the reciprocal transformation of the raw latencies ($1/(1+x)$) and after correcting for individual differences in average latency to respond. Product *attitude accessibility* was therefore operationalised as the difference between the reciprocal target response latency and the reciprocal mean response latency to the filler items (Berger, 1992; Fazio, 1990b).

Subjects' listing of preferred products was used as a proximal measure of *behaviour*¹. Each subject's most preferred product from each product category was

¹ Although this measure did not comprise of literal product selection I perceive it as a measure of behaviour, rather than of behavioural intention. When listing their preferences subjects were convinced that they were selecting the products they would actually receive, rather than indicating what products they intended to later select.

assigned a value of three and their second and third choice were assigned a value of two and one, respectively. The remaining, non-selected, products were assigned a value of zero.

6.2.3 Results

Mean product involvement across all product categories was 71.85 (mean SD = 27.2). Specifically, mean product involvement with soft drinks was 69.34 (SD = 23.99), while product involvement with beer and chocolate bars was 68.35 (SD = 30.06) and 77.84 (SD = 27.10), respectively. Mean response latency across all target products was 1.373 seconds (mean SD = 0.825). Mean response latency across soft drinks was 1.413 seconds (SD = 1.012), while mean latency across beer and chocolate bars was 1.402 seconds (SD = 0.769) and 1.305 seconds (SD = 0.650), respectively. In order to enhance the statistical power of the analyses and because all products and product categories were of a similar nature (i.e. common, inexpensive and frequently consumed products), in most of the following analyses, the data were collapsed across product category and product and, therefore, 18 (products) times 90 (subjects) observations were used. Any particular data point where an inconsistency between a subject's attitudinal response in the computerised task and the subsequent response in the questionnaire had occurred was excluded from the analysis (average error rate 3.4 per cent). Neutral responses in the questionnaire were not considered as inconsistent. Attitude accessibility and attitude extremity (i.e. the distance of an attitude from the middle of the scale) were significantly positively correlated. Mean correlation of extremity with accessibility across all target products was .22 ($p < .001$).

To allow for more detailed analyses, whenever necessary, accessibility scores were divided into two groups, high and low. In order to control for the effect of attitude extremity, this grouping procedure was performed separately for extreme (attitude scores above 5 or below 3) versus medial attitudes. The median of the accessibility variable was computed separately for each extremity group (and for each product) and subsequently, accessibility scores were divided on the basis of these medians (see Fazio *et al.*, 1989). Further, involvement scores were divided into two groups, high and low, on the basis of median-splits of the variable (for each product category).

Across all observations, highly involved subjects reported their attitudes faster than less involved subjects (mean response latencies 1.338 seconds and 1.382 seconds, respectively). In order to examine the relation of involvement with accessibility and to eliminate the effect of extremity, accessibility was regressed on involvement after the effect of extremity had been partialled out. Involvement was found to be a significant, albeit weak, predictor of accessibility ($\beta = .05$, $t = 2.09$, $p < .05$). A closer look at mean response latencies for the high and low involvement groups (Table 6.1) reveals that for thirteen of the eighteen target products attitudes were reported faster by more involved than by less involved subjects. However, attitude accessibility differences reached significance on very few occasions.

In order to examine the moderating impact of involvement and accessibility on attitude-behaviour consistency, moderated regression analyses were used (see Baron and Kenny, 1986). Behaviour was regressed on the interaction of attitude by involvement, after the effect of attitude and involvement had been partialled out. The results supported the hypothesised moderating role of involvement ($\beta = .22$, $t = 2.59$, p

< .01) and indicated that high involvement tends to increase the impact of attitudes on behaviour. To further explore this moderating effect, attitude-behaviour correlations were calculated for the high and low involvement groups. Behaviour was more consistent with attitudes in the case of the high involvement group ($r = .51, p < .001$) than in the case of the low involvement group ($r = .43, p < .001; z = 2.30, p < .05$).

Table 6.1. Mean response latency (in seconds) per target product for the high (HI) and low involvement (LI) groups

	Soft drink		Beer		Chocolate bar	
	HI	LI	HI	LI	HI	LI
Product 1	1.340	1.349	1.317	1.293	1.098	1.210
Product 2	1.442	1.463	1.396	1.502	1.265	1.306
Product 3	1.247	1.547	1.363	1.217	1.190	1.348 ^b
Product 4	1.388	1.527	1.496	1.127 ^a	1.293	1.339
Product 5	1.360	1.377	1.434	1.252	1.266	1.568 ^c
Product 6	1.300	1.604	1.569	1.427	1.359	1.413

Note. Comparisons refer to the accessibility variable and not to raw response latencies.

^a $t(84) = 2.57, p < .01$

^b $t(88) = -2.39, p < .01$

^c $t(88) = -2.87, p < .01$

To examine the unconfounded moderating role of accessibility on attitude-behaviour consistency and to simplify the moderated regression analysis, accessibility was regressed on extremity (separately for each product) and the residuals of this analysis were subsequently used. Behaviour was regressed on attitude and on the residual (of the accessibility on extremity regression), and the interaction of attitude by

residual was entered in a subsequent step. Again the results supported the hypothesis: the interaction term was positive and significant ($\beta = .11$, $t = 2.06$, $p < .05$) suggesting that more accessible attitudes were more predictive of behaviour. To further explore this moderating effect, attitude-behaviour correlations were calculated for the high and low accessibility groups. Attitude-behaviour correlation was higher for the high accessibility ($r = .52$, $p < .001$) than for the low accessibility group ($r = .41$, $p < .001$; $z = 2.53$, $p < .05$).

The relatively weak relationship between involvement and accessibility suggested that the impact of the former variable on attitude-behaviour consistency would be unmediated by accessibility. Indeed, involvement was found to moderate attitude-behaviour consistency even after controlling for the moderating effect of attitude accessibility. The attitude by involvement term was significant, even when entered into the regression equation after the attitude by residual term ($\beta = .23$, $t = 2.72$, $p < .01$).

In order to examine the overall, combined effect of the variables on the attitude-behaviour relationship and to check for any interaction effects between involvement and accessibility, behaviour was regressed on the interaction of attitude by involvement by residual, after the effect of all variables and their two-way interactions had been partialled out. As can be seen in Table 6.2, involvement and accessibility did not interact to moderate the impact of attitudes on behaviour. Attitude-behaviour correlations per involvement and accessibility subgroups also indicate that the impact of both variables was additive. Mean attitude behaviour correlations were .51, .47, .47, and .35 for the high involvement high accessibility, high involvement low accessibility,

low involvement high accessibility, and low involvement low accessibility groups, respectively.

Table 6.2. Regression of behaviour on attitude, involvement, residual, attitude by involvement, attitude by residual, and attitude by involvement by residual

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
				.49	.24	88.46 ***
Attitude	.22	.39	6.77 ***			
Involvement	-.01	-.29	-5.42 ***			
Residual	-789.07	-.19	-3.22 ***			
Attitude by involvement	.00	.24	2.79 **			
Attitude by residual	186.87	.24	2.12 *			
Attitude by involvement by residual	-.56	-.06	-.80			

* $p < .05$; ** $p < .01$; *** $p < .001$

6.2.4 Discussion

The present study examined the relationship between involvement and attitude accessibility and the moderating role of these factors in the consistency between attitudes and behaviour. High levels of involvement were associated with more accessible attitudes and highly involved respondents were found to behave in a more attitude-consistent way. Further, more accessible attitudes were more predictive of behaviour than less accessible attitudes. The combined influence of involvement and accessibility on attitude-behaviour consistency was additive.

Recent conceptualisations view attitudes as associations between an object and its evaluation stored in memory (Fazio, 1986). The strength of this association is reflected in the accessibility of an attitude. Factors that strengthen the object-evaluation association should also enhance attitude accessibility. Involvement determines the extent of elaboration during attitude formation or change and, through that, the accessibility of an attitude (see Study 1, Chapter 5). Involved individuals, while processing information, access and rehearse their attitude schema many times, in order to evaluate each new argument, 'strengthening the interconnections among the components and rendering the schema more internally consistent, accessible, enduring and resistant' (Petty and Cacioppo, 1986, p.22). Because uninvolved individuals do not engage in such extensive processing their attitudes are less likely to be strengthened and to become more accessible. Further, as has already been discussed, involvement enhances attitude accessibility by increasing the salience of an attitude (Higgins and G. A. King, 1981) and the frequency with which people think and talk about the attitude object (Howard-Pitney *et al.*, 1986). For example, consumers are more likely to frequently think and talk about products they consider important and personally relevant. Their attitudes are more likely to be frequently activated and thereby to become more accessible. In addition, the personal relevance and importance of an involving product category should enhance the salience of product attitudes, i.e. in relation to attitudes concerning products perceived as unimportant and trivial.

Although previous research has not revealed large differences in accessibility measures as a function of motivational factors (e.g. attitude importance, Krosnick, 1989), the results concerning the relationship between involvement and accessibility were weaker than expected. One factor that might account for this weakness is the fact

that the present study was designed to eliminate possible confounding of involvement with other attitude variables (e.g. to ensure that all subjects had direct experience with the attitude objects). In this sense, the present findings reflect the direct relationship of involvement and attitude accessibility, although the possibility of an indirect influence cannot be ruled out. For example, involvement is associated with direct experience with the attitude object. Some theorists consider direct experience as a critical indicator of involvement (e.g. Fazio and Zanna, 1981) and direct experience has been shown to determine attitude accessibility (Fazio *et al.*, 1983). It is possible, thus, that involvement might further influence attitude accessibility through direct experience and, therefore, the relationship between involvement and accessibility may be stronger than that observed in the present study. A second factor that might be responsible for the weakness of findings is the small variance of product involvement across individuals which did not reach the anticipated levels and, in fact, was quite smaller than that reported in previous applications of the PII (e.g. Zaichkowsky, 1985). It is possible that in the case of products or other attitudinal objects polarising individuals in their degree of involvement, the relationship between involvement and attitude accessibility would be enhanced.

In line with Fazio's (1986) model and with the elaboration likelihood model (Petty and Cacioppo, 1986), high accessibility and high involvement were associated with more attitude-consistent behaviour. In contrast with Fazio's (1989) suggestions, however, the moderating influence of involvement was unmediated by attitude accessibility, a finding that might be explained by the weak relationship between the two variables. The elaboration likelihood model of attitude strength (Petty *et al.*, 1995) views attitude accessibility as a central moderator of attitude strength along with other

factors, such as knowledge about the attitude object and certainty/confidence with which an attitude is held. High involvement promotes information search and hence increases the amount of knowledge about the attitude object (Berent and Krosnick, 1992), which, in turn, enhances attitude-behaviour consistency (Davidson *et al.*, 1985). Further, because involved individuals base their attitudes on more and better processed information, they are more certain/confident about them (Laczniak and Muehling, 1993a) and thus more likely to act in a way that is consistent with them (Fazio and Zanna, 1978a, 1978b). It is possible, therefore, that the observed independent effect of involvement on attitude-behaviour consistency was in fact mediated by such factors, rather than being direct.

In summary, the results of the study indicate that involvement is positively related to attitude accessibility and that both these variables moderate attitude-behaviour consistency in an additive manner. However, the present research is not without limitations. Such limitations include the use of self-reported measures of most variables, the correlational nature of the data and the use of a convenience student sample. Further research examining the interrelations between the variables, employing diverse attitude objects and more representative samples is required before these findings can be generalised. An interesting direction for future investigations would be the examination of the relationship between involvement, accessibility and attitude-behaviour consistency in the case of attitudinal objects more strongly differentiating individuals in their level of involvement.

6.3 Summary of Chapter 6 and conclusions

The study presented in this chapter extended the findings of the first study (Chapter 5) by examining the relation between involvement, attitude accessibility and attitude strength in a non-persuasive, non-experimental context. The results of the study indicate that involvement and accessibility are positively related, yet they exert an independent influence on attitude-behaviour correspondence. Together the findings of Study 1 and Study 2 provide support for the first and second main hypotheses of this thesis and indicate that involvement and accessibility constitute two distinct but interrelated dimensions of attitude strength. These findings also suggest that involvement plays an important part in situations of spontaneous attitude activation. High involvement produces more accessible attitudes that are more likely to be automatically activated to influence behaviour than low involvement attitudes. The observed independent effect of involvement on the attitude-behaviour link, however, suggests that involvement might also increase the likelihood of automatic attitude activation independently of attitude accessibility. It remains unclear and open to future investigations whether the independent effect of involvement on attitude-behaviour consistency is direct or mediated by factors such as attitude certainty/confidence, structural consistency and knowledge about the attitude object as the elaboration likelihood model of attitude strength (Petty *et al.*, 1995) postulates.

CHAPTER 7

The moderating role of involvement
within the theory of planned behaviour:
The prediction of behavioural intention

7.1 Introduction

This chapter is concerned with the role of involvement within the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991). Unlike Fazio's (1986) model of automatic attitude activation, these theories view the attitude-behaviour sequence as a conscious and thoughtful process and integrate attitudes and other factors as determinants of social behaviour. The study presented in the following sections investigates the moderating influence of involvement on the relative importance of attitudes, subjective norms and perceived control in the formation of behavioural intentions. On the grounds that involvement determines attitude strength, it is expected that high levels of the variable enhance the impact of attitudes, relative to that of subjective norms and perceived control, on intentions. In addition, the study examines the predictive value of perceived control and past behaviour in the context of an infrequently performed behaviour that is associated with strong problems of behavioural control. More specifically, the theories of reasoned action and planned behaviour are applied in the prediction of intentions to buy an expensive, durable consumer product. It is expected that high product involvement is associated with an increase in attitudinal impact and a decrease in normative and control impact on purchase intentions. It is also expected that perceived control, unlike past behaviour, improves the prediction of intentions over attitudes and subjective norms.

7.2 Study 3: The moderating role of involvement in the prediction of intentions

7.2.1 Introduction

The theory of reasoned action (Ajzen and Fishbein, 1980; Fishbein, 1967; Fishbein and Ajzen, 1975; see Chapter 4, part II) views individuals as active information processors making systematic use of the information available to them in order to behave. Based on the assumption that most actions of social relevance are under volitional control, the theory views behavioural intention as the immediate determinant of behaviour (Ajzen and Fishbein, 1980). Intention, in turn, has two antecedents: attitude towards the behaviour, the individual's evaluation of the behaviour, and subjective norm, the individual's perception of social pressures put on him/her to perform or not to perform the behaviour. At a more detailed level, attitudes are determined by a set of behavioural beliefs, concerning the possible consequences of the behaviour, and by the evaluation of these beliefs, in an expectancy-value manner. Subjective norms are a function of a person's beliefs that specific referents (individuals or groups) think he/she should or should not perform the behaviour (normative beliefs) and his/her motivation to comply with these referents.

The theory of planned behaviour (Ajzen, 1985, 1991; Ajzen and Madden, 1986; Schifter and Ajzen, 1985; see Chapter 4, part II) was developed in order to broaden the range of behaviours that can be explained by the theory of reasoned action, to include those that are under incomplete volitional control. It extends the original model by

introducing perceived behavioural control as a third, conceptually independent determinant of intentions and behaviour. Perceived control refers to the perceived ease or difficulty of performing a target behaviour and is assumed to be based on a set of control beliefs, concerning control over factors implicated in the successful performance of the behaviour, and on the facilitating (or inhibiting) effect of these factors (Ajzen, 1989). According to the theory of planned behaviour, behaviour is the weighted sum of the influence of intentions and perceived control, while intentions are the weighted sum of the influence of attitudes, subjective norms and perceived control. Although several studies have demonstrated the value of perceived control in the prediction of intentions and behaviour (Beck and Ajzen, 1991; Madden, Ellen and Ajzen, 1992; Netemeyer, Burton and Johnston, 1991; for a review see Ajzen, 1991), other studies indicate that the inclusion of a control variable does not improve prediction over the components of theory of reasoned action (e.g. Fishbein and Stasson, 1990; Hinsz and Nelson, 1990).

Some investigators have questioned the sufficiency of the theory of reasoned action in predicting habitual behaviours and have suggested that behaviour can be more accurately predicted if past behaviour and habit are taken into account (Landis, Triandis and Adamopoulos, 1978; Triandis, 1977, 1980; Wittenbraker, Gibbs and Kahle, 1983). In addition, it has been suggested that past behaviour can also have an effect on intentions and, thus, influence behaviour indirectly (Bagozzi, 1981; Bagozzi, Baumgartner and Yi, 1992; Bentler and Speckart, 1979, 1981; Fredricks and Dossett, 1983). According to the theories of reasoned action and planned behaviour, past behaviour is reflected in attitudes, subjective norms and perceived control, as beliefs underlying these constructs are, at least in part, based on past experience. Nevertheless,

it is possible that frequently performed, overlearned behaviours are executed more or less automatically, without the mediation of cognitive variables (Triandis, 1977, 1980). In such cases, past behaviour should contribute independently to the prediction of later behaviour and, in fact, might be a stronger predictor than attitudes, subjective norms and perceived control. However, whether past behaviour should be added to the theories of reasoned action and planned behaviour as an additional variable is an issue that requires further investigation (Ajzen, 1991).

