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An attempt to extend means-end theory: An investigation of the linkages between choice behaviour and values

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Abstract

The research problem was identified as a lack of means-end theory linking choice behaviour to values. The aim of the study was, therefore, to determine whether or not the means-end theory could be extended to linking choice behaviour to values. The research was focused on the following two research questions: (1) what, if any, are the conceptual categories in the means-end theory linking choice behaviour to values? (2) How, if at all, are the conceptual categories in the means-end theory linking choice behaviour to values connected together?

A case research method was adopted for the empirical investigation of the study, focusing on food choices in the family context. The fieldwork, carried out in the UK, was done in two phases, i.e. the pilot study and the main study. The research findings suggest that the conceptual categories linking choice behaviour to values consist of the following conceptual categories: choice behaviour, attributes of choices, consequences, and values. In addition, the research findings indicate more dominant direct linkages between the adjacent conceptual categories than between the nonadjacent conceptual categories. The dominant direct linkages between the adjacent conceptual categories suggest that the conceptual categories linking choice behaviour to values are hierarchically connected together. The main implication of the research findings is that researchers can establish linkages between choice behaviour and values on the basis of actual choices in specific social contexts, instead of using cognitions as a surrogate for choice behaviour.

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List of Abbreviations

BPM	:	Behavioural perspective model
HVMs	:	Hierarchical value maps
LOVs	:	List of values
RSV	:	Rokeach value survey
TRA	:	Theory of reasoned action

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In spite of the difficulties often uncounted in reaching definite conclusions about researches, one major lesson learnt from this study was:

> The further I advanced in seeking to know much, the clearer it became to me how little I knew!

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Outline of the thesis report

The report is organised into six chapters. Chapter one introduces the reader to the thesis report. The chapter begins with a quick overview of the nature of the research problem, the study aim, and the research questions. The discussion, then, outlines the philosophical paradigm. The discussion of the paradigm involves outlining the study's orientation towards the nature of reality (ontology), and the grounds for justifying knowledge of reality (epistemology).

Chapter two provides a detailed review of published literature on values research. The critique, first, covers the macro approaches to values researches, highlighting the strengths and weaknesses of the approach in determining and linking values to choice behaviour. Means-end theory, representing the micro approach to values research is, then, reviewed, giving a detailed analysis of the assumptions underlying the theory reported in the extant literature. The analysis provided the grounds for the identification of the research problem for this study.

Chapter three explores the social cognitive and behavioural perspectives of consumer behaviour. The two perspectives are discussed, highlighting their strengths and weaknesses in providing the bases of theories of consumer behaviour. The literature review chapter is then summarised, and the research problem is restated in the context of what is reported about means-end theory within the existing literature.

Chapter four presents the research methodology. The discussion in this chapter starts with the justification of the case research method. The decisions about the number of cases in the study and the criteria used in selecting the cases are then explained. Next, the chapter presents the conceptual model used to guide the study. The key concepts that make up the proposed means-end model linking context-nested choices to values are defined, explaining how the concepts are linked. The procedures followed in carrying out the field research; both the pilot study and the main data collection exercise are then explained. After that, the measures that were taken to ensure the validity and reliability of the study are presented. The ethical considerations taken during the study are also highlighted. The chapter concludes by presenting a summary of the research methodology adopted for this study

Chapter five is concerned with the analysis of the research data. The first part of the data analysis focuses on determining the conceptual categories of choice behaviour, attributes of choices, consequences, and values. The second part, then, concentrates on the investigation of linkages between the conceptual categories. The summary of the data analysis closes the chapter.

Chapter six contains the conclusions of the study and the implications of the research findings for theory and marketing practice. After highlighting the implications of the research findings, the chapter ends with a presentation of recommendations for further studies.