Although the theories of reasoned action and planned behaviour assert that the relative impact of attitudes, subjective norms and perceived control in the formation of intentions varies across different conditions, these conditions are not specified in the models. Research conducted within the theory of reasoned action has identified a number of factors that increase or decrease attitudinal and normative influence. Such factors include the type of the behaviour in question (i.e. attitudinally versus normatively controlled behaviours; Trafimow and Fishbein, 1994a, 1994b) and personality characteristics, such as state versus action orientation (Bagozzi *et al.*, 1992) and attention to social comparison information (Bearden and Rose, 1990).

The present study contributes to the identification of the conditions that determine the relative importance of attitudes, subjective norms and perceived control in the formation of behavioural intentions by examining the role of involvement, as a moderating factor, within the theory of planned behaviour. Several studies on the attitude-behaviour relation have shown that high involvement with an attitude object enhances attitude-behaviour (Krosnick, 1988b; Petersen and Dutton, 1975; Shavitt and Brock, 1986; Sivacek and Crano, 1982; Verplanken, 1989) and attitude-intention consistency (Petty, Cacioppo and Schumann, 1983). According to the elaboration

likelihood model of persuasion (Petty and Cacioppo, 1986), individuals for whom a certain attitude object is important and personally relevant engage in elaborate processing of related information, whereas individuals for whom the object is not personally relevant engage in limited processing. When an attitude is created or changed as a result of extensive processing, it is strong (i.e. is a good predictor of behaviour). In contrast, when an attitude is based on little thought, it is weaker and less influential.

The elaboration likelihood model of attitude strength (Petty, Haugtvedt and S. M. Smith, 1995) justifies the higher attitude-behaviour and attitude-intention consistency under high involvement conditions by the fact that attitudes that are based on extensive elaboration of information are easier to retrieve at a later stage, are more structurally consistent, are held with greater certainty/confidence and are based on larger amounts of information about the attitude object. For example, high involvement has been shown to increase attitude accessibility by increasing not only the extent of cognitive elaboration during attitude formation (see Study 1, Chapter 5), but also the frequency of attitude activation (Higgins and G. A. King, 1981; Krosnick, 1989; Lavine, Sullivan, Borgida and Thomsen, 1996). Further, involvement determines search and exposure to information (Bloch, Sherrell and Ridgway, 1986; Celsi and Olson, 1988; Zaichkowsky, 1985) and thus the amount of knowledge about the attitude object available in memory (Berent and Krosnick, 1992). In addition, because involved individuals base their attitudes on more and better processed information they are more certain and confident about them (Laczniak and Muehling, 1993a) and more likely to behave in accordance with them.

Although the impact of involvement on attitude-behaviour consistency has been the topic of several studies, the effect of the variable in the context of more complex models dealing with the causal impact of attitudes on behaviour has rarely been examined. A limited number of studies conducted within the framework of the theory of reasoned action have examined attitude-intention and subjective norm-intention correlations under different levels of involvement. Budd and Spencer (1984) used measures of attitude centrality, attitude certainty and latitude of rejection as indicators of involvement with the attitudinal act. All three variables were found to moderate the attitude-intention relation, correlations being higher in the case of subjects scoring highly on all three moderator variables. These investigators also measured the centrality and certainty of normative influence on intention and found that these variables moderated the subjective norm-intention relation, in a manner similar to that observed in the case of attitudes. However, the moderating impact of involvement with the attitudinal act on the subjective norm-intention relation was not examined in this study. Most studies concerned with the moderating influence of involvement with an attitude object on the relative importance of the components of the theory of reasoned action show that high involvement decreases subjective norm-intention correlations. In an investigation of intentions to do biotechnological research, Nederhof (1989) found a subjective norm-intention correlation of .74 under low involvement compared to .52 under high involvement, although no significant differences were observed in the case of the attitude-intention relation. In a study investigating crossover paths within the components of the theory of reasoned action, Oliver and Bearden (1985) found that the contribution of attitudes and subjective norms to the prediction of intentions to use an appetite suppressant in order to lose weight was moderated by respondents'

involvement with weight control. Attitude-intention and subjective norm-intention path estimates for high versus low involvement respondents were .69 versus .41 and .27 versus .33, respectively. Despite concerns regarding possible sampling bias (i.e. only individuals with weight loss concerns were selected to participate in the study) which should have the effect of restricting the variance of involvement from moderate to high levels, their findings too indicate that high involvement attenuates the impact of subjective norms on intentions.

The main objective of the present study is to examine the role of involvement within the theory of planned behaviour and, more specifically, the moderating role of product involvement in the relative impact of attitudes, subjective norms and perceived control on product purchase intentions. The present conceptualisation of involvement resembles enduring product class involvement, which refers to an ongoing, baseline concern with a product class and reflects (relatively stable over time) feelings of interest, enthusiasm and excitement consumers might have about a specific product category (M. J. Houston and Rothschild, 1977; Mittal and Lee, 1989; Richins and Bloch, 1986). The focus of such a conceptualisation is on the individual, rather than the product itself. In other words, it is the personal meaning or significance that an individual attaches to a product that precedes and generates involvement (Zaichkowsky, 1985; Antil, 1984) and the distinction is drawn between involved and uninvolved individuals, rather than between involving and uninvolved products.

In the present study, the theory of planned behaviour is applied in the prediction of intentions to 'buy a personal computer within the next nine months'. Computers were expected to induce a wide range of involvement levels across respondents and thus to provide an appropriate research opportunity. Because computers are expensive,

durable products that are not frequently purchased, the specific period was selected to allow for substantial variance in purchase intentions across respondents. The position that product involvement also reflects involvement with product related behaviours (i.e. product purchase) is taken here. It is assumed that individuals highly involved with a product also attach greater importance to their product related behaviours, as compared to less involved individuals.

High involvement enhances the strength of an attitude, it is therefore expected that individuals who are highly involved with the product hold stronger attitudes towards their product related behaviours. For example, it is expected that such individuals base their attitudes towards product purchase on careful consideration of possible positive or negative consequences of the behaviour and thus their attitudes are more consequential. By contrast, it is expected that less involved individuals hold weaker attitudes and, therefore, are more susceptible to social influence when forming their intentions. In short, I expect attitudes and subjective norms to have a competitive impact on intentions under conditions of high and low involvement (i.e. an increase in attitudinal influence to be associated with a decrease in normative influence). Further, I also expect the predictive weight of perceived control to decrease under conditions of high involvement. Although previous research has not examined the relation between involvement and perceived control, it is possible that individuals who hold strong attitudes towards an action are less likely to be influenced in their behavioural decisions by anticipated impediments in the performance of the action. The following hypotheses are tested:

H1: Attitudes are a stronger predictor of intentions for highly involved individuals compared to less involved individuals.

H2: Subjective norms are a stronger predictor of intentions for less involved individuals compared to highly involved individuals.

H3: For highly involved individuals attitudes are a stronger predictor of intentions than subjective norms. In contrast, for less involved individuals subjective norms are a stronger predictor than attitudes.

H4: Perceived control is a stronger predictor of intentions for less involved individuals compared to highly involved individuals.

A second objective of this study is to evaluate the efficiency and sufficiency of the theory of planned behaviour by examining the predictive value of perceived control and past behaviour. According to the theory, the effects of perceived control on intentions and behaviour are stronger when the behaviour presents strong problems of control (Madden, Ellen and Ajzen, 1992). Because the behaviour of buying a computer is subject to various control factors (e.g. affordability of the product, availability of special technical knowledge/advice required for product selection), I expect perceived control to improve the prediction of intentions over the components of the theory of reasoned action. However, because purchase of durable products, such as computers, constitutes a discrete, infrequent behaviour, I do not expect past behaviour (e.g. past purchase and ownership of the product) to directly influence purchase intentions but rather, to be fully anticipated in attitudes, subjective norms and perceived control and the beliefs underlying these constructs.

The following hypotheses are also tested:

H5: Perceived control improves the prediction of intentions.

H6: Past behaviour does not improve the prediction of intentions.

7.2.2 Method

Subjects

Seventy-eight students at the University of London completed a questionnaire examining intentions to buy a computer in the following nine months. Thirty-one (40 per cent) of the subjects were male and 47 (60 per cent) were female. Subjects' age ranged between 18 and 43 years. Mean age was 24.57 years (SD = 4.79). Twenty-two (28 per cent) of the subjects were undergraduate students and 56 (72 per cent) were postgraduate students. Subjects came from a wide variety of backgrounds including Psychology, Geography, Law, Engineering, Computer Science and Economics. Subjects were recruited by means of advertising notices and were paid £3 for their participation.

Questionnaire Design and Measures

The first page of the questionnaire provided instructions concerning the use of semantic differential scales as most items employed such a format. Next, involvement with computers was assessed with the Personal Involvement Inventory (PII; Zaichkowsky, 1985), which consists of 20 7-point bipolar items (scored from 7 to 1), such as interesting/uninteresting, important/unimportant, of concern to me/of no concern to me (see Appendix C). In the following section of the questionnaire, the components of the theory of planned behaviour were assessed. Subjects were asked to rate the behaviour on five 7-point scales (scored from 7 to 1) with endpoints: extremely good/extremely bad, extremely desirable/extremely undesirable, extremely

useful/extremely useless, extremely wise/extremely foolish, extremely pleasant/extremely unpleasant. Responses were averaged to comprise a single index of attitude towards the behaviour (Cronbach's alpha = .88). A measure of subjective norm was obtained from one item formatted as follows: 'Most people who are important to me in my social and academic environment think that I should buy a computer within the next nine months...' (extremely likely (7)/extremely unlikely (1)). Perceived control was measured with two items, the exact wording of which was: 'If I wanted to buy a computer within the next nine months I could easily do so...' (extremely likely (7)/extremely unlikely (1)) and 'For me to buy a computer within the next nine months is...' (extremely easy (7)/extremely difficult (1)). The average of these items comprised a single index of perceived control (Cronbach's alpha = .96). Intention was assessed with two items formatted as follows: 'I intend to buy a computer within the next nine months...' and 'I will buy a computer within the next nine months...' (extremely likely (7)/extremely unlikely (1)). A single index of behavioural intention was developed from the average of these items (Cronbach's alpha = .87). Next, subjects were asked to indicate how many computers they had bought in the past and responses provided a measure of past behaviour. Subjects were also asked to indicate when they had last bought a computer. Responses were coded in years (that had elapsed between last purchase and questionnaire completion). Nine additional items were included in the questionnaire, in order to check the validity of the basic measure of product involvement. These items were mainly concerned with interest in computers and were measured on 7-point scales ranging from very much (7) to not at all (1) or completely true (7) to completely false (1). Specifically, subjects responded to the following items: 'I enjoy learning about computers', 'I enjoy talking about computers in a conversation

with my friends', 'I enjoy investigating what a computer programme can do', I enjoy using a computer', 'I am never bored while using a computer', 'I often read computer magazines and books', 'I am always interested in getting new computer programmes', 'I am really interested in computers', 'I am always interested in having the latest version of computer programmes'. Demographic information was obtained in the last section of the questionnaire.

7.2.3 Results

The PII contains items that might confound involvement with product attitudes (e.g. wanted/unwanted) and, in fact, some authors suggest that the scale comprises of a product evaluative dimension (Munson and McQuarrie, 1987). Although, the focus of the study is not on product attitudes (but rather on attitudes towards product purchase), because PII scores and attitude towards the behaviour were moderately correlated ($r = .26, p < .05$), and in order to ensure that the involvement and attitude measures did not conceptually overlap, the PII and attitude towards the behaviour items were submitted to a principal components analysis using varimax rotation (Table 7.1). This analysis revealed a four factor structure (eigen values >1). The PII items loaded heavily on the first two factors and the fourth factor (all factor loadings $\geq .53$) which appear to represent the importance, interest and personal relevance dimensions of product involvement, respectively. The attitude items' loadings on these factors were quite low ($\leq .29$). Instead, these items loaded heavily on the third factor (all factor loading $\geq .82$). PII items' loadings on this factor were considerably lower ($\leq .21$). Given this factor structure the complete PII scale was

Table 7.1. Principal components analysis (with varimax rotation) of the PII and the attitude towards the behaviour items

	Factor 1	Factor 2	Factor 3	Factor 4
PII items				
useful / useless	.85	.14	.10	
beneficial / not beneficial	.84	.11		.17
needed / not needed	.81	.27	.11	
significant / insignificant	.74	.37	.15	.29
essential / nonessential	.68	.35		.22
valuable / worthless	.67	.16	.13	.47
relevant / irrelevant	.67	.30		.23
fundamental / trivial	.66	.28		.32
vital / superfluous	.64	.30		.43
important / unimportant	.53	.24		.46
interesting / boring	.24	.90		
exciting / unexciting	.23	.88		.18
fascinating / mundane	.25	.84	.11	.24
interesting / uninteresting	.35	.82		
appealing / unappealing	.28	.80	.12	.29
desirable / undesirable	.34	.61	.11	.41
wanted / unwanted	.41	.56	.21	.28
matter to me / don't matter to me	.41	.33	.19	.71
mean a lot to me / mean nothing to me	.37	.40		.63
of concern to me / of no concern to me	.42	.43		.58
Attitude towards the behaviour items				
useful / useless			.86	.11
good / bad	.10		.85	-.14
desirable / undesirable	.18	.23	.84	-.11
wise / foolish			.82	.18
pleasant / unpleasant			.59	.29
Eigen values	12.16	3.25	2.08	1.01
Percentage of explained variance	48.70	13.00	8.30	4.10

Note. Loadings above |.50| are shown in boldface.

retained in the analyses and the sum of all items was used as a measure of product involvement (Cronbach's alpha = .96). The additional involvement items were moderately to strongly correlated with the PII scores. Correlation coefficients ranged between .27 and .62 (mean $r = .46$).

Behavioural intentions were strongly correlated with attitudes ($r = .59$, $p < .001$), subjective norms ($r = .58$, $p < .001$) and perceived control ($r = .66$, $p < .001$), and weakly correlated with past behaviour ($r = -.14$). Intentions were also strongly correlated with time of last purchase ($r = .41$, $p < .001$), indicating that the older the computer owned the more likely subjects were to have the intention to replace it. Fifty-three (68 per cent) of the subjects did not own a computer. Of those owning a computer, 23 (45 per cent) had last bought one over three years ago. Subjects held slightly positive attitudes towards the behaviour (mean attitude 4.89, SD = 1.40), while mean subjective norm and mean perceived control were slightly negative (3.72, SD = 2.06 and 3.69, SD = 2.01, respectively). Mean intention was 3.17 (SD = 2.21).

In order to examine the predictive value of perceived control and to compare the theories of reasoned action and planned behaviour, intention was regressed on the predictor variables using an hierarchical procedure. Perceived control was entered into the equation after partialling out the effect of attitudes and subjective norms. As can be seen in Table 7.2, the addition of perceived control in the regression equation explained a further 25 per cent of variance in intentions, producing a significant increment in R^2 ($\Delta(R^2) = .25$, $p < .01$). This result supports H5 that the addition of perceived control improves the prediction of intentions. It should also be noted that perceived control was the strongest predictor of intentions, a finding indicating that subjects' intentions

were influenced more by the perceived ease or difficulty of performing the behaviour, than by their evaluation of the behaviour or by the perceived social pressure.

Table 7.2. Regression of purchase intention on attitude, subjective norm and perceived control

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.66	.43	29.33 ***
Attitude	.60	.38	3.53 ***			
Subjective norm	.38	.35	3.25 ***			
step 2				.82	.68	53.84 ***
Attitude	.51	.32	3.91 ***			
Subjective norm	.27	.25	3.03 **			
Perceived control	.57	.51	7.62 ***			

** $p < .01$; *** $p < .001$

To examine the contribution of past behaviour in the prediction of intentions, past behaviour was entered into the equation after attitudes, subjective norms and perceived control. As expected past behaviour did not produce a significant increase in the amount of explained variance and did not reach significance levels ($\beta = -.03$, $t = < 1$; $\Delta(R^2) < .01$). This finding supports H6 concerning the predictive value of past behaviour and suggests that in the case of discrete, infrequent behaviours, as the behaviour studied here, past behaviour does not add to the prediction of intentions.

In order to examine the moderating role of involvement in the prediction of intentions, the sample was divided into two groups, on the basis of a median-split of

product involvement and behavioural intention was regressed on attitudes, subjective norms and perceived control separately for the high and low involvement groups¹. As can be seen in Table 7.3, in the case of the high involvement group, only attitudes and perceived control were significant predictors of intentions. In contrast, in the case of the low involvement group, attitudes were insignificant and subjective norms and perceived control were the only significant predictors of intentions. The predictive weight of attitudes was higher in the case of high involvement ($\beta = .40$) than in the case of low involvement ($\beta = .22$). In contrast, the weight of subjective norms was higher in the case of low involvement ($\beta = .31$) than in the case of high involvement ($\beta = .18$). Further, in the case of more involved subjects, attitudes were stronger predictors of intentions than subjective norms ($\beta = .40$ versus $.18$, respectively). In contrast, in the case of less involved subjects, subjective norms were stronger predictors than attitudes ($\beta = .31$ versus $.22$, respectively). These findings support hypotheses H1, H2 and H3 on the moderating role of involvement in the predictive weight of attitudes and subjective norms and indicate that high involvement enhances the predictive value of attitudes and decreases the value of subjective norms. The results also provide some support for H4 as the weight of perceived control was higher in the case of less

¹ This procedure was preferred over moderated regression analyses, as it was not expected that the relative weight of predictor variables would uniformly increase or decrease as a function of involvement; rather, it was expected that involvement would regulate the attitude, subjective norm and perceived control relations with intention in a step function (see Baron and Kenny, 1986). However, a moderated regression analysis was also performed on the data. Although partial regression coefficients for the interaction terms were quite high and followed the expected direction (.34 for the attitude by involvement term, -.45 for the subjective norm by involvement term and -.21 for the perceived control by involvement term), none of these terms reached significance levels, possibly due to the relatively small sample size.

involved subjects ($\beta = .57$ versus $.48$ for the high involvement group), although the variable was a strong predictor of behavioural intentions for both involvement groups.

Table 7.3. Regression of purchase intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI				.81	.66	22.18 ***
Attitude	.59	.40	3.14 **			
Subjective norm	.18	.18	1.42			
Perceived control	.55	.48	4.66 ***			
LI				.81	.66	22.61 ***
Attitude	.38	.22	1.81			
Subjective norm	.36	.31	2.61 ***			
Perceived control	.59	.57	5.60 ***			

** $p < .01$; *** $p < .001$

7.2.4 Discussion

In the present study, the theory of planned behaviour was applied in the prediction of product purchase intentions. It was expected that perceived control would add to the prediction of intentions by attitudes and subjective norms, as the behaviour was thought to present strong problems of control. The results indicated that perceived control improved significantly the prediction of intentions and, in fact, the variable was a stronger predictor than attitudes and subjective norms. Further, as expected, past

behaviour failed to add significantly to the prediction of intentions and the components of the theory of planned behaviour sufficed for optimal prediction. These findings provide strong support for the theory of planned behaviour and indicate that, at least in the case of behaviours under incomplete volitional control, the inclusion of perceived control is essential for the accurate prediction of intentions.

The strong impact of perceived control in the present context can be explained by the fact that the control factors associated with the behaviour under study are not easily controlled by the specific research population (e.g. money, technical knowledge/advice). Subjects who believed they had inadequate control over these factors were less likely to form strong behavioural intentions, even if their attitudes and subjective norms were favourable. In other words, even if respondents evaluated positively the behaviour and their social environment was supportive, they still would not form the intention to perform the behaviour unless they felt they had access to the requisite resources. Further, the failure of past behaviour to add to the prediction of intentions can be attributed to the nature of the behaviour. Because the behaviour is not frequently performed, it cannot become habitualised, i.e. executed automatically without the mediation of cognitive processes, and the only way in which past behavioural experience can influence intentions is by influencing attitudinal, normative and control beliefs.

The main goal of the study was to explore the moderating role of involvement within the theory of planned behaviour. The investigation was based on the assumption that involvement should determine the strength of attitudes towards the behaviour and thus should moderate their relative impact on intentions. It was expected that high product involvement would enhance the impact of attitudes and decrease the impact of

subjective norms and perceived control on product purchase intentions. The results supported the hypothesised moderating role of involvement. High involvement was associated with an increase in the weight of attitudes and a decrease in the weight of subjective norms. Attitudes were significant predictors only in the case of high involvement and subjective norms were significant predictors only in the case of low involvement. Also, the relative weight of perceived control was lower in the case of highly involved subjects, although the contribution of the variable was strong for both involvement groups.

These findings show that high involvement is associated with an increase in the relative weight of attitudes and a decrease in the weight of subjective norms and perceived control, and suggest that highly involved individuals are more likely to form their intentions on the basis of their attitudes than less involved individuals who, instead, rely more on social influence and perceptions of control. These findings are consistent with the conclusion of previous research on the attitude-behaviour relationship that the perceived importance and personal relevance of an object determine the impact of attitudes on intentions and behaviour (e.g. Petty *et al.*, 1983) and with the postulates of the elaboration likelihood model of attitude strength. High product involvement motivates individuals to think, talk and search for information about the product and their product related behaviours (e.g. possible positive or negative consequences), rendering their attitudes stronger (i.e. more accessible; Krosnick, 1989; see also Study 1, Chapter 5), held with greater certainty and confidence (Laczniak and Muehling, 1993a) and based on more and better processed information (Berent and Krosnick, 1992). Involved individuals are therefore more likely to act upon their attitudes and to form strong behavioural intentions, irrespective

of the social approval of their behaviour and of anticipated difficulties. By contrast, less involved individuals lack motivation to engage in similar information search and processing and, thus, their attitudes are weaker (i.e. less accessible, based on less information and held with less certainty/confidence). Such individuals are more likely to be influenced by their perceptions of social pressure and control in forming their behavioural intentions.

The findings of this study provide corroboration for the theory of planned behaviour and demonstrate the moderating influence of involvement in the relative importance of the model's components. However, the study is limited in several respects. First, the correlational nature of the data restrains any causal interpretation of the results. Second, the focus of the study on a single behavioural domain restricts the generalisability of findings. Experimental designs in future research, focusing on other behavioural domains and employing multiple and diverse attitudinal objects are required before the conclusions can be generalised. In addition, most of the explanations offered here for the moderating influence of involvement are speculative and evidence is required before they can be accepted.

7.3 Summary of Chapter 7

The study presented in this chapter examined the moderating role of involvement within the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991). These theories assert that social behaviour is the end result of rational consideration of information and that, therefore, attitudes influence behaviour in a deliberate, conscious manner. In addition, the theories posit that

behaviour is not exclusively determined by attitudes and that subjective norms and perceived control also come into play in the prediction of behaviour. On the theoretical grounds that high involvement enhances attitude strength, i.e. the impact of attitudes on behaviour, it was expected that the variable would increase the importance of attitudes, relative to that of subjective norms and perceived control, in the formation of behavioural intentions. The results supported this prediction and indicated that high involvement is associated with an increase in the relative predictive weight of attitudes and a decrease in the predictive weight of subjective norms and perceived control.

CHAPTER 8

The moderating role of involvement
within the theory of planned behaviour:
The prediction of intention and behaviour

8.1 Introduction

Study 3 (Chapter 7) demonstrated the moderating role of involvement within the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991). The findings of the study revealed that high involvement tends to enhance the relative weight of attitudes and to reduce the weight of subjective norms and perceived control in the prediction of behavioural intentions. The study reported in the present chapter attempts to replicate these findings and to investigate the moderating role of involvement in the prediction of actual behaviour. It is expected that involvement moderates the relative importance of attitudes, subjective norms and perceived control and regulates the strength of the intention-behaviour relation. Further, the study investigates the predictive value of perceived control and past behaviour, in the context of a repeated, volitional behaviour. More specifically, the study applies the theory of planned behaviour in the prediction of intended and actual product usage. It is expected that high product involvement increases attitudinal influence on intentions and enhances the impact of intentions on behaviour. It is also expected that past behaviour improves significantly behavioural prediction.

8.2 Study 4: The moderating role of involvement in the prediction of intentions and behaviour

8.2.1 Introduction

The theory of planned behaviour (Ajzen, 1985, 1991; see Chapter 4, part II) is an extension of the theory of reasoned action (Ajzen and Fishbein, 1980) made necessary

by the original model's limitations in dealing with behaviours over which people have incomplete volitional control. As in the original model, a central factor in the theory of planned behaviour is the individual's intention to perform a given behaviour. Intention is assumed to be determined by the individual's attitude towards the behaviour and subjective norm, which are, respectively, determined by behavioural and normative beliefs. The theory of planned behaviour adds to the original model the concept of perceived behavioural control, defined as 'the perceived ease or difficulty of performing the behaviour' (Ajzen, 1987, p. 44), which can determine behaviour both directly and indirectly, through intentions.

Study 3 (Chapter 7) demonstrated the utility of perceived control in the prediction of intentions to perform a behaviour over which respondents had incomplete volitional control (purchase of an expensive, durable product). Several other studies have yielded similar results. Ajzen's (1991) review of research investigating the contribution of perceived control in the prediction of intentions to perform several, diverse behaviours (e.g. Beale and Manstead, 1991; Doll and Ajzen, 1992; Netemeyer, Burton and Johnston, 1991; Schifter and Ajzen, 1985; van Ryn and Vinokur, 1992) shows that perceived control makes a significant contribution and increases the amount of variance in intentions explained by attitudes and subjective norms. In addition, Ajzen's (1991) review of studies incorporating measures of actual behaviour (e.g. Doll and Ajzen, 1992; Netemeyer *et al.*, 1991; Schifter and Ajzen, 1985; van Ryn and Vinokur, 1990) also shows that perceived control improves the prediction of behaviour, although its contribution is less strong than in the prediction of intentions. Nevertheless, the impact of perceived control on intentions and behaviour is expected

to vary according to the controllability of the behaviour. According to Ajzen (1991):

‘When a behaviour/situation affords a person complete control over behavioural performance, intentions alone should be sufficient to predict behaviour, as specified in the theory of reasoned action. The addition of perceived behavioural control should become increasingly useful as volitional control over the behaviour declines’ (p. 185).

Similarly, it stands to reason that the importance of perceived control in the prediction of intentions also varies according to the controllability of the behaviour, and that, in situations where individuals have (or perceive having) complete control over the behaviour, the addition of a control variable as a predictor of intentions is superfluous.

In the present study, the theory of planned behaviour is applied in the prediction of product usage, a behaviour thought to be under good volitional control by the specific research population. Specifically, the model is applied in the prediction of intended and actual usage of computers by college students, who are thought to have good control over the factors required for the performance of the behaviour (i.e. availability of the product, availability of appropriate software, technical knowledge and skills). Previous applications of the theory of reasoned action in the prediction of computer usage have demonstrated the predictive value of intentions, attitudes and subjective norms (Koslowsky, Hoffman and Lazar, 1990; Pancer, George and Gebotys, 1992). Because of the volitional nature of the behaviour, it is expected that perceived control will not add to the prediction of intentions and behaviour over the terms of the theory of reasoned action.

The present study also addresses the issue of whether past behaviour should be integrated in the theories of reasoned action and planned behaviour as a predictor of intentions and behaviour. According to Triandis (1977, 1980), behaviour is the joint

outcome of behavioural intention and habit. In his model, habit is defined as 'situation specific sequences that are or have become automatic, so that they occur without self-instruction' (Triandis, 1980, p. 204), and is operationalised as the number of times an act has been performed in the past. More generally, the concept of habit implies that a behaviour can become so routinised through repetition that a person ceases to make any conscious decision to act yet still behaves in the accustomed way. Bentler and Speckart (1979) examined the role of habit and past behaviour in a study on students' use of alcohol, marijuana and hard drugs. Using structural modelling techniques, they compared the theory of reasoned action with a model that included direct causal paths from attitudes to behaviour, past behaviour to intentions, and past behaviour to later behaviour. The analysis showed that the alternative model fitted the data better than the theory of reasoned action and demonstrated that past behaviour can influence both intentions and behaviour. Similar results were later reported by Fredricks and Dossett (1983) and Bagozzi (1981).

Ajzen (1991) argues that past experience with a behaviour conveys information concerning the controllability of the behaviour (e.g. ease of access to requisite resources and opportunities) which is not covered by attitudes and subjective norms, but instead, is anticipated in the construct of perceived control (and its underlying beliefs). One may therefore expect that measures of past behaviour, shown to improve prediction under the theory of reasoned action, become redundant under the theory of planned behaviour. Consistent with this rationale, Study 3 (Chapter 7) demonstrated that past behaviour did not add to the prediction of behavioural intentions. However, this failure of past behaviour to improve prediction of intentions was not attributed to the inclusion

of perceived control as a predictor variable but, rather, to the infrequent performance of the behaviour under study (i.e. purchase of an expensive, durable product).

Recent applications of the theory of planned behaviour in the prediction of more frequently performed behaviours have shown that, despite the inclusion of perceived control, the addition of past behaviour significantly improves the prediction of both intentions and behaviour. For example, Bagozzi and Kimmel (1995), in an application of the model in the prediction of exercise and dieting, found that a model including direct paths from past behaviour to intentions and from past behaviour to later behaviour fitted the data significantly better than the theory of planned behaviour, demonstrating thus that the influence of past behaviour on intentions and behaviour is not completely covered by the theory's terms.

Following such findings and Triandis' (1977, 1980) arguments, one would expect the frequency of performance of a behaviour to regulate the relative importance of past behaviour. The present study extends the findings of Study 3 (Chapter 7) and allows a comparison of the importance of behavioural determinants and, in particular, of past behaviour and perceived control, by focusing on a frequently performed, volitional behaviour. Because the target behaviour is frequently performed it is expected that past behaviour will make a significant contribution to the prediction of intentions and/or behaviour.

The major objective of the study, however, is to replicate the findings of Study 3 (Chapter 7) concerning the moderating role of involvement in the prediction of behavioural intention and to extend these findings to the prediction of actual behaviour. The conceptualisation of involvement employed here is similar to that of Study 3. In other words, the present study focuses on product involvement, referring to individuals'

perceived personal relevance and importance of and interest in a product category (Mittal and Lee, 1989; Bloch and Richins, 1983; Zaichkowsky, 1985). The selection of computers as a research product category was again dictated by the need to use a product that would substantially differentiate participants in their degree of involvement. Product involvement is assumed to reflect involvement with product related behaviours and, in this case, with product usage.

On the theoretical grounds that high involvement enhances attitude strength and attitudinal impact on behaviour and on the basis of the findings of Study 3 (Chapter 7), it is expected that high involvement will be associated with an increase in the impact of attitudes and a decrease in the impact of subjective norms and perceived control on intentions.

Empirical evidence indicates that involvement also moderates the intention-behaviour relation and that high involvement increases the consistency between intentions and behaviour. In a study on voting intentions and behaviour, Pieters and Verplanken (1995) found that high involvement (operationalised as the importance of the elections and the elections outcome) increased the consistency between intentions and subsequent (self-reported) behaviour. In addition, this moderating effect of involvement was mediated by the amount of reasoning respondents reported having done in relation to the elections. This latter finding leads the authors to suggest that involvement moderates intention-behaviour consistency through a process similar to that of attitude-behaviour consistency (i.e. by determining the extent of cognitive processing of information during intention formation). On the basis of this evidence, it is expected that intentions will be more accurate predictors of highly involved subjects' behaviour than of less involved subjects' behaviour.

The following hypotheses are tested:

H1: Perceived control does not improve the prediction of intentions and behaviour.

H2: Past behaviour improves the prediction of intentions and/or behaviour.

H3: Intentions are a stronger predictor of behaviour for highly involved individuals compared to less involved individuals.

H4: Attitudes are a stronger predictor of intentions for highly involved individuals compared to less involved individuals.

H5: Subjective norms are a stronger predictor of intentions for less involved individuals compared to highly involved individuals.

H6: For highly involved individuals attitudes are a stronger predictor of intentions than subjective norms, in contrast, for less involved individuals subjective norms are a stronger predictor than attitudes.

H7: Perceived control is a stronger predictor of intentions for less involved individuals compared to highly involved individuals.