Chapter

ONE

Introduction to the Study

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The Study Aim and the Research Questions 4

The Philosophical Paradigm of the Study 4
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Background to the Study

Researchers are increasingly interested in adopting means-end theory as a framework for explaining how consumers' product choices are linked to values (Allen and Ng, 1999; Botschen et al, 1999; Grunert, 1995; Gutman, 1982; Klenosky et al, 1993; Mulvey et al, 1994; Nielsen et al, 1998; Walker and Olson, 1991). Gutman's (1982) means-end model, built on earlier contributions by Howard (1977), Rokeach (1973), Vinson et al (1977), and Young and Feigin (1975), is widely advocated as a practical framework for understanding linkages between values and choices (Botschen et al 1999; Grunert and Grunert, 1995; Gutman, 1982; Nielsen et al 1998; Olson and Reynolds, 1983; Reynolds and Gutman, 1988; Walker and Olson, 1991). The key characteristics of Gutman's (1982) means-end model are the three levels at which conceptual categorisation and abstractions take place, i.e. attributes, consequences, and values (Gutman, 1982; Reynolds et al, 1995).

At the most concrete (or least abstract) level of the conceptual categorisation is the category of "attributes". Attributes are physical and/or psychological constructs by which consumers describe and/or differentiate between products (cf. Valette-Florence and Rapachi, 1991). In other words, consumers infer that products *have* attributes (Reynolds et al, 1995). At the next highest level of categorisation and abstraction is the conceptual category of consequences. Consequences are the physiological or psychological outcomes that consumers expect to accrue in consuming products in specific situations (Gutman, 1982). Put differently, consequences are the consumers' desired or undesired outcomes, which *result* from the use of products in specific situations. At the highest level of categorisation and abstraction is the conceptual category of values. Values are defined as an individual's *abstract goals, representing that particular person's belief that certain states of existence ("ends") are personally or socially desirable* (cf. Rokeach, 1973; Schwartz, 1994).

There are some similarities between the concepts of consequences and values. For example, both of them, consequences and values, are a person's desired states of being. However, there is an important difference. Consequences are outcomes that are desired or undesired, not for their own sake, but as means or instrumental to other higher consequences. Values, on the other hand, are the consequences, which represent the consumer's desired "end state of existence".

The uncovering of linkages between attributes, consequences, and values, in Gutman's model, is often attempted using "laddering". This is an in-depth interview technique that was specifically developed for means-end studies (see Reynolds and Gutman, 1988).

The Research Problem

Means-end studies reported in the extant literature typically involve the researcher in cognitive mapping, i.e. establishing consumers' knowledge structures and perceptual orientations towards a given set of products. These, then, explain how consumers' perceived attributes of the products are connected to the consumers' values (Grunert, 1995; Grunert and Grunert, 1995; Klenosky et al, 1993; Reynolds et al, 1995; Walker and Olson, 1991). Once means-end structures linking values to consequences and attributes have been established, it is often assumed that, by implication, the link between consumers' values and their choices has been established (Gutman, 1982; Reynolds et al, 1995; Reynolds and Gutman, 1988; Nielsen et al, 1998).

There is, however, no empirical basis for this assumption. On the contrary, empirical research casts doubt that cognition alone can necessarily predict choice behaviour (Fishbein, 1966; Fiske and Taylor, 1991; La Piere, 1934; Wicker, 1969; William, 1980). Whereas an individual's cognitive structures for specific products represent that person's declarative knowledge and perceptions of the products (Grunert and Grunert, 1995), consumer choice behaviour is concerned with what individuals choose, given a social context (Lambin, 2000; Schiffman and Kanuk, 2000). Establishing linkages between values and consumer choice behaviour could require that researchers firstly determine consumer choice behaviour, i.e. what consumers choose, given a consumption occasion in a particular social context. Only then, could they attempt to describe the linkages between choices and values (see Allen and Ng, 1999).

The Study Aim and the Research Questions

The aim of the study was formally stated as follows:

To determine whether or not means-end theory can be extended to linking choice behaviour to values.

As a framework for addressing the aim, the study was focused on the following research questions:

1. What, if any, are the conceptual categories in the means-end theory linking choice behaviour to values?
2. How, if at all, are the conceptual categories in the means-end theory linking choice behaviour to values connected together?

A conceptual model for means-end theory linking context-nested choices to values was used as a guide to answering the research questions. The conceptual model is discussed in detail in chapter 4. The conceptual model was built in accordance with the philosophical paradigm adopted for the study.