8.2.2 Method

Subjects

Seventy-seven students at the University of London participated in the study. Forty (51 per cent) of the subjects were male and 37 (49 per cent) were female. Subjects' age ranged between 18 to 43 years (mean age 24.59, SD = 4.71). Twenty-five subjects (32 per cent) were undergraduate students and 52 (68 per cent) were postgraduate students. Subjects came from a wide variety of backgrounds including Psychology, Geography, Law, Engineering, Computer Science and Economics. Data were collected in two waves. First, subjects completed a questionnaire investigating intentions to use a

computer in the next two weeks. Two weeks later subjects were contacted again and completed a questionnaire assessing their actual product usage. Respondents' date of birth was used as an identification code, in order to match responses from the first and second data collection waves. Subjects were recruited by advertising notices and were paid £4 for their participation.

Preliminary study

In order to develop accurate measures of product usage, a preliminary study was conducted to determine the pattern of computer usage by college students. Twenty-six students at the University of London (12 female, mean age 25 years) completed a questionnaire assessing the average time (per week) they had been spending on a computer during the past three months. Usage time ranged from 0 to 30 hours (mean = 8.68, SD = 8.86). Eighty per cent of the respondents reported an average usage time of less than 15 hours (per week). The questionnaire also included an open-ended item asking participants to indicate the specific tasks they had been using the computer for. Although some respondents reported the specific computer programmes they had been using, rather than the tasks they had been using them for, all responses were classified according to the nature of the task. The most frequently mentioned tasks were doing word-processing (18 respondents), communicating through electronic mail (17 respondents), doing statistical analysis (13 respondents), playing computer games (9 respondents) and doing graphics (6 respondents).

Questionnaire design and measures

The design of the questionnaire was identical to that of Study 3 (Chapter 7). Involvement with computers was again assessed with the Personal Involvement

Inventory (PII; Zaichkowsky, 1985), a scale consisting of 20 7-point items scored from 7 to 1 (e.g. important/unimportant, interesting/uninteresting, of concern to me/of no concern to me; see Appendix C). The same involvement items that were used in Study 3 (Chapter 7) to check the validity of the PII were also administered in the present study. Specifically, subjects were asked to respond to nine 7-point scales ranging from 'very much' (7) to 'not at all' (1) or 'completely agree' (7) 'to completely disagree' (1) assessing their interest in computers (e.g. 'I am really interested in computers', 'I enjoy using a computer', 'I enjoy learning about computers', 'I enjoy talking about computers in a conversation with my friends'). Subjects were asked to rate the behaviour of 'using a computer in the next two weeks' on four 7-point scales scored from 7 to 1 with endpoints: extremely good/ extremely bad, extremely desirable/ extremely undesirable, extremely pleasant/ extremely unpleasant, extremely useful/ extremely useless. The average of these scales comprised a measure of attitude towards the behaviour (Cronbach's alpha = .88). A measure of subjective norm was obtained from responses to the following item: 'Most people who are important to me in my social and academic environment think that I should use a computer in the next two weeks...' ('extremely likely' (7) to 'extremely unlikely' (1)). Perceived control was directly measured with two items, the exact wording of which was: 'If I wanted to use a computer in the next two weeks I could easily do so...' ('extremely likely' (7) to 'extremely unlikely' (1)) and 'For me to use a computer in the next two weeks is...' ('extremely easy' (7) to 'extremely difficult' (1)). A single index of perceived control was developed from the average of these items (Cronbach's alpha = .70). Product usage was operationalised along two dimensions: (1) usage frequency, referring to how often the product is used (usage time), regardless of the different applications for which

it is used, and (2) usage variety, referring to different applications for which the product is used, regardless of how frequently it is used¹ (Ram and Jung, 1990). Subjects were asked for how many hours they intended to use a computer in the following two weeks. Responses were scored on a 1 to 5 range: 0-3, 3-8, 8-18, 18-30 hours and more than 30 hours, respectively, to comprise a measure of usage frequency intentions. The development of this measure was based on the preliminary study. A measure of usage variety intentions was obtained by aggregating intentions to perform five specific behaviours. In this case, the most common, most frequently performed tasks on a computer were selected (on the basis of the preliminary study). Subjects were asked to rate the likelihood that they would perform each of the following specific behaviours: 'use a computer to do word-processing', 'use a computer to do statistical analysis', 'use a computer to do graphics', 'play computer games' and 'communicate through electronic mail' ('extremely likely' (7) to 'extremely unlikely' (1)). Responses were summed to compose a single index of usage variety intentions (Cronbach's $\alpha = .50$)². The traditionally used measure of intention asking respondents to rate the likelihood that they will perform the behaviour was expected to be inappropriate in the present study. Indeed, 70 per cent of the subjects considered the

¹ The more general attitude toward using a computer in the next two weeks was thought of as a rather general disposition influencing usage variety (i.e. the performance of a number of specific behaviours/applications of the product). For a discussion on the use of multi-act behavioural criteria and the aggregation principle see Chapter 4, part II and Ajzen (1988).

² Despite the low reliability coefficient this item was retained as it was thought to represent only one aspect of usage behaviour (i.e. usage variety). A positive attitude toward using the product might not necessarily influence the variety of functions for which it will be used, instead it might only increase the total time spent with it. The dual nature of product usage was thought to differentiate it from traditional multiple behavioural criteria concerning social attitudes, where high reliability is considered essential.

performance of the behaviour 'extremely likely'. This measure was dropped from any subsequent analysis. Past usage frequency was assessed by asking subjects to report for how many hours they had used a computer in the past two weeks. The format and scoring of this item was similar to that employed in the assessment of usage frequency intentions. A measure of past usage variety was obtained by asking subjects to indicate how many of the five specific tasks they had performed during the previous two weeks. Demographic information was obtained in the last section of the questionnaire.

Actual usage behaviour was assessed two weeks after the completion of the initial questionnaire and was operationalised in a way similar to that of usage intentions. Usage frequency was assessed by asking subjects to report for how many hours they had used a computer and usage variety was assessed by asking subjects to report how many of the five specific tasks they had performed on a computer during the specified two weeks period.

8.2.3 Results

As in Study 3, the PII and the attitude towards the behaviour items were submitted to a principal components analysis (using varimax rotation), in order to ensure that the involvement measure did not conceptually overlap with the evaluation of the behaviour. A three factor structure was revealed (Table 8.1). The first factor (explained variance 55.4 per cent) consisted mainly of the importance items of the PII scale. The second factor consisted mainly of the PII interest items. The personal relevance items (shown in the previous study to load on a third factor) loaded here mainly on the importance factor (with the exception of the 'mean a lot to me/mean nothing to me')

item which loaded equally on both the importance and the interest factors). The attitude items loaded heavily on a third factor (loadings .70 to .80). These items loaded only weakly on the first two factors (loadings from .11 to .40). Also, PII items' loadings on the third factor were considerably low (.11 to .43). This factor structure indicated that the involvement measure was conceptually distinct from the attitude construct and, therefore, the whole PII scale was retained in the analysis. Responses to all PII items were summed to comprise a measure of product involvement (Cronbach's alpha .96). Mean r of the additional involvement items with PII scores was .51.

Subjects held rather positive attitudes towards using a computer in the next two weeks (mean attitude 5.42, SD = 1.20). Mean subjective norm was 5.55 (SD = 1.50) indicating that in general subjects perceived their social context to be rather favourable towards them performing the behaviour. Mean perceived control was also high (6.34, SD = 1.05) indicating that subjects perceived themselves as having strong control over the behaviour. Mean usage frequency and usage variety intentions were 3.04 (SD = 1.42) and 3.91 (SD = 1.29), respectively. Mean actual usage frequency and usage variety were 2.16 (SD = 1.29) and 2.87 (SD = 1.30), respectively.

Actual usage frequency and usage variety were strongly correlated with the corresponding intention measures ($r = .72, p < .001$ and $r = .75, p < .001$, respectively) and past behaviour measures ($r = .63, p < .001$ and $r = .56, p < .001$, respectively). Usage variety intentions were significantly correlated with attitudes ($r = .46, p < .001$), subjective norms ($r = .44, p < .001$) and perceived control ($r = .27, p < .05$). Similarly, usage frequency intentions were significantly correlated with attitudes ($r = .52, p < .001$), subjective norms ($r = .51, p < .001$) and perceived control ($r = .42, p < .001$).

Table 8.1. Principal components analysis (with varimax rotation) of the PII and the attitude towards the behaviour items

	Factor 1	Factor 2	Factor 3
PII items			
vital / superfluous	.82	.25	
beneficial / not beneficial	.82		.30
significant / insignificant	.75	.26	.29
essential / nonessential	.74	.28	.11
useful / useless	.73	.15	.19
relevant / irrelevant	.71	.22	.21
valuable / worthless	.69	.17	.38
fundamental / trivial	.66	.35	.16
needed / not needed	.64	.36	.15
mean a lot to me / mean nothing to me	.62	.38	.33
important / unimportant	.57	.20	.34
of concern to me / of no concern to me	.51	.50	.40
wanted / unwanted	.48	.38	.31
exciting / unexciting	.18	.91	.17
interesting / boring	.24	.89	.17
fascinating / mundane	.31	.87	.16
interesting / uninteresting	.28	.82	.21
appealing / unappealing	.23	.79	.43
matter to me / don't matter to me	.51	.52	.34
desirable / undesirable	.47	.52	.35
Attitude towards the behaviour items			
good / bad	.26	.24	.80
useful / useless	.21	.11	.74
desirable / undesirable	.35	.40	.73
pleasant / unpleasant	.28	.38	.70
Eigen values	13.28	2.21	1.36
Percentage of explained variance	55.40	9.02	5.70

Note. Loadings above |.50| are shown in boldface.

Intentions were strong predictors of both usage frequency ($\beta = .72$, $t = 8.17$, $p < .001$; $R^2 = .52$) and usage variety ($\beta = .75$, $t = 9.33$, $p < .001$; $R^2 = .56$). To examine the additional contribution of perceived control and past behaviour in the prediction of actual behaviour, hierarchical regression analyses were performed. Perceived control was entered into the regression equations after the effect of intentions had been partialled out. As can be seen in Tables 8.2 and 8.3, the addition of perceived control did not improve the amount of explained variance and the variable did not reach significance levels either in the case of usage frequency or in the case of usage variety.

Table 8.2. Regression of usage frequency on intention, perceived control and past behaviour

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	R^2	<i>F</i>
step 1				.71	.51	60.84 ***
Intention	.65	.71	7.80 ***			
step 2				.72	.51	30.81 ***
Intention	.62	.68	6.95 ***			
Perceived control	.10	.09	.94			
step 3				.74	.54	22.64 ***
Intention	.48	.52	4.19 ***			
Perceived control	.04	.03	.39			
Past behaviour	.26	.24	1.88			

*** $p < .001$

In a subsequent step of the analyses, past behaviour was entered into the equation, in order to examine whether the variable improves prediction over the

components of the theory of planned behaviour. Tables 8.2 and 8.3 demonstrate that past behaviour did not improve prediction and did not reach significance levels either in the case of usage frequency or usage variety. It should be noted, however, that in the case of usage frequency, the additional contribution of past behaviour was only marginally insignificant ($p = .06$). Overall, these findings support the assumption of the theories of reasoned action and planned behaviour that intentions are the immediate determinants of behaviour.

Table 8.3. Regression of usage variety on intention, perceived control and past behaviour

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.74	.55	71.47 ***
Intention	.72	.74	8.45 ***			
step 2				.74	.55	35.41 ***
Intention	.70	.71	7.15 ***			
Perceived control	.06	.05	.51			
step 3				.74	.55	23.21 ***
Intention	.69	.70	5.19 ***			
Perceived control	.05	.04	.47			
Past behaviour	.02	.02	.15			

*** $p < .001$

To examine the moderating role of involvement in the prediction of behaviour, the sample was divided into high and low involvement groups on the basis of the median of the variable and separate regression analyses were

performed for each group³. Intentions were strong predictors of usage frequency for both high and low involvement groups ($\beta = .73$, $t = 6.02$, $p < .001$; $R^2 = .53$ and $\beta = .72$, $t = 5.42$, $p < .001$; $R^2 = .53$, respectively) and of usage variety for both high and low involvement groups ($\beta = .76$, $t = 6.76$, $p < .001$; $R^2 = .58$ and $\beta = .72$, $t = 5.82$, $p < .001$; $R^2 = .53$, respectively). These findings do not support H3 on the moderating role of involvement in the intention-behaviour relation. To examine whether involvement moderated the impact of intentions, relative to that of perceived control and past behaviour, behaviour was hierarchically regressed on the three predictor variables, separately for each involvement group. As can be seen in Tables 8.4 and 8.5, the contribution of perceived control in the prediction of behaviour remained insignificant for both involvement groups and for both usage frequency and usage variety. However, the results concerning the contribution of past behaviour were more complicated. In the case of usage frequency and for the high involvement subjects, the addition of past behaviour to the equation did not improve the prediction of behaviour and intentions remained the single significant predictor. However, in the case of low involvement, the addition of past behaviour explained an additional 18 per cent of the variance ($\Delta(R^2) = .18$, $p < .01$) and, in

³ The same procedure was also used in the examination of the moderating role of involvement in the prediction of intention. The reasons for selecting this procedure over moderated regression analysis were similar to those discussed in Study 3 (Chapter 7), i.e. involvement was expected to moderate the impact of intentions on behaviour and the impact of attitudes, subjective norms and perceived control on intentions in a step function (Baron and Kenny, 1986).

Table 8.4. Regression of usage frequency on intention, perceived control and past behaviour for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI						
step 1				.73	.54	35.52 ***
Intention	.78	.73	5.96 ***			
step 2				.74	.55	18.04 ***
Intention	.75	.70	5.50 ***			
Perceived control	.39	.11	.89			
step 3				.74	.55	11.64 ***
Intention	.73	.68	4.40 ***			
Perceived control	.38	.11	.85			
Past behaviour	.03	.03	.20			
LI						
step 1				.70	.49	23.79 ***
Intention	.60	.70	4.87 ***			
step 2				.73	.54	13.73 ***
Intention	.54	.63	4.23 ***			
Perceived control	.19	.22	1.52			
step 3				.82	.67	15.45 ***
Intention	.21	.24	1.38			
Perceived control	.03	.04	.28			
Past behaviour	.63	.60	3.02 **			

** $p < .01$; *** $p < .001$

Table 8.5. Regression of usage variety on intention, perceived control and past behaviour for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI						
step 1				.74	.54	36.47 ***
Intention	.89	.74	6.03 ***			
step 2				.77	.59	21.26
Intention	.84	.70	5.84 ***			
Perceived control	.68	.21	1.81			
step 3				.77	.59	13.70 ***
Intention	.86	.71	4.55 ***			
Perceived control	.69	.21	1.78			
Past behaviour	-.02	-.01	-.12			
LI						
step 1				.73	.54	28.24 ***
Intention	.61	.73	5.31 ***			
step 2				.73	.54	13.56 ***
Intention	.59	.71	4.07 ***			
Perceived control	.02	.02	.15			
step 3				.73	.54	8.75 ***
Intention	.51	.62	1.97			
Perceived control	.01	.02	.11			
Past behaviour	.10	.11	.38			

*** $p < .001$

fact, yielded insignificant the contribution of intentions. Although in the case of usage variety past behaviour did not reach significance levels and did not improve the amount of explained variance either for the high or the low involvement groups, the relative weights of the predictor variables followed a pattern similar to that of usage frequency. On the whole, the results concerning the moderating role of involvement in the prediction of actual behaviour suggest that low involvement is associated with a decrease in the impact of intentions on behaviour and an increase in the impact of past behaviour.

In order to examine the predictive value of perceived control in the prediction of intentions, usage frequency and usage variety intentions were first regressed on attitudes and subjective norms and then on perceived control, in a subsequent step (Tables 8.6 and 8.7). Although attitudes and subjective norms were significant predictors of intentions, the addition of perceived control did not improve prediction and the variable did not reach significance levels.

Table 8.6. Regression of usage frequency intention on attitude, subjective norm and perceived control

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.52	.27	13.25 ***
Attitude	.38	.32	2.79 **			
Subjective norm	.28	.28	2.43 **			
step 2				.52	.27	8.72 ***
Attitude	.40	.33	2.58 **			
Subjective norm	.28	.28	2.41 **			
Perceived control	-.03	-.02	-.21			

** $p < .01$; *** $p < .001$

These findings, together with those concerning the prediction of actual behaviour, support H1 and indicate that the inclusion of a control variable does not always enhance the prediction of intentions and behaviour (e.g. when individuals do not associate the behaviour with control problems).

Table 8.7. Regression of usage variety intention on attitude, subjective norm and perceived control

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.60	.36	20.71 ***
Attitude	.38	.35	3.26 ***			
Subjective norm	.29	.33	3.10 **			
step 2				.60	.37	14.21 ***
Attitude	.32	.29	2.44 **			
Subjective norm	.27	.31	2.88 **			
Perceived control	.14	.12	1.06			

** $p < .01$; *** $p < .001$

To examine the moderating role of involvement in the relative weight of attitudes, subjective norms and perceived control in the prediction of intentions, separate regression analyses were performed for the high and low involvement groups⁴.

⁴ The data were also analysed by means of moderated regression analyses. In the prediction of usage frequency intentions, the β weights of the interaction terms were 3.02 ($p < .01$) for the attitude by involvement term, and -.75 and -.74 for the subjective norm by involvement and perceived control by involvement terms, respectively. In the case of usage variety intentions, the β weights of the interaction terms were .81 for the attitude by involvement term, and -.31 and -.02 for the subjective norm by involvement and perceived control by involvement terms, respectively.

As can be seen in Tables 8.8 and 8.9, in the case of the high involvement group, attitudes were the only significant predictor of usage frequency and usage variety intentions ($\beta = .60$ and $.34$, respectively). In contrast, in the case of the low involvement group, attitudes were not significant and instead intentions were predicted by subjective norms ($\beta = .54$ and $.39$ for usage frequency and usage variety intentions, respectively). These findings support H4, H5 and H6 on the moderating role of involvement in the relative predictive weight of attitudes and subjective norms and indicate that high involvement is associated with an increase in the predictive weight of attitudes and a decrease in the weight of subjective norms. Although perceived control did not reach significance levels in any case, its weight was higher in the case of the low involvement group indicating that, as in the case of purchase intentions, perceived control over the behaviour is more important for less involved individuals ($\beta = .12$ versus $.09$ and $.32$ versus $.11$ for usage frequency and usage variety intentions, respectively) and providing some support for the hypothesis that perceived control is a stronger predictor of intentions for highly involved individuals compared to less involved individuals (H7).

In order to examine the predictive value of past behaviour, past usage frequency and usage variety were entered into the regression equations after attitudes, subjective norms and perceived control. As can be seen in Tables 8.10 and 8.11, past usage behaviour explained an additional 31 per cent ($p < .01$) of the variance in usage frequency intentions and an additional 23 per cent ($p < .01$) of the variance in usage variety intentions. In fact, when past behaviour was entered into the regression equation, all other predictors became insignificant, a finding indicating not only that the effect of past behaviour was not fully covered by attitudes, subjective norms and

Table 8.8. Regression of usage frequency intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI				.63	.40	7.42 ***
Attitude	1.03	.60	4.50 ***			
Subjective norm	.11	.11	.82			
Perceived control	.25	.09	.69			
LI				.51	.26	3.20 *
Attitude	-.23	-.19	-.88			
Subjective norm	.49	.54	2.74 **			
Perceived control	.13	.12	.58			

* $p < .05$; ** $p < .01$; *** $p < .001$ **Table 8.9.** Regression of usage variety intention on attitude, subjective norm and perceived control for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI				.52	.27	4.23 **
Attitude	.52	.34	2.22 *			
Subjective norm	.19	.23	1.45			
Perceived control	.28	.11	.71			
LI				.66	.44	7.67 ***
Attitude	.08	.07	.39			
Subjective norm	.34	.39	2.37 *			
Perceived control	.32	.32	1.82			

* $p < .05$; ** $p < .01$; *** $p < .001$

perceived control, but also that past behaviour was a superior predictor than these constructs. These results, together with those concerning the prediction of behaviour for the whole sample, provide partial support for H2 on the predictive value of past behaviour and indicate that past behaviour does not necessarily have a direct influence on behaviour. Instead, the impact of the variable can be indirect, mediated by intentions.

Table 8.10. Regression of usage frequency intention on attitude, subjective norm, perceived control and past behaviour

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.50	.25	7.52 ***
Attitude	.40	.32	2.40 **			
Subjective norm	.25	.25	2.02 *			
Perceived control	.01	.01	.08			
step 2				.74	.56	20.42 ***
Attitude	.21	.17	1.61			
Subjective norm	.12	.12	1.24			
Perceived control	-.10	-.07	-.71			
Past behaviour	.71	.62	6.64 ***			

* $p < .05$; ** $p < .01$; *** $p < .001$

In order to examine whether involvement moderated the relative contribution of past behaviour in the prediction of intentions, separate regression analyses were performed for the high and low involvement groups (Tables 8.12 and 8.13). These analyses revealed that although past behaviour significantly improved the amount of

Table 8.11. Regression of usage variety intention on attitude, subjective norm, perceived control and past behaviour

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
step 1				.60	.36	12.01 ***
Attitude	.33	.31	2.43 **			
Subjective norm	.23	.25	2.17 *			
Perceived control	.21	.16	1.38			
step 2				.76	.59	22.74 ***
Attitude	.21	.19	1.84			
Subjective norm	.11	.12	1.30			
Perceived control	.08	.06	.68			
Past behaviour	.51	.55	5.95 ***			

* $p < .05$; ** $p < .01$; *** $p < .001$

explained variance in both usage frequency and usage variety intentions for both high and low involvement groups ($\Delta(R^2) = .17, p < .01$ versus $.33, p < .01$ and $\Delta(R^2) = .22, p < .01$ versus $.36, p < .01$, respectively), the relative predictive weight of past behaviour was lower for the high involvement group ($\beta = .46, t = 3.76, p < .001$ versus $.69, t = 4.27, p < .001$ and $\beta = .54, t = 3.49, p < .001$ versus $.73, t = 6.25, p < .001$), suggesting that more involved individuals' intentions might be less influenced by past behaviour and habit.

Table 8.12. Regression of usage frequency intention on attitude, subjective norm, perceived control and past behaviour for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI						
step 1				.63	.40	7.14 ***
Attitude	1.02	.59	4.35 ***			
Subjective norm	.11	.11	.79			
Perceived control	.29	.09	.68			
step 2				.76	.57	10.61 ***
Attitude	.79	.46	3.76 ***			
Subjective norm	.07	.07	.63			
Perceived control	.21	.06	.59			
Past behaviour	.47	.44	3.60 ***			
LI						
step 1				.48	.23	2.53
Attitude	-.28	-.23	-1.00			
Subjective norm	.43	.46	2.08 *			
Perceived control	.20	.20	.84			
step 2				.75	.56	7.77 ***
Attitude	-.14	-.12	-.67			
Subjective norm	.18	.19	1.12			
Perceived control	-.06	-.06	-.32			
Past behaviour	.85	.69	4.27 ***			

* $p < .05$; *** $p < .001$

Table 8.13. Regression of usage variety intention on attitude, subjective norm, perceived control and past behaviour for the high (HI) and low involvement (LI) groups

Variables	<i>B</i>	β	<i>t</i>	<i>R</i>	<i>R</i> ²	<i>F</i>
HI						
step 1				.45	.21	2.85 *
Attitude	.54	.34	2.16 *			
Subjective norm	.23	.23	1.51			
Perceived control	.34	.13	.84			
step 2				.65	.43	5.93 ***
Attitude	.18	.11	.75			
Subjective norm	.11	.11	.84			
Perceived control	.18	.07	.52			
Past behaviour	.44	.54	3.49 ***			
LI						
step 1				.64	.42	5.79 **
Attitude	.10	.09	.43			
Subjective norm	.25	.28	1.47			
Perceived control	.39	.38	1.96			
step 2				.88	.78	21.06 ***
Attitude	.26	.24	1.82			
Subjective norm	.04	.04	.38			
Perceived control	.04	.04	.33			
Past behaviour	.75	.73	6.25 ***			

* $p < .05$; ** $p < .01$; *** $p < .001$

8.2.4 Discussion

In the present study the theory of planned behaviour was applied in the prediction of a frequently performed, volitional behaviour, i.e. intended and actual product usage. One of the objectives of the study was to examine the contribution of perceived control and past behaviour in the prediction of intentions and actual behaviour. Because the target behaviour was thought to be under good volitional control, it was expected that perceived control would not improve significantly the prediction of intentions and behaviour. However, because of the frequent performance of the behaviour, it was expected that the impact of past behaviour on later behaviour would not be completely mediated by the components of the theory of planned behaviour and that the variable would have an independent influence on intentions and/or behaviour. The results supported both hypotheses. Perceived control did not contribute significantly either to the prediction of intentions or to the prediction of actual behaviour. Although intentions sufficed for the optimal prediction of behaviour, past behaviour had a strong impact on intentions, unmediated by attitudes, subjective norms and perceived control, and, in fact, past behaviour was a superior predictor than these variables.

Although most studies applying the theory of planned behaviour have shown that perceived control has a strong impact on intentions and behaviour (Ajzen, 1991), the findings of the present study only lend partial support to the theory. Despite previous research demonstrating that perceived control enhances the prediction of intentions even in the case of volitional behaviours (Netemeyer *et al.*, 1991), the present research indicates that the addition of perceived control does not improve the

prediction of intentions unless the behaviour is perceived to be at least somewhat problematic in control. Although using a computer depends on certain requisite factors, since respondents on the whole perceived themselves having good control over these factors, they formed their intentions solely on the basis of their attitudes and subjective norms. A closer look at the control factors related to usage behaviour reveals that most of them are easily controlled by the population under study. Colleges provide a large number of computers, technical support/advice and training, contemporary software is relatively easy to use and students are expected to have the required expertise to use a computer for at least the common tasks that were examined here⁵. These findings are consistent with Ajzen's (1991) suggestions that the degree of volitional control over a behaviour determines whether the components of the theory of reasoned action suffice for the prediction of intentions and behaviour.

Further, the present findings show that, under certain circumstances, the components of the theories of reasoned action and planned behaviour are insufficient predictors of behaviour and support suggestions that past behaviour should be integrated in the theories as an independent predictor. Although past behaviour might add little to the prediction of infrequently performed behaviours, the results of the present study indicate that, in the prediction of repeatedly performed behaviours, past behaviour should be taken into account. On the whole, the findings of this study, together with those of Study 3 (Chapter 7), indicate that the nature of the behaviour in question determines the predictive utility of perceived control and past behaviour and

⁵ It should be noted that this study was conducted towards the end of the academic year and, therefore, even first year students were quite experienced in using computers.

the sufficiency of the components of the theories of reasoned action and planned behaviour as immediate determinants of social behaviour.

The main objective of the present study was to replicate and extend the findings of Study 3 (Chapter 7) concerning the moderating role of involvement within the theory of planned behaviour. This investigation was based on the assumption that product involvement should determine the strength of attitudes towards product related behaviours and, thus, should moderate their relative impact on intentions. On the theoretical grounds that involvement enhances attitude strength, and following the findings of Study 3, it was expected that high product involvement would increase the relative importance of attitudes and decrease the importance of subjective norms and perceived control. The results conformed with this hypothesis and with the findings of Study 3 and supported the moderating role of involvement in the prediction of product usage intentions. High product involvement was found to be associated with an increase in the relative predictive weight of attitudes and a decrease in the weight of subjective norms. The opposite pattern of results was obtained in the case of low product involvement. Also, the relative weight of perceived control was lower in this case, although the contribution of the variable was weak and insignificant for both involvement groups.

Together with the findings of Study 3 (Chapter 7), these findings indicate that high involvement tends to increase the relative weight of attitudes and to decrease the weight of subjective norms and perceived control in the prediction of intentions and suggest that highly involved individuals form their intentions on the basis of their attitudes more so than less involved individuals who, instead, rely more on social influence and perceptions of control. These findings are consistent with the conclusion

of previous research on the attitude-behaviour relationship that the perceived importance and personal relevance of an object determine the impact of attitudes on intentions and behaviour (e.g. Petty *et al.*, 1983) and with the suggestions of the elaboration likelihood model of attitude strength (Petty, Haugtvedt and S. M. Smith, 1995) in which involvement is viewed as an antecedent of attitude strength.

The study also examined the moderating role of involvement in the prediction of behaviour. Involvement was not found to moderate the impact of intentions on behaviour. However, when both intentions and past behaviour were used as predictors of behaviour, high involvement was associated with an increase in the contribution of intentions and a decrease in the contribution of past behaviour, while the opposite pattern of results was obtained in the case of low involvement.

These findings might also be explained in terms of the motivational role of involvement and its impact on the extent of cognitive processing (see Pieters and Verplanken, 1995). According to the theories of reasoned action and planned behaviour, attitudes, subjective norms, perceived control and intentions are the end result of active information processing. It is possible that high involvement motivates individuals to expend more cognitive effort, not only when forming their attitudes towards a behaviour (i.e. when considering the possible consequences of the behaviour), but also when forming their intentions (i.e. when considering their attitudes, subjective norms and perceived control), and that therefore intentions are better-formed (see Bagozzi and Yi, 1989) and more influential than the noncognitive construct of past behaviour.

The findings of the present study concerning the moderating role of involvement, together with those of Study 3 (Chapter 7), have important implications

not only for the accurate prediction of intentions but also for the development of effective persuasion strategies. Advertising, for example, relies heavily on shaping favourable attitudes towards the purchase of specific products and brands, as attitudes have been thought to be the primary determinant of intentions (e.g. Farley, Lehmann and Ryan, 1981; van den Putte, 1991). However, the present research demonstrates that attitudes are not always the stronger predictor of intentions and that under certain circumstances social influence and perceived control over a behaviour can be more important than attitudes. Involvement seems to provide a means of distinguishing the relative importance of the antecedents of intentions and, thus, of determining the target of persuasive attempts. The utilisation of appropriately targeted persuasion strategies should enhance the likelihood of effective persuasion and, therefore, of intention (and behaviour) change. For instance, for individuals who are not involved with an attitude object a persuasive message targeting their normative and control beliefs might be more effective than an attitudinal message. Advertising might therefore become more effective by the development of strategies targeting different kinds of product related beliefs (behavioural, normative and/or control) on the basis of consumers' product involvement.

Although the findings of the present study support the hypothesised moderating role of involvement within the theory of planned behaviour, several limitations restrict the causal interpretation and generalisability of findings. The major limitation concerns the correlational nature of the data. An additional weakness of the study stems from the use of self-reported measures of behaviour, which makes it possible that subjects' responses were anchored by their stated intentions. Additional, experimental research is required to substantiate the influence of involvement on the relative impact of

behavioural determinants. Further research is also needed to examine the moderating influence of involvement in the context of other behavioural domains and to investigate the exact mechanisms through which involvement exerts its moderating influence.

8.3 Summary of Chapter 8 and conclusions

The objective of the study presented in this chapter was to examine the moderating role of involvement in the prediction of behavioural intentions and actual behaviour. In addition, the study examined the predictive value of perceived control and past behaviour. In respect to the moderating role of involvement in the prediction of intentions, the findings of the study followed a pattern identical to that of Study 3 (Chapter 7). High involvement was associated with an increase in the relative predictive weight of attitudes and a decrease in the weight of subjective norms and perceived control. These findings, together with those of Study 3, support one of the main hypotheses of this thesis and demonstrate that involvement provides a motivational factor that regulates the importance of attitudes, relative to that of other behavioural determinants, in shaping social behaviour. Although involvement was not found to moderate the intention-behaviour relation, it moderated the predictive weight of intentions, relative to that of past behaviour, in the prediction of behaviour. Further, perceived control was not found to improve the prediction either of intentions or behaviour whereas, past behaviour was found to be a strong predictor of intentions. In respect to the predictive value of perceived control and past behaviour, therefore, these findings, together with those of Study 3, indicate that the nature of the behaviour under study determines the relative utility of these predictor variables.

CHAPTER 9

Involvement as a
determinant of the process through which
attitudes influence behaviour

9.1 Introduction

The studies presented in Chapters 5, 6, 7 and 8 investigated the role of involvement within models of automatic and controlled attitude-to-behaviour processes. The study presented in this chapter explores the role of involvement in determining whether attitudinal influence on behaviour follows an automatic or a controlled process. In particular, the study examines the hypothesis that high levels of involvement during decision making promote deliberate versus spontaneous attitudinal processes. More specifically, it is predicted that high involvement with a purchase decision promotes controlled (attribute based) versus automatic (global evaluation based) decision strategies.

9.2 Study 5: The effect of involvement on attitude-to-behaviour processes

9.2.1 Introduction

The theory of reasoned action (Ajzen and Fishbein, 1980) views social behaviour as the end result of rational and systematic information processing. According to this theory, the immediate determinant of behaviour is behavioural intention which, in turn, is determined by the individual's evaluation of the behaviour (attitude towards the behaviour) and the perceived social pressure to perform or not to perform the behaviour (subjective norm). The theory posits a causal sequence from beliefs to

attitudes to intentions and behaviour. Attitudes towards an action are assumed to be based on consideration of the potential costs and benefits of this action. More specifically, attitudes towards any given behaviour are based on a set of beliefs concerning the possible consequences of this action and on the evaluation of these consequences, in an expectancy-value manner.