The Philosophical Paradigm of the Study

Researchers often hold diverse views about critical issues that guide research action. The diverse views on research are organised into sets of beliefs or philosophical perspectives, known as paradigms (Carson et al, 2001; Guba, 1990; Lincoln and Guba, 2000; Neuman, 1994). The paradigmic position for this study is outlined so as to providers readers with focus, clarity, and consistency in interpreting the research study (Miles and Huberman, 1994). The outline, first, highlights the main paradigms that guide social studies, as a way of providing the background in which the selection of the paradigmic position for this study was justified (Carson et al, 2001).

The paradigms that are usually considered in social studies are positivism, postpositivism, critical theory, and constructivism (Lincoln and Guba, 1998). Tables 1 and 2 below summarise the basic beliefs (metaphysics) that researchers use to differentiate the paradigms.

Table 1: Basic beliefs about research paradigms

Item	Positivism	Postpositivism	Critical theory et al.	Constructivism
Ontology	Naïve realism - "real" reality but apprehendable	Critical realism - "real" reality but only imperfectly and probabilistically apprehendable	Historical realism - virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	Relativism - local and specific constructed realities
Epistemology	Dualist/objectivist; findings true	Modified dualist/objectivist; critical tradition/community; findings probably true	Transactional/subjectivist; value-mediated findings	Transactional/ subjectivist/ created findings
Methodology	Experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	Dialogic/dialectical	Hermeneutical/dialectical

Source: Lincoln and Guba, 2000, 168

Table 2: Paradigm positions on selected practical issues

Item	Positivism	Postpositivism	Critical theory et al.	Constructivism
Inquiry aim	explanation: prediction and control		critique and transformation	understanding; reconstruction
Nature of knowledge	verified hypotheses established as facts or laws	nonfalsified hypotheses that are probable facts or laws	structural/historical insights	individual reconstructions coalescing around consensus
Knowledge accumulation	accretion - "building blocks" adding to "edifice of knowledge"; generalizations and cause-effect linkages		historical revisionism; generalization by similarity	more informed and sophisticated reconstructions; vicarious experience
Goodness or quality criteria	conventional benchmarks of "rigor": internal and external validity, reliability, and objectivity		historical situatedness; erosion of ignorance and misapprehension; action stimulus	trustworthiness and authenticity
Values	excluded - influence denied		included - formative	
Ethics	extrinsic: tilt toward deception		intrinsic: moral tilt toward revelation	intrinsic: process tilt toward revelation; special problems
Voice	"disinterested scientist" as informer of decision makers, policy makers, and change agents		"transformative intellectual" as advocate and activist	"passionate participant" as facilitator of multivoice
Training	technical and quantitative: substantive theories	technical; quantitative and qualitative; substantive theories	resocialization; qualitative and quantitative; history; values of altruism and empowerment	
Accommodation	commensurable		incommensurable	
Hegemony	in control of publication, finding, promotion, and tenure		seeking recognition and input	

Source: Lincoln and Guba, 2000, 170

The four paradigms of positivism, postpositivism, critical theory, and constructivism, shown in table 1, are briefly outlined on the bases of ontology, epistemology, and methodology. Ontology is the branch of philosophy that studies the nature of reality and human beings in the world (Magee, 2001). Ontological questions seek to answer whether or not reality really exists objectively, independent of the human mind. A researcher's ontological orientation is often considered to be an indicator of that particular researcher's epistemological position.

Epistemology is the study of knowledge, which seeks to establish the grounds on which knowledge claims are justified (Vesey and Foulkes, 1990). A researcher, normally, adopts a study methodology that conforms to that particular's researcher's epistemological perspective. Methodology is about the most appropriate techniques for establishing and presenting knowledge claims, given particular ontological and epistemological positions.