From a different perspective, Fazio (1986, 1989) argues that behaviour is not always reasoned and planned and puts forward a model in which attitudes (towards an object) can influence behaviour spontaneously, without any effortful processing of information. In this conceptualisation, the overall evaluation of an attitude object (rather than its specific attributes) can be automatically retrieved from memory, provided it is sufficiently accessible, to bias the way the object is perceived and thereby to guide behaviour towards this object.

The MODE model provides a means of conceptually integrating the automatic impact of attitudes upon behaviour that is inherent in the model proposed by Fazio (1986) and the deliberative, controlled impact of attitudes upon behaviour that is central in Ajzen and Fishbein's (1980) theory of reasoned action. The distinction between controlled and automatic attitude activation drawn in the MODE model centres on whether behaviour stems from careful consideration of information or, instead, spontaneously flows from overall evaluations of alternatives. For example, a consumer in front of a brand selection task might base his/her decision either on some general evaluation of the available brands (e.g. a positive or negative feeling towards a particular 'brand name') or, alternatively, on careful consideration and comparison of the specific brand attributes that are relevant to his/her needs. The MODE model delineates the conditions that promote the former process versus the latter and asserts

that for effortful and systematic information processing to occur both motivation and opportunity to deliberate are required. When either motivation or opportunity is missing, attitudes can influence behaviour only in an automatic, unconscious manner.

In a direct test of the model, Sanbonmatsu and Fazio (1990) found that as motivation to make a correct decision and opportunity to do so decreased, the likelihood that individuals would rely on their overall evaluation of the object to reach a behavioural decision increased. In this study (experiment 1), subjects were presented with a series of statements about two department stores. The first store was described in generally favourable terms, except of its camera department. The second store was described in generally unfavourable terms, while its camera department was described in favourable terms. At a later point subjects were asked to decide which store they would shop a camera from. Motivation to reach a correct decision was manipulated by fear of invalidity (Kruglanski, 1989) and opportunity to do so was manipulated by time available to reach a decision. The findings indicated that only when both motivation and opportunity were high did subjects use an attribute-based decision strategy and therefore selected the second store. When either motivation or opportunity were low, subjects relied on their overall evaluation of the stores to reach a decision. In a subsequent experiment, subjects presented with information about the two stores were additionally instructed to form separate evaluations of each of their departments (Sanbonmatsu and Fazio, 1990, experiment 2). Under this condition, the effect of processing motivation and opportunity on decision strategy was neutralised. This finding indicates that when attention, during attitude formation, is directed towards the specific attributes of an object, this specific information is later used in making a

behavioural decision, irrespective of processing motivation and opportunity at this stage.

The objective of the present study is to examine the role of purchase involvement, as a motivational factor, in consumers' decision making and, in particular, in the process through which attitudes influence purchase decisions. Purchase involvement reflects a temporary concern with a purchase decision and stems from situational factors, for instance, a high-risk brand selection situation (M. J. Houston and Rothschild, 1978; Zaichkowsky, 1986). Depending on their level of purchase involvement, consumers differ greatly in the extensiveness of their decision process (indicated by the number of attributes used to compare brands), the length of the choice process, and the willingness to reach a maximum or a threshold level of satisfaction with a selection process (Krugman, 1965, 1967). High levels of purchase involvement promote more effortful decision making.

The present study focuses on purchase involvement, as a factor determining individuals' motivation to deliberate when making purchase decisions, and investigates the impact of the variable on the process through which attitudes guide such purchase decisions. It is expected that high purchase involvement has similar consequences to those of high fear of invalidity, that is, it increases subjects' motivation to reach an accurate decision and their motivation to deliberate and thus promotes controlled attitudinal processes. In contrast, low purchase involvement is expected to be associated with low processing motivation. In this case, automatic processes are more likely. Following Sanbonmatsu and Fazio (1990), the stimulus information of the study is carefully constructed so that subjects' decision will indicate whether deliberate, attribute-based processing had occurred or their decision had been spontaneously

guided by more global evaluations. Specifically, subjects in the study are exposed to a series of statements about two companies, A and B, manufacturing various electronic equipment. Company A is generally described in favourable terms. However, the information about the cameras manufactured by the company is generally unfavourable. In contrast, company B is generally described in unfavourable terms, although the information about its cameras is favourable. Subsequently, subjects are asked to make a decision about which company they would purchase a camera from. Prior to the decision making task, the purchase involvement manipulation is introduced. Half the subjects are instructed to imagine that they actually need to buy products of the kinds manufactured by the companies and to carefully consider the information they had previously been exposed to, to help them make the right purchase decision, while the other half do not receive any specific instructions. If subjects rely on their global attitudes towards each company in making their selection, they will select company A, which is described more favourably overall. If subjects rely on the specific information about the companies and their products, they will select company B, which produces a superior camera.

It is expected that the selection of company to buy a camera from varies as a function of the purchase involvement manipulation. Low purchase involvement is expected to increase reliance on global attitudes and to decrease the likelihood that specific knowledge about the companies will be used. Thus, it is anticipated that subjects in the low purchase involvement condition will tend to choose company A. In contrast, high purchase involvement is expected to increase motivation to retrieve and consider specific information and, thus, subjects in this condition will be more likely to choose company B.

9.2.2 Method

Subjects

One hundred and two students at the University of London participated in the study. Fifty-one (50 per cent) of the subjects were female and 51 (50 per cent) were male. Their age ranged between 18 and 64 years (mean age 21.25 years, SD = 7.27). Eighty-seven subjects (85 per cent) were undergraduate students and 15 (15 per cent) were postgraduate students. Subjects came from a wide range of backgrounds including psychology (15 subjects, 15 per cent), history (9 students, 9 per cent), law (7 students, 7 per cent) and economics (4 students, 4 per cent). Subjects were recruited by means of advertising notices and were paid £3.00 for their participation. Subjects were run in small group sessions (of 3 to 8 subjects) and were randomly assigned to a high or low purchase involvement condition.

Preliminary study

The incongruity between the description of the companies and the description of the cameras these companies produced was a key element in determining subjects' decision making strategies. However, the valence of attributes used in the description of the cameras would not necessarily lead to incongruity in itself as, for example, these attributes might be unimportant in a product selection process. To identify product attributes that are important or unimportant in such a process and to control for attribute importance in the description of the cameras of the two companies, a preliminary study was conducted. At the initial phase of this study, 12 students at the University of London (7 female, mean age 24.5 years) were interviewed and were

asked to provide a list of attributes they expected a camera to feature. In addition, several magazine advertisements and advertising brochures were reviewed. A list of 33 camera attributes was generated on the basis of the interviews and the advertisements' review. Subsequently, a sample of 28 students (18 female, mean age 22.51 years) were asked to rate these attributes in terms of their perceived importance. Specifically, they were instructed to think how important each attribute would be in their decision to buy a camera and to rate each attribute against a 9-point scale ranging from extremely important (+4) to not very important (-4). Table 9.1 presents the attributes rated as most and least important that were later selected to provide the basis for the development of the experimental stimuli.

Table 9.1. Means and standard deviations of the most and least important camera attributes

Attribute	Mean	SD
camera colour (a variety of colours to choose from)	-2.32	1.93
remote control	-1.57	2.04
holding strap/case	-1.36	1.89
double exposure mode (overlap two exposures)	-1.14	2.70
date and time imprints option	-.61	2.53
attractive, stylish design	-.50	2.66
autofocus	2.50	2.24
ease of use	2.61	1.71
red-eye reduction mode	2.68	1.70
automatic, built-in flash	2.79	1.97
easy film load	2.82	2.00
adequate manufacturer's guarantee	2.86	1.63
strength and durability	3.04	1.07
manual exposure setting (shutter speed and aperture set manually)	3.18	1.33
picture quality	3.61	.69

Procedure and materials

At the beginning of each session subjects were informed that the study consisted of a number of consecutive tasks and that instructions would be provided at the beginning of each task. Subsequently, they were informed that their first task was to read a booklet containing information about two companies manufacturing electronic equipment. At this point, subjects were presented with the booklet containing the experimental stimuli. The first page of the booklet informed subjects that the information they were about to read concerned real companies and had been drawn from magazines providing consumer reports and product reviews. Subjects were also informed that the names of the companies could not be disclosed and that therefore the companies would be called A and B. Subjects were instructed to read the information and no specific instructions concerning the attention they should devote to the information were given. The following pages of the booklet were divided into two sections. The first section contained information about company A and the second information about company B. Each piece of information was presented on a separate page. Subjects were asked to start reading from the first page and not to go back to the previous pages as they would go on. Subjects were explicitly instructed to try to form an overall evaluation of each company. Although the information concerning company A always preceded information about company B, for half the subjects company A was described in generally favourable terms and company B in unfavourable terms, while for the other half company A was described in generally unfavourable terms and company B in favourable terms. In the latter case, subjects' responses were reversed so that throughout this chapter company A always refers to the favourably described company producing the unfavourably described cameras. The introductory information

about each company was presented at the beginning of each section. However, the information concerning the products manufactured by each company was arranged in a relatively random order, so that information about each product would not appear together. This was necessary in order to prevent subjects from forming specific attitudes towards each product.

Fourteen statements were used to describe each company and its products (see Appendix D). Three of these statements provided general information about the company (e.g. 'Company A is a leading name in the field of electronic equipment and has been manufacturing state-of-the-art equipment for 70 years' versus 'Company B, a small manufacturer, is a recent entrant in the field of electronic equipment'). Six statements described the cameras the company produced and five statements provided information about other products manufactured by the company (e.g. camcorders, TV sets). Two such products were used for each company. The format (e.g. technical language) in which they were described was similar to that used for the cameras.

The attributes selected to describe the cameras produced by each company were based on the preliminary study. The cameras of company B were described as featuring 6 important attributes and not featuring 2 unimportant attributes. In contrast, the cameras of company A were described as featuring 4 unimportant attributes and not featuring 4 important attributes. Table 9.2 presents the specific statements used in the description of the cameras produced by each company. When subjects had finished reading the information in the booklet, they were asked to complete a one page questionnaire containing measures of their overall evaluation of each company.

Table 9.2. Statements used in the description of the cameras of companies A and B

Company A	Company B
The company produces a range of cameras that incorporate a strong and durable titanium body.	The company produces a range of cameras that feature a very attractive design and come in several different colours to choose from.
The cameras offer excellent picture quality.	All the cameras feature a double exposure mode that allows you to create trick photography by overlapping two exposures in one picture.
The cameras feature precise automatic focus and exposure while they also offer a manual setting option.	All the cameras come with a holding strap and a carrying case.
The automatic, built-in flash of the cameras provides optimum light -and can anytime be paused. The red-eye reduction mode reduces the red-eye effect common in night portraits.	The cameras offer only limited three month guarantee.
The cameras do not come with remote control as standard equipment.	Operating the cameras is not particularly user friendly and film loading is a rather complicated business.
The cameras do not offer a date and time imprint option.	The cameras cannot be set manually (both focus and exposure setting).

Following the completion of the questionnaire, subjects were engaged in a filler task which involved a procedure similar to that of the experimental task. Specifically, subjects were presented with a booklet containing information about three fictitious expedition trips to Africa and, subsequently, were asked to complete a short questionnaire assessing their overall evaluation of each trip. The filler task lasted

approximately 15 minutes and was included in the study in order to clear subjects' short-term memory of the experimental information.

In the final part of each session, subjects were asked to complete a questionnaire which contained the crucial measure of their camera purchase decision. This last questionnaire also provided the manipulation of purchase involvement. Because subjects in each session were assigned to both high and low purchase involvement conditions, the manipulation instructions were provided in the first page of the questionnaire. Subjects were asked to read these instructions carefully and no further oral instructions were given. The specific instructions given to subjects assigned in the high purchase involvement condition were: 'This questionnaire concerns the information you previously read about companies A and B. In the first part of the experiment you were asked to indicate your overall evaluation of each company. Now we would like you to think about the specific products that you received information about. Imagine that you actually need to buy these kinds of products and you consider the information to help you make the right purchase decision. Please consider carefully all the information you have received while you respond to the following questions and try to give accurate responses. Please complete all questions'. Subjects in the low purchase involvement condition received the following instructions: 'This questionnaire concerns the information you previously read about companies A and B. Please complete all questions'. The question measuring subjects' purchase decision was followed by a number of filler items which were included in order to avoid drawing undue attention to this target question. For example, subjects were asked to indicate their evaluation of the products manufactured by the companies. Demographic information was obtained in the last part of this questionnaire.

Measures

Companies A and B were evaluated on 7-point scales ranging from very favourable (7) to very unfavourable (1). Subjects were asked to indicate their purchase decision by selecting one of four options, the exact wording of which was: 'I would definitely buy a camera from company A', 'I would probably buy a camera from company A', 'I would probably buy a camera from company B' and 'I would definitely buy a camera from company B'.

9.2.3 Results

The stimulus information was designed to provide subjects with specific information about the cameras produced by the companies and to create a relatively positive attitude towards company A. Subjects' evaluation of the two companies served to check whether the stimuli were successful in creating a more positive attitude towards company A than towards company B. The vast majority of subjects (91 out of 102) evaluated company A more positively than company B. The 11 subjects who did not evaluate company A more positively than company B were excluded from the analysis (see Sanbonmatsu and Fazio, 1990). The mean evaluation of company A by the subjects retained in the analysis was 5.36, whereas the mean evaluation of company B was 4.24 ($t(88) = 7.46, p < .001$).

Table 9.3 presents the frequencies with which subjects selected each purchase decision option. As can be seen in the table, subjects in the high involvement condition were more likely to choose company B to buy a camera from. Subjects' decisions of which company they would buy a camera from were transformed into numbers, with -2

indicating 'I would definitely buy a camera from company A', -1 indicating 'I would probably buy a camera from company A', 1 indicating 'I would probably buy a camera from company B' and 2 indicating 'I would definitely buy a camera from company B'.

Low involvement subjects' decision was more favourable towards company A than towards company B, whereas high involvement subjects decision was more favourable towards company B than towards company A (mean decision -.46 versus .08, respectively, $t(89) = -2, p < .05$). These results indicate that subjects in the low involvement condition were more likely to base their purchase decision on their overall evaluation of the companies rather than on retrieval and careful consideration of the specific information they had previously received about the two companies and their products. In contrast, subjects in the high involvement condition were more likely to base their decision on the specific information they had received and, therefore, their purchase decision was less influenced by their global evaluation of the companies.

Table 9.3. Frequencies of purchase decisions for the high and low involvement groups

Purchase decision	High involvement		Low involvement	
	<i>Frequency</i>	<i>Percentage</i>	<i>Frequency</i>	<i>Percentage</i>
Definitely buy from company A	5	10	7	17.1
Probably buy from company A	19	38	21	51.2
Probably buy from company B	19	38	10	24.4
Definitely buy from company B	7	14	3	7.3

9.2.4 Discussion

The present study examined the role of involvement in Fazio's (1990a) MODE model. It was predicted that high purchase involvement would motivate subjects to base their purchase decisions on specific information concerning the alternatives, whereas low involvement subjects would be more likely to be influenced in their decisions by their overall evaluation of the alternatives. The results confirmed this hypothesis and indicated that subjects in the high purchase involvement condition were less influenced by their global evaluation of the companies and more influenced by the specific information describing the cameras produced by the companies in their selection of company to buy a camera from.

These findings provide support for the MODE model and indicate that involvement provides a motivational factor determining the extent of cognitive effort during attitude retrieval thereby determining the process through which attitudes influence behaviour. In situations where individuals are involved with a behavioural decision, they are more likely to devote the cognitive effort required for a deliberative process to occur (i.e. consideration and appraisal of specific information relevant to the decision alternatives). By contrast, in situations where individuals are not involved with the behavioural decision, they are more likely to be influenced by their more global evaluations of alternatives, which presumably they use as a heuristic in order to minimise the effort expended in the decision making task.

This explanation of the effects of involvement in the attitude-behaviour process is compatible with the postulates of the elaboration likelihood model of persuasion

(Petty and Cacioppo, 1986). The present findings suggest that involvement functions as a motivational factor both during attitude formation and during attitude activation. In other words, involvement determines the extent of cognitive processing and the process through which attitudes are formed, as well as the process through which attitudes influence behaviour. High involvement increases scrutiny of information both at the level of attitude formation (during exposure to attitudinal information) and at the level of attitude activation (during retrieval of attitudinal information from memory).

The findings of the study have important implications in the context of consumer behaviour. In situations of low purchase involvement, for instance, in the case of 'small purchases' of a routine nature, low processing motivation is likely to occur and overall product and brand attitudes are likely to determine purchase decisions (see Herr and Fazio, 1993). In contrast, when a purchase decision concerns expensive, high risk items or products that are of particular importance to the individual, the motivation to deliberate about the potential positive or negative aspects of purchase alternatives is enhanced and, therefore, purchase decisions are more likely to be based on specific product and brand attributes. In the former case advertising strategies aiming at developing a positive feeling towards the product should be sufficiently effective. In the latter case, however, advertising should ensure that product attributes are salient to consumers during purchase decision making.

Although the findings of this study support the hypothesised impact of involvement on the process through which attitudes guide behaviour and provide corroboration for the MODE model, a number of issues remain unclear. First, the study involved a 15 minute delay between exposure to information and the decision making task. It is unclear what the effects of involvement would be under longer time delay

conditions where, presumably, some of the information might become inaccessible from memory. It is possible that under such conditions only global evaluations are sufficiently accessible and, therefore, involvement and processing motivation do not differentiate individuals' decision making strategies. Also, the present study did not control for subjects' involvement during exposure to information (i.e. motivation during attitude formation). It is unclear how the level of involvement during attitude formation and the level of involvement during attitude activation jointly determine the attitude-behaviour process. Sanbonmatsu and Fazio's (1990, experiment 2) findings may suggest that individuals who closely attend to and scrutinise the information they receive follow an attribute-based decision making strategy, irrespective of their level of motivation during such decision making. Additional research is required to resolve these issues and to further explore the effects of involvement on the manner through which attitudes influence behavioural decisions.

9.3 Summary of Chapter 9 and conclusions

The study presented in this chapter was designed to examine the role of involvement as a determinant of the process through which attitudes guide behaviour. It was hypothesised that high involvement motivates individuals to expend more cognitive effort in processing attitude relevant information when making a behavioural decision and that therefore high involvement promotes deliberate versus spontaneous attitude-to-behaviour processes. The findings of the study confirmed this hypothesis and suggest that the importance and personal relevance of a behavioural decision determine whether attitudes influence behaviour in a thoughtful or a spontaneous manner. These

findings support the last main hypothesis of this thesis and demonstrate the importance of involvement in determining the process through which attitudes guide behavioural decisions.

CHAPTER 10

Discussion and conclusions

10.1 Introduction

A large body of social psychological and consumer research has been devoted to the investigation of the effects of involvement on the processes through which attitudes are formed or changed and on the consistency between attitudes and behaviour. Empirical findings have established the importance of involvement as a motivational factor determining the extent of cognitive processing during attitude formation and the strength of the attitude-behaviour link.

This thesis argues for the importance of involvement as a variable playing a significant part in the complex processes through which attitudes exert their impact on behaviour and examines the role of the variable within the main models of the attitude-behaviour sequence. Specifically, a number of hypotheses related to the role of involvement in Fazio's (1986) model of automatic attitude activation, the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1991) and the MODE model (Fazio, 1990a) were formulated and tested. In the following sections of this chapter, the empirical findings of the thesis are summarised and the main research issues are discussed in the light of these findings. The chapter concludes by reviewing the major limitations of this work and by considering some questions raised for future investigation.

10.2 Summary of empirical findings

10.2.1 Study 1: The impact of involvement on attitude accessibility

The first study of the thesis (see Chapter 5) concerned the role of involvement within the model of automatic attitude activation (Fazio, 1986). According to this model, the accessibility of an attitude is a critical factor determining whether this attitude is capable of influencing behaviour in a spontaneous, effortless manner. The study examined the hypothesis that the level of involvement with a persuasive message during attitude formation determines the accessibility of the resulting attitudes. To examine this hypothesis, an experimental design employing a manipulation of involvement was utilised. Sixty-two subjects were exposed to an advertisement for an unfamiliar consumer product under high or moderate advertising message involvement conditions. Subsequently, subjects' product attitudes, as well as the accessibility of these attitudes, were assessed. The results supported the hypothesised impact of involvement on attitude accessibility and indicated that attitudes formed under conditions of high involvement are significantly more accessible compared to those formed under lower levels of involvement.

10.2.2 Study 2: Involvement and attitude accessibility as dimensions of attitude strength

Following the findings of the first study (Chapter 5), a correlational study was conducted to examine (a) the relation between involvement and attitude accessibility in

a non-persuasive, non-experimental context and (b) the simultaneous impact of the variables on the strength of the attitude-behaviour relationship (see Chapter 6). Ninety subjects reported their attitudes towards a number of familiar, everyday consumer products, and their involvement with the underlying product categories. In addition, the accessibility of product attitudes was assessed by means of a response latency task. Subjects were also asked to select some of these products to receive later as a gift for participating in the study. On the basis of previous findings (Petty, Cacioppo and Schumann, 1983; Fazio, Powell and Williams, 1989), it was expected that both involvement and attitude accessibility would moderate attitude-behaviour consistency and, specifically, that high levels of both variables would be associated with more attitude-consistent product choice. Following the findings of Study 1 (Chapter 5) and the predictions of the elaboration likelihood model of attitude strength (Petty, Haugtvedt and S. M. Smith, 1995), it was also predicted that involvement would be positively related to attitude accessibility, and that its impact on attitude-behaviour consistency would be partly independent from that of accessibility. The results revealed a positive, albeit weak, relation between involvement and accessibility and confirmed the moderating role of the variables in the attitude-behaviour relation. High levels of both involvement and accessibility were associated with more attitude-consistent product choice. The results also indicated that the moderating influence of the variables on the attitude-behaviour relation was additive.

10.2.3 Study 3: The moderating role of involvement in the prediction of intentions

The third study of the thesis (Chapter 7) concerned the role of involvement within the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991). The theory of reasoned action posits that behavioural intentions are jointly determined by attitudes towards the target behaviour and subjective norms. The theory of planned behaviour extends the theory of reasoned action by introducing perceived control as an independent determinant of intentions and behaviour. This study was designed to investigate the moderating influence of involvement on the relative importance of attitudes, subjective norms and perceived control in the prediction of behavioural intentions. Seventy-eight subjects participated in the study, which examined the moderating role of product involvement in the prediction of product purchase intentions. On the grounds that high involvement enhances attitude strength, it was hypothesised that it also enhances attitudinal influence, relative to normative and control influence, on intentions. The results confirmed this hypothesis. Involvement was found to moderate the relative weight of the models' components in a way such that high levels of involvement were associated with an increase in the impact of attitudes and a decrease in the impact of subjective norms and perceived control. The opposite pattern of effects was observed in the case of low involvement. These findings suggest that highly involved individuals are more likely to form their intentions and hence to behave in accordance with their attitudes than less involved individuals who rely more on their subjective norms and perceived control. Further, the results

indicated that perceived control was a strong predictor of intentions, while past behaviour did not improve prediction, lending support to the theory of planned behaviour.

10.2.4 Study 4: The moderating role of involvement in the prediction of intentions and behaviour

The fourth study of the thesis (Chapter 8) replicated and extended the findings of Study 3 (Chapter 7). In this study, the theory of planned behaviour (Ajzen, 1985, 1991) was applied in the prediction of both behavioural intentions and actual behaviour. Seventy-seven subjects participated in the study which examined the moderating role of product involvement in the prediction of intended and actual product usage. The contribution of perceived control and past behaviour in the prediction of intentions and behaviour were also examined in the study. Following the findings of Study 3, it was expected that high involvement would increase attitudinal impact on intentions and decrease the impact of subjective norms and perceived control. On the basis of previous findings (Pieters and Verplanken, 1995), it was also predicted that high involvement would enhance the impact of intentions on behaviour. Further, because of the relatively volitional nature and the frequent performance of the behaviour, it was expected that perceived control would not improve the prediction of intentions and behaviour over the components of the theory of reasoned action (Ajzen and Fishbein, 1980), while the reverse would be true for past behaviour. The results supported the hypothesised moderating role of involvement in the prediction of intentions and followed a pattern identical to that of Study 3. High involvement was associated with an increase in the impact of attitudes

and a decrease in the impact of subjective norms and perceived control on intentions. By contrast, low involvement was associated with a decrease in the impact of attitudes and an increase in the impact of the remaining variables. High involvement was also found to be associated with an increase in the weight of intentions, relative to that of past behaviour, in the prediction of actual behaviour. Consistent with the hypotheses, perceived control did not add to the prediction either of intentions or behaviour. Although past behaviour did not improve the prediction of actual behaviour, it contributed significantly to the prediction of intentions.

10.2.5 Study 5: The effect of involvement on attitude-to-behaviour processes

The last study of the thesis (Chapter 9) concerned the role of involvement in the MODE model (Fazio, 1990a). According to this model, whether attitudes influence behaviour through a controlled or an automatic process depends on individuals' motivation and opportunity to engage in cognitive processing of information. This study examined the effect of involvement on the process through which attitudes guide behaviour. High involvement has been shown to increase elaboration of information during attitude formation (Petty and Cacioppo, 1986). It was expected that the variable would have a similar effect on individuals' motivation to scrutinise attitude relevant information when making a memory-based behavioural decision. One hundred and two subjects were assigned to a high or low purchase involvement condition and were asked to make a purchase decision based on information they had been exposed to during an initial phase of the experiment. This information was designed in a way such

that the optimal decision comprised of the overall unfavourably described alternative. It was expected that subjects in the high involvement condition would be more motivated to retrieve and carefully consider the specific information they had previously received, and that therefore they would discern the optimal alternative. By contrast, it was expected that low involvement subjects would not engage in similar information scrutiny, and that instead they would rely on their overall evaluation of the alternatives. The results confirmed this hypothesis and indicated that the level of involvement during decision making determines whether attitudes guide behavioural decisions through an overall evaluation versus specific information based process. These findings corroborated the MODE model's assumption that motivation is a prerequisite for deliberative attitudinal influence on behaviour and demonstrated the importance of involvement, as a motivational factor determining the occurrence of controlled versus automatic attitude-to-behaviour processes.

10.3 Involvement as a determinant of attitude accessibility

Contemporary approaches to the attitude-behaviour relation are mostly concerned with the processes through which attitudes influence behaviour. In this, third generation of research on attitude-behaviour consistency, a distinction has been drawn between automatic and controlled processes. This distinction centres on whether attitudes influence behaviour in a spontaneous, unconscious way or whether individuals deliberately use their attitudes as a guide in their behavioural decisions. Many everyday decisions are made quickly and easily because they are based on spontaneous attitude-

to-behaviour processes that do not require a great deal of deliberation and reflection. Such processes allow people to reduce cognitive load and simplify decision making.

Fazio's (1986) model of automatic attitude activation is concerned with such spontaneous attitudinal influence on behaviour. In this model, attitudes are viewed as memory associations between attitude objects and summaries of evaluative information. According to the model, an attitude can be spontaneously and unconsciously retrieved from memory to bias the way an object is perceived and hence to guide behaviour towards this object. An automatically activated attitude can direct focal attention towards attitude-consistent aspects of the attitude object and lead individuals to neglect attitude-inconsistent information. The attitude can therefore induce people to perceive the attitude object as more positive or negative than it really is and influence their behavioural responses towards the object. However, for such spontaneous attitude activation to occur, it is necessary that the attitude is easily retrievable from memory (i.e. upon presentation of the attitude object, the summary evaluation is automatically invoked). Attitude accessibility, which reflects the strength of the object-evaluation association in memory, is a key variable determining the capacity of attitudes for such automatic activation. Any manipulation strengthening the object-evaluation association should result in attitudes that are more accessible, and hence more likely to influence behaviour in an automatic manner.

It has been argued in this thesis that involvement serves as a determinant of attitude accessibility and, therefore, plays an important part in automatic attitude-to-behaviour processes (i.e. by determining the ability of attitudes to be spontaneously activated). There are several mechanisms through which involvement might influence the accessibility of an attitude. First, involvement can influence accessibility by

determining the extent of cognitive processing of information during attitude formation. According to the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986), high levels of involvement motivate individuals to expend more cognitive effort in processing information when forming their attitudes and promote central versus peripheral processes. The complex processing of information implicated in attitude formation via the central route strengthens the object-evaluation link in memory and, therefore, enhances attitude accessibility.

The findings of the first study (Chapter 5) demonstrated the impact of the level of involvement during attitude formation on attitude accessibility. These findings corroborated the elaboration likelihood model of attitude strength (Petty *et al.*, 1995) in which attitude accessibility is assigned a central role as an immediate determinant of attitude strength. According to this model, attitude accessibility and, therefore, attitude strength depend on the extent of elaboration during attitude formation. Attitudes formed under high involvement, high elaboration conditions are more accessible and hence more easily retrieved upon encountering the attitude object and more likely to influence behaviour through a spontaneous and unconscious process.

Further, involvement can influence attitude accessibility by determining the manner of attitude formation and, specifically, whether an attitude is formed on the basis of direct experience with the attitude object or, alternatively, on the basis of indirect information (see Fazio and Zanna, 1981). Individuals who perceive an attitude object as important and relevant to themselves are more likely to interact directly with it and to base their attitudes on such direct behavioural experience rather than relying on indirect information. For example, individuals who are involved with a product category are more likely to base their product attitudes on product trial rather than on

communicated information. Attitude formation based on direct behavioural experience results in corresponding increase in attitude accessibility (Fazio, Chen, McDonel and Sherman, 1982).

Moreover, high involvement can increase attitude accessibility through processes not directly related to attitude formation. For instance, high involvement can enhance attitude accessibility by increasing the frequency of attitude activation (Lavine, Sullivan, Borgida, and Thomsen, 1996). Frequent attitude activation has been shown to strengthen the object-evaluation link in memory (Fazio, Chen, McDonel and Sherman, 1982). Individuals who are involved with an attitudinal object think and talk about their attitudes more frequently than individuals who view the object as unimportant and not personally relevant. For example, consumers who are involved with a product category can be expected to think and talk about products and brands falling in this category more frequently than consumers who perceive the same product category as trivial and insignificant. Thus, highly involved individuals' attitudes are more frequently activated and hence more readily retrieved in future encounters with the attitude object.

In addition, high involvement can influence attitude accessibility by determining the salience of an attitude. Attitudes concerning objects perceived as important and relevant to oneself are more salient than attitudes concerning less involving objects. For instance, consumers' attitudes towards involving products should be more salient than attitudes concerning products or other attitudinal objects perceived as trivial and uninteresting.

Although not directly concerned with the specific mechanisms through which involvement influences attitude accessibility, the second study of the thesis (Chapter 6) demonstrated that involvement is positively associated with attitude accessibility. The

relatively weak association between the variables observed in this study, was attributed to the trivial nature of the specific attitudinal objects, which limited the variance of involvement across subjects, and to controlling for the effects of direct experience. However, accessibility differences can be expected to be more pronounced in the case of attitudinal objects differentiating people more strongly in their level of involvement. In situations where the attitude object is strongly perceived as important and self-relevant, all the mechanisms described above may become active and, therefore, the accessibility of attitudes towards this object can be radically increased, making these attitudes more likely to be spontaneously activated to influence behaviour.

10.4 Involvement and attitude accessibility as dimensions of attitude strength

As has already been discussed, high levels of involvement and accessibility have been shown to increase attitude-behaviour consistency. However, these factors have been studied independently and their combined influence on attitude-behaviour consistency has not been examined in previous research. Fazio (1989) suggests that attitude accessibility might be a central moderator of the attitude-behaviour relation, mediating the moderating influence of other factors. This perspective implies that involvement and other moderators of the attitude-behaviour relation exert their moderating influence by virtue of their relation to attitude accessibility.

Consistent with this perspective, the elaboration likelihood model of attitude strength (Petty *et al.*, 1995) assigns attitude accessibility a central moderating role in the consistency between attitudes and behaviour. However, this model also views a

number of other factors, such as the extent of knowledge about the attitude object, attitude certainty/confidence and structural consistency, as direct moderators of the attitude-behaviour relation. This model asserts that involvement, by determining the extent of elaboration of information during attitude formation, influences these attitudinal properties which, in turn, determine attitude strength.

The combined moderating impact of involvement and accessibility on attitude-behaviour consistency was examined in the second study of the thesis (Chapter 6). The findings indicated that involvement and accessibility have an independent, additive effect on the consistency between attitudes and behaviour and thus did not support Fazio's (1989) assumptions. Although the findings of this study suggest that involvement and accessibility constitute two distinct dimensions of attitude strength, exerting an independent influence on the attitude-behaviour relation, further research is required to examine whether the moderating influence of involvement is mediated by attitude certainty/confidence, structural consistency and knowledge, as the elaboration likelihood model of attitude strength predicts.