Though paradigms are identified with specific orientations towards ontology, epistemology, and methodology, the boundaries between the paradigms are blurred. The boundaries between some paradigms are blurred because the paradigms share similar positions on their orientations towards certain philosophies that guide the research process. Consider, for example, the boundaries between the paradigms of positivism and postpositivism in table 2. The two paradigms have similar orientations towards the nature and role of "knowledge accumulation", "quality of criteria", and "voice" in research (see table 2). A similar pattern of shared positions on paradigmatic orientations towards certain key philosophical questions also exists between critical theory and constructivism. As can be seen in table 2, the two paradigms have similar orientations towards the philosophical questions concerning the role of "personal values" in research and the "level of training" required in order to carry out research.

In addition, the boundaries between paradigms are "fluid" because paradigmatic categories keep on altering with new thinking (see Richardson, 1998; Lincoln and Guba, 2000). A change in paradigm boundaries is known as paradigm shift (Denzin and Lincoln, 1998; Lincoln and Guba, 2000). Denzin and Guba (1998) introduced a term, blurring of genres, referring to the lack of rigidly recognised boundaries between paradigms.

Furthermore, researchers rarely adopt paradigms in forms that they were originally presented. Instead, the researchers,

in most cases, act as "bricoleur-theorists" (Lincoln and Guba, 2000, 6), i.e. those who work between and within competing and overlapping paradigms. In this study, a paradigmic bricolage was constructed using the basic concepts of ontology, epistemology, and methodology. Though the main concepts are used in this section to outline the paradigmatic position for this study, a more detailed discussion of the study methodology, and axiology is given separately in chapter four.

Ontological considerations

Ontology, the study of the nature of reality and human beings, is traditionally represented by two extreme opposite philosophical positions, i.e. "realism" and "idealism". Extreme realists, also known as naïve realists, contend that "reality" exists "out there" independent of human consciousness (Vesey and Foulkes, 1990). Idealists, on the other hand, adopt relative ontology, arguing that "reality" is mind-dependent, and therefore is a subjective phenomenon (Vesey and Foulkes, 1990). According to the doctrine of idealism, reality is a matter of personal mental visions whose interpretation as reality is subjective (Magee, 2001; Vesey and Foulkes, 1990).

The philosophy adopted for this study is called critical realism, which is positioned in between naïve realism and idealism, rejecting the extreme positions of both naïve realism and idealism. It is suggested that some phenomena relate to objective reality while others have mind-dependent reality (see Searle, 1999). Consider, for example, phenomena such as atoms of chemical elements, natural objects composed of the atoms (e.g. water, gases, wood, planets, and galaxies), and forces that might result from the interaction between the objects (e.g. the force of gravity). It could be argued that these phenomena exist independent of human consciousness. On the other hand, social phenomena, such as justice, beauty, values, family, civilisation, or democracy, could be considered as socially constructed conceptual ideas, whose interpretation as reality is subjective (Magee, 2001; Searle, 1999).

Though critical realists consider socially constructed phenomena to be subjective, it is well established that the phenomena exert real influence on people's behaviour (see Searle, 1999). Critical realists argue that the influence of commonly held beliefs about socially constructed reality on behaviour is characterised by action sequences and regularities (see Grunert and Grunert, 1995; Miles and Huberman, 1994 Urmson and Rée, 1989; Vesey and Foulkes,

1990). As an example, people with shared values, which could be considered to be largely a result of the human need for self-identity, perceive, cognise, and interpret the external world in ways that depict a steady relationship between *behaviour* and *values* (cf. Miles and Huberman, 1994). Based on critical realist ontology, it is contended that values are socially constructed phenomena, whose influence on behaviour is real, and can be inquired into (cf. Grunert and Grunert, 1995; Gutman, 1982).

Epistemological considerations

Epistemology, the branch of philosophy that is concerned with the study of knowledge, has two opposing philosophical perspectives, i.e. *rationalism* and *empiricism* (Vesey and Foulkes, 1990). According to Vesey and Foulkes (1990) and Magee (2001) rationalists argue that reasoning is the only way of establishing knowledge of phenomena in the world. Rationalists consider sensory input to be inherently unreliable, more of a source of error, in establishing knowledge (Magee, 2001). The doctrine of deductivism is founded on rationalist epistemology (Magee, 2001). Deductivism, which has its roots in mathematics and natural sciences, is an approach for scientific discovery that requires a researcher to start from indubitable facts or premises and then proceed to link the facts to derive logical consequences or conclusions in a chain of reasoning (Magee, 2001; Neuman, 1994).

Social researchers who adopt rationalism and deductivism advocate the use of a small number of hypotheses that are comparable to those of mathematical axioms, and try to work down to what must be proved (Denzin and Lincoln, 1998; Neuman, 1994; Vesey and Foulkes, 1990). Deductivism, together with the rationalist epistemology, are located within the positivist and postpositivist paradigms, in which a priori theory and a priori propositions are used, assuming that imagination can leap ahead of experience in establishing knowledge (Neuman, 1994; Vesey and Foulkes, 1990).

Empiricists, on the other hand, believe that knowledge can only be established through sensory input, such as seeing, hearing, feeling, tasting, or smelling (Miles and Huberman, 1994; Vesey and Foulkes, 1990). Radical empiricists reject the use of a priori theory and a priori propositions in research, arguing, "our senses constitute the only direct interface between ourselves and reality" (Magee, 2001, 104). Empiricists advocate inductive research approach, where studies start with sensory input, then move on to generate theory grounded in the research data (cf. Glaser and Strauss,

1967; Neuman, 1994). The theory generated in the inductive research approach, is based on sensory data, and is then used for more abstract generalisation, i.e. generalisation to wider phenomena (Neuman, 1994).

It could be problematic and unnecessary for a researcher to be totally aligned to either rationalism together with deductive research approach, or empiricism and the inductive research approach (see Ali and Birley, 1999; Miles and Huberman, 1994). Consider, for example, that empiricists expect researchers to suspend all theoretical premises until empirical investigation is complete. Bryman (1988), quoting Bulmer (1979), argues that it is doubtful whether a researcher is capable of suspending awareness of theories until data collection is complete. For this reason, this study adopted a *hypothetic-inductive* research approach, that integrates the deductive and inductive research approaches (Ali and Birley, 1999).

Table 3 overleaf shows how the integrated approach (the hypothetic-inductive) research approach compares with the purist deductive and inductive research approaches in developing theory. The purist deductive approach, which follows the rationalist epistemology, typically starts with a hypothesis. The hypothesis is, then, tested resulting in either accepting or rejecting the hypothesis. If the hypothesis is accepted, then, the hypothesis becomes a theory. At the other extreme, the purist inductive approach, which follows the empirical epistemology, starts with no hypothesis, and ends up with a new theory developed from the empirical data. This study adopted the integrated approach, thus avoiding the limiting extreme positions whilst benefiting from the advantages of both perspectives. The integrated research approach was, characteristically, based on a proposed model with conceptual constructs that were used to guide the research process.

Table 3: The integrated approach compared with purist deductive and inductive research approaches

Stage	Purist deductive	Purist inductive	Integrated approach
1.	Develop theoretical framework	Area of enquiry identified - but no theoretical framework	Develop theoretical framework based on constructs
2.	Variables identified for relevant constructs	Respondents identify constructs and explain the relationship between them	Some variables identified for relevant constructs - others can be identified by respondents
3.	Instrumental development	Broad themes for discussion identified	Researcher converts the a priori theoretical framework into atheoretical questions
4.	Respondents give answers to specific questions	Respondents discuss general themes of interests	Respondents discuss the seemingly general questions and identify constructs which are meaningful to them and explain relationships between the constructs
5.	Answers analysed in terms of prior theoretical framework	Researcher develops theory on purely inductive basis	Respondent data analysed according to existing theory. OR theory is developed on an inductive basis - without regard to existing theory.
6.	*Outcome* Theory tested according to whether hypotheses are accepted or rejected	*Outcome* Theory developed	*Outcome* *Either* Existing theory is adapted *Or* Alternative theoretical framework is presented

Source: Ali and Burley, 1999, 106

The adoption of critical realist ontology together with the epistemologies that are consistent with the integrated hypothetic-deductive approach located the study within the realm of the doctrine of *phenomenology*. Phenomenology is a philosophical position that regards social research as "the study of lived experiences and the ways we understand those experiences to develop a worldview" (Marshall and Rossman, 1999, 112). Within the doctrine of phenomenology, this study took on the interpretivist epistemology, which is generally associated with qualitative research studies (Carson et al, 2001; Denzin and Guba, 1998; Dey, 1993; Lincoln and Guba, 2000).

Significance of the Study

Most researchers assume that means-end studies can establish linkages between consumers' values and choice behaviour. These researchers usually recommend marketing programmes based on the assumption that consumers' means-end structures linking values to perceived product attributes are indicators of the linkages between values and choice behaviour. However, literature review revealed that means-end structures do not necessarily link values to consumers' choices in a given social context. There is no theory, within existing literature, linking values to choice behaviour. A means end theory linking choice behaviour to values could have the following implications to means-end studies and marketing practice.

1. The procedure followed in carrying means-end studies.

The process of research, in traditional means-end studies, typically starts with choosing the stimulus that is used as the bases for determining the conceptual categories of "attributes", "consequences", and "values". Choice behaviour is, therefore, not directly determined in traditional means-end studies. Rather, the respondents' choice behaviour is deduced from cognitive structures linking attributes of the stimulus to the end states representing values.

The procedure followed in the study of the proposed means-end theory, on the other hand, starts with the investigation of "choice behaviour" within a given social context. Once choice behaviour has been established, it then forms the bases of the investigation of other conceptual categories of "attributes", consequences, and "values". The advantage of this procedure of starting the research process with determining "choice behaviour" is that it obviates the need

to predict choice behaviour on the basis of the discredited consumers' cognitions.

2. Recognising the importance of social contexts in determining linkages between choices and values.

Though researchers agree on the importance of social contexts in determining linkages between choice patterns and values (see Reynolds and Gutman, 1988; Segal et al, 1990), most researchers attempt to take into account the social contexts by encouraging respondents to think of a hypothetical context during the interviews (Gutman, 1982; Gutman, 1987; Reynolds and Gutman, 1988). A researcher typically evokes a situational context by asking respondents to think of a hypothetical context while giving responses (Reynolds and Gutman, 1988). However, as already explained, individuals do not necessarily act consistently with what they say with reference to a hypothetical context. What individuals do in specific situations is influenced by the individual's personal inclinations, social influences, and other considerations, which cannot easily be taken into account when the decision is with reference to hypothetical contexts. In some means-end studies, researchers have attempted to avoid the influences of social contexts altogether (see Botschen and Hemetsberger, 1998). Whilst the use of a hypothetical context in a study could be appropriate for mapping cognitive structures, actual consumer choices could be better established in a natural social context in which the consumers make the choices (Fiske and Taylor, 1991). In that sense, the study could contribute to knowledge by developing methods of establishing actual choices in social contexts and linking the choices to values.

It was also put into consideration that the research results might not have supported the proposal that means-end theory linking values to choice behaviour could be developed. Such results would have cast doubts on the usefulness of means-end theory to marketing. It has already been explained that means-end theory in extant literature relies solely on the now discredited assumption that cognition predicts actual behaviour. If values were not linked to choice behaviour, then, the next research priority would have been to concentrate on determining how, if at all, means-end theory was relevant to marketing. The research results would, therefore, had set new research agenda.

The key concepts involved in the proposed means-end model are, therefore, values and choice behaviour. The concepts are reviewed in the next two chapters. Chapter 2 is concerned

with the review of the concept of values. Choice behaviour is, in turn, reviewed in chapter 3. The review of the concept of choice behaviour is then followed by a presentation of a summary of current state of knowledge of means-end theory and the identification of the research gap.

Chapter

TWO

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Social scientists acknowledge the power of values in influencing choice behaviour (e.g. Allport 1961; Allport and Vernon, 1931; Allport et al, 1960; Kluckhohn and Strodtbeck, 1961; Hofstede, 1980; Rokeach, 1968; 1973). These scientists, however, hold divergent views about the exact nature of values and appropriate approaches to value research (cf. Bagozzi and Dabholkar, 1994; Gutman, 1982, 1987; Hofstede, 1980; Lawson, 1997; Schwartz, 1994). The concept of values and the approaches to value research reported in extant literature are reviewed in this chapter. The concept of values adopted for this study is also explained, highlighting the key assumptions that underpin the value concept and the alternative approaches to value research. The discussion is, then, summarised, linking the literature review in this chapter to the review of choice behaviour in the next chapter.

The Concept of Values

Since the early 1930s, social scientists have used the concept of values to explain a range of diverse phenomena. Psychologists, for example, conceive of values as phenomena mainly linked to personality types, such as dogmatism, authoritarianism, ethnocentrisms, and Machiavellianism (Allport and Vernon, 1931; Troldahl and Powel, 1965; Rim, 1970; Feather, 1971). Sociologists, on the other hand, think of values as a concept chiefly related to society's collective consciousness, which determine social conduct (Durkheim, 1960; Blau, 1964). For their part, researchers in the field of organisational behaviour conceive of the value concept as a phenomenon mainly associated with problems within organisations (McMurray, 1963), corporate decision strategies (Guth and Tagiuri, 1965), and indices of managerial success (England and Lee, 1974).

In an attempted to harmonise the diverse views on human values across different social disciplines, some scientists (e.g. Kluckholm and Strodtbeck, 1961), suggested that values be thought of as human orientations towards the following:

- *Good or evil*
- *Past, present, or future in perspective*
- *Being, becoming, or doing*
- *Subjugation to, in harmony with, or in mastery over nature*
- *Linearity, collateral, individualism, or collectivism*

Kluckholm and Strodtbeck's (1961) classification of the value concept, however, seems to be too broad and general.

In addition, many researchers remained unconvinced that Kluckholm and Strodtbeck's (1961) classification harmonise the hitherto divergent perspectives on the meaning of values. Instead, they continued to draw attention to "the conceptual disarray of the value concept in the social sciences" (Rokeach, 1973, 17). There seemed to be too many concepts that different researchers referred to as values. Smith (1969), for example, made the following comments regarding the multiple views on values:

"...the increased currency of the explicit value concept among psychologists and social scientists has unfortunately not been accompanied by corresponding gains in the conceptual clarity or consensus. We talk about altogether too many probably different things under one rubric when we stretch the same terminology to include the utilities of mathematical decisions theory... fundamental assumptions about the nature of the world and the man's place in it... ultimate preferences among life style... and core attitudes or sentiments that set priorities among one's preferences and thus give structure to a life... And, at the same time, we are embarrassed with a proliferation of concepts akin to values: attitudes and sentiments, but also interests, preferences, motives, catharsis, values. The handful of major attempts to study values empirically have started from different preconceptions and have altogether failed to link together to yield a domain of cumulative knowledge" (Smith, 1969, 97-98)

In the absence of a consensus, over the concept of values, Rokeach (1973) provided what is widely regarded as fresh momentum to the values research (see Gutman, 1982; Long and Schiffman, 2000; Zhao et al, 1998).

Rokeach defined values as

> *"an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence"* (Rokeach, 1973, 5)

Most researchers, building on Rokeach's definition, incorporate the concept of "goals" in the definition of values (Bagozzi and Dabholkar, 1994; Gutman, 1997; Hofstede et al, 1998, Lawson, 1997; Pieters et al, 1995; Schwartz, 1994). Schwartz (1994) and Hofstede et al (1998) offer the two most often-quoted goal-oriented definitions of values. According to Schwarts (1994), values are defined as

> *"desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity" (Schwartz, 1994, 21)*

Hofstede et al (1998), for his part, suggest a psychology related goal-oriented definition of values, as

> *"intangible higher-order outcomes or ends, being cognitive representations of consumers' most basic and fundamental needs and goals" (Hofstede et al, 1998, 38)*

Implicit in different definitions of values reviewed above is that values have the characteristics of being: (i) beliefs pertaining to abstract goals, (ii) modes of conduct, or end states of existence, that are (iii) personally desirable, which (iv) guide behaviour. Each of these characteristics is explored