10.5 Involvement as a moderator of the relative impact of attitudes on behaviour

Although some decisions are made quickly and easily, other decisions require much deliberation and reflection. The theory of reasoned action (Ajzen and Fishbein, 1980) provides an example of a deliberative processing model of the attitude-behaviour relation. This theory asserts that any intentional behaviour is the end result of rational and systematic consideration of information. According to this theory, behavioural

intentions are the direct and immediate determinants of behaviour. Intentions, in turn, are jointly determined by attitudes towards the behaviour in question, which are based on careful analysis of the costs and benefits associated with the performance of this behaviour, and subjective norms, reflecting the social approval or disapproval of the behaviour. The theory of planned behaviour (Ajzen, 1985, 1991) extends the theory of reasoned action by introducing perceived control, a construct reflecting individuals' beliefs concerning the availability of resources and opportunities required for the performance of the behaviour, as an independent determinant of intentions and behaviour. According to the theory of planned behaviour, intentions are determined by attitudes, subjective norms and perceived control, and behaviour is determined by intentions and perceived control. In addition to these factors, some investigators have suggested the integration of past behaviour into the theories of reasoned action and planned behaviour as an additional determinant of intentions and behaviour (e.g. Bagozzi, 1981; Bagozzi and Kimmel, 1995; Bentler and Speckart, 1979, 1981, Triandis, 1977, 1980).

The role of involvement as a moderator of the relative importance of attitudes and the remaining behavioural determinants modelled in the theories of reasoned action and planned behaviour was an additional issue addressed in this thesis. The findings of Study 3 (Chapters 7) and Study 4 (Chapter 8) indicate that high involvement increases the relative impact of attitudes and decreases the impact of subjective norms and perceived control on behavioural intentions. The moderating role of involvement in the prediction of intentions can be explained in terms of the impact of the variable on attitude strength.

According to the elaboration likelihood model of attitude strength (Petty *et al.*, 1995), high involvement increases the extent of cognitive elaboration during attitude formation thereby enhancing the amount of object related knowledge, attitude accessibility, certainty and structural consistency. People who hold strong attitudes towards the performance of an action should be more motivated to act in accordance with them and to take other, non-personal considerations less into account. For example, when individuals base their evaluation of a behaviour on large amounts of information and are confident in this evaluation, and when their feelings and thoughts about the behaviour are consistent with each other, then they should be less inclined to conform to social pressures or to be influenced by anticipated impediments when forming their behavioural intentions and more likely to behave according to their personal judgements.

The fourth study of the thesis (Chapter 7) demonstrated that involvement moderates the impact of intentions on behaviour, relative to that of past behaviour. High involvement was associated with an increase in the impact of intentions and a decrease in the impact of past behaviour, while the opposite was true in the case of low involvement. This effect of high involvement was also thought to be the result of the more extensive cognitive effort expended not only during attitude formation but also during intention formation (i.e. during consideration of attitudes, subjective norms and perceived control and the beliefs underlying these constructs). This finding seems to suggest that involved individuals' intentions and behaviour are mainly based on cognitive consideration of information rather than on pre-established behavioural patterns.

10.6 The efficiency and sufficiency of the theory of planned behaviour:

The predictive value of perceived control and past behaviour

An additional issue addressed in the thesis concerned the contribution of perceived control and past behaviour in the prediction of intentions and behaviour. The contribution of the variables was examined in the context of two behaviours thought to differ in their degree of volitional control and frequency of performance (see Study 3, Chapter 7 and Study 4, Chapter 8). Perceived control was found to have a strong impact on respondents' intentions to perform the behaviour which was liable to a number of control factors. However, the variable did not add to the prediction of intentions (and actual behaviour) concerning the performance of the behaviour which was not posing serious problems of control. Further, past behaviour did not make a significant contribution to the prediction of intentions to perform the discrete, infrequently performed behaviour. Although the impact of the variable on the performance of the repeatedly executed behaviour was completely mediated by intentions, the variable had a strong impact on behavioural intentions, exerting thus an indirect influence on behaviour. In all, these findings indicate that the volitional nature and the frequency of performance of a behaviour determine the contribution of perceived control and past behaviour in the prediction of intentions and behaviour and that, therefore, the specific behavioural context in which the theories of reasoned action and planned behaviour are applied dictates the appropriateness and utility of these variables.

10.7 Involvement as a determinant of the process through which attitudes guide behaviour

Fazio's (1990a) MODE model provides a useful framework for integrating the spontaneous (Fazio, 1986) and the deliberative (Ajzen and Fishbein, 1980) attitude-to-behaviour process models. According to the MODE model (Fazio, 1990a), the process through which attitudes influence behaviour is determined by individuals' motivation and opportunity to engage in cognitive processing of information. When both motivation and opportunity are present, attitudes are likely to influence behaviour in the thoughtful manner outlined in the theories of reasoned action and planned behaviour (i.e. through careful consideration of the attributes of attitudinal objects or the pros and cons of behavioural alternatives). However, when either motivation or opportunity is missing, then attitudes can influence behaviour only in an automatic manner, as described in the model of automatic attitude activation (Fazio, 1986).

One of the issues addressed in this thesis concerned the role of involvement in the MODE model (Fazio, 1990) and, in particular, the role of the variable as a determinant of the process through which attitudes guide behaviour. The findings of Study 5 (Chapter 9) indicate that high involvement with a behavioural decision promotes deliberative versus automatic attitude-to-behaviour processes, and demonstrate the importance of the variable in determining the manner in which attitudes influence behaviour.

Research on attitude formation and change has shown that the level of involvement with an attitudinal object or a persuasive message determines individuals'

motivation to elaborate on attitude relevant information and, therefore, the process through which attitudes are formed or changed. Involvement was also shown here to determine individuals' motivation to scrutinise information available in memory when making a behavioural decision and, hence, the process through which attitudes influence behaviour. High involvement increases the cognitive effort individuals are willing to expend during decision making and promotes controlled attitudinal processes. In other words, when individuals attach great importance to a behavioural decision, then they are more likely to scrutinise the possible consequences of the behaviour and, therefore, attitudinal influence on behaviour is more likely to be deliberative and conscious.

10.8 Limitations and suggestions for future research

The empirical findings of the thesis demonstrate the significance of involvement as a variable playing an important part in the attitude-behaviour sequence. Nevertheless, any evaluation of this work should take into account a number of theoretical and empirical limitations.

First, the investigation of the effects of involvement on the attitude-behaviour sequence was not exhaustive. This investigation focused exclusively on the most prominent process models of the attitude-behaviour relation, although a number of alternative approaches have been recently put forward by attitude theorists. Such approaches include the theory of goal pursuit (Bagozzi and Warshaw, 1990), which is concerned with the performance of goal-directed behaviours and which incorporates attitudes towards trying to attain a goal and attitudes towards succeeding and failing in

this attainment in the prediction of behaviour, and Eagly and Chaiken's (1993) composite attitude-behaviour model, which integrates attitudes towards objects and attitudes towards behaviours as determinants of behaviour. The automatic model of attitude activation (Fazio, 1986) and the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991) represent the extremes of the spontaneous-deliberative processing continuum. Fazio (1990a) suggests that many decisions lie towards the middle of the continuum, where some aspects of the process are spontaneous and other aspects are deliberative. The effects of involvement within alternative models of the attitude-behaviour relation and within mixed attitude-to-behaviour processes remain unclear and, therefore, open to future investigation.

Besides, even in limiting the investigation of the effects of involvement within Fazio's (1986) model of automatic attitude activation, the theories of reasoned action (Ajzen and Fishbein, 1980) and planned behaviour (Ajzen, 1985, 1991) and the MODE model (Fazio, 1990a), this investigation was not exhaustive and only a limited number of hypotheses were tested. There may be additional ways in which involvement influences the attitudinal processes and the relations between the variables outlined in these models. For example, it is unclear how involvement and attitude accessibility interact in the context of the theories of reasoned action and planned behaviour. It is possible that attitude accessibility is irrelevant in the context of deliberative attitudinal processes (Fazio, 1989) and that in such cases other attitude strength related properties (e.g. attitude certainty, attitude consistency) become more important. Also, the role of subjective norms and perceived control in the context of spontaneous attitudinal processes remain largely unclear. Can these factors be activated spontaneously to influence behaviour like attitudes do? Or does their influence on behaviour require

attentive effort and deliberation? Additional research is necessary to resolve these and other issues that emanate from or have not be addressed in this thesis.

A major limitation of the present research concerns the utilisation of different conceptualisations of involvement across studies. For example, in some cases the focus was on involvement with a persuasive message, whereas in other cases the focus was on the perceived importance and relevance of the attitude object or the behavioural decision. This was a result of the diversity of involvement's conceptualisation in past research which provided the empirical grounds for the present investigations. Nevertheless, it complicates the integration of findings and points out the need to clarify the concept and to examine the differential impact, if any, of different types of involvement on attitude-to-behaviour processes. In general, it seems that the perceived importance and relevance of an attitude object determine both the level of involvement with related information during attitude formation and the level of involvement with behavioural decisions involving this object. However, it is also possible that involvement fluctuates over time and context and, for instance, an object becomes involving once the attitude has been formed or one becomes involved with a behavioural decision for reasons other than the perceived importance and relevance of the attitude object. In this latter case, the level of involvement with persuasive information should be largely irrelevant to the processes through which attitudes influence behaviour. An interesting issue for future investigation would, therefore, pertain to the impact of different types and levels of involvement on attitudinal processes, from attitude formation to overt behaviour.

An additional limitation of the present research concerns the use of student samples. Although students commonly serve as subjects in theoretical investigations,

such sample restrictions reduce the generalisability of findings. Moreover, the generalisability of findings is also restricted by the exclusive testing of the hypotheses in a consumer behaviour context. Additional research, employing diverse attitudinal objects and behavioural domains and more representative samples, is required before the findings and conclusions of the present investigations can be accepted and generalised.

10.9 Conclusions

In this thesis I have attempted to demonstrate the significance of involvement in the attitude-behaviour sequence and to provide some insight into the effects of the variable on attitude-to-behaviour processes. Notwithstanding the theoretical and empirical limitations, the findings presented herein suggest that: (a) the extent of cognitive processing occurring during retrieval and consideration of attitudes and attitude relevant information varies as a function of involvement and, therefore, involvement serves as a determinant of the process through which attitudes influence behaviour, (b) in the context of automatic attitude-to-behaviour processes, high involvement attitudes are more accessible and more likely to be spontaneously activated to influence behaviour, and (c) in the case of deliberate attitude-to-behaviour processes, high involvement enhances the impact of attitudes on behaviour, relative to that of social influence and behavioural control factors. In all, these findings point out the need to expand the investigation of the effects of involvement beyond attitude formation and attitude-behaviour correspondence and into the actual processes that underlie

attitudinal impact on behaviour, and to pursue novel ways in which motivational factors might intervene in attitudinal processes.

In conclusion, the present thesis demonstrated the importance of involvement in the processes through which attitudes exert their influence on behaviour. Nevertheless, the investigation of the role of the variable was not exhaustive and further research is required to fully explore the effects of involvement on the attitude-behaviour sequence and to elucidate the underlying mechanisms. It is hoped that the findings presented here will provide a sound starting point for future investigations.

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APPENDIX A

Copy of the experimental advertisement used in Study 1 (Chapter 5)

Lubriderm™ is different.

Why? Because this heavy-duty lotion works hard and feels surprisingly clean. That's right. Lubriderm is a rich formula that's water based, not oil based... so it does the job without feeling greasy. It's no wonder that Lubriderm is the leading moisturizer among those most recommended by dermatologists.

See you later, alligator.

lubriderm

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(Scale: 60%)

APPENDIX B

List of the target products used in Study 2 (Chapter 6)

	Soft drink	Beer	Chocolate bar
Product 1	7-up	Stella Artois	Mars
Product 2	Pepsi	Guinness	Snickers
Product 3	Coca-Cola	Carling	Toblerone
Product 4	Lilt	Beck's	Bounty
Product 5	Sprite	Boddington's	Crunchie
Product 6	Tango	Budweiser	Galaxy

APPENDIX C

The Personal Involvement Inventory (PII; Zaichkowsky, 1985) used
in Study 2 (Chapter 5), Study 3 (Chapter 6), and Study 4 (Chapter 7)

important	___ : ___ : ___ : ___ : ___ : ___ : ___	unimportant
of no concern to me	___ : ___ : ___ : ___ : ___ : ___ : ___	of concern to me
irrelevant	___ : ___ : ___ : ___ : ___ : ___ : ___	relevant
means a lot to me	___ : ___ : ___ : ___ : ___ : ___ : ___	means nothing to me
useless	___ : ___ : ___ : ___ : ___ : ___ : ___	useful
valuable	___ : ___ : ___ : ___ : ___ : ___ : ___	worthless
trivial	___ : ___ : ___ : ___ : ___ : ___ : ___	fundamental
beneficial	___ : ___ : ___ : ___ : ___ : ___ : ___	not beneficial
matters to me	___ : ___ : ___ : ___ : ___ : ___ : ___	doesn't matter
uninterested	___ : ___ : ___ : ___ : ___ : ___ : ___	interested
significant	___ : ___ : ___ : ___ : ___ : ___ : ___	insignificant
vital	___ : ___ : ___ : ___ : ___ : ___ : ___	superfluous
boring	___ : ___ : ___ : ___ : ___ : ___ : ___	interesting
unexciting	___ : ___ : ___ : ___ : ___ : ___ : ___	exciting
appealing	___ : ___ : ___ : ___ : ___ : ___ : ___	unappealing
mundane	___ : ___ : ___ : ___ : ___ : ___ : ___	fascinating
essential	___ : ___ : ___ : ___ : ___ : ___ : ___	nonessential
undesirable	___ : ___ : ___ : ___ : ___ : ___ : ___	desirable
wanted	___ : ___ : ___ : ___ : ___ : ___ : ___	unwanted
not needed	___ : ___ : ___ : ___ : ___ : ___ : ___	needed

APPENDIX D

List of statements used in the description of companies A and B

(Study 5, Chapter 9)

COMPANY A

- Company A is a leading name in the field of electronic equipment and has been manufacturing state-of-the-art equipment for 70 years.
 - The R&D department of the company is behind several technological developments and innovations.
 - The company produces a wide range of electronic equipment such as VCRs, camcorders, cameras and photographic equipment and audio-visual systems. The company invests in product satisfaction.
 - The company recently launched a range of lightweight palmcorders that feature S-VHS picture quality.
 - All the palmcorders come with an image stabiliser that helps to eliminate the effects of camera shake and the subsequent loss of picture quality.
 - The company produces a range of TV sets that feature colour transient improver and picture noise reduction for stronger, more realistic colours and clear picture.
 - All TV sets feature on screen display of main functions.
 - All TV sets feature auto set-up for reduced installation time.
 - The company produces a range of cameras that incorporate a strong and durable titanium body.
 - The cameras offer excellent picture quality.
 - The cameras feature precise automatic focus and exposure while they also offer a manual setting option.
 - The automatic, built-in flash of the cameras provides optimum light -and can anytime be paused. The red-eye reduction mode reduces the red-eye effect common in night portraits.
 - The cameras do not come with remote control as standard equipment.
 - The cameras do not offer a date and time imprint option.
-

COMPANY B

- Company B, a small manufacturer, is a recent entrant in the field of electronic equipment.
 - The company was established in 1989 and struggles to keep up with the fierce competition generated by the fast technological developments of our times.
 - The company is now trying to enter the international market. However, they should invest more on research and development of innovative products if they are to meet consumers' growing needs and expectations.
 - The company recently launched a new personal cd player which features one phrase repeat, a function which rewinds and plays back 4 or 8 second snatches of tape, making it a great asset to learning song lyrics.
 - The cd player does not take rechargeable batteries and does not incorporate any electricity consumption saving features.
 - The company produces a range of compact-but-not-so-very-light camcorders.
 - The camcorders feature an attractive design.
 - The camcorders only come with mono sound.
 - The company produces a range of cameras that feature a very attractive design and come in several different colours to choose from.
 - All the cameras feature a double exposure mode that allows you to create trick photography by overlapping two exposures in one picture.
 - All the cameras come with a holding strap and a carrying case.
 - The cameras offer only limited three month guarantee.
 - Operating the cameras is not particularly user friendly and film loading is a rather complicated business.
 - The cameras cannot be set manually (both focus and exposure setting).
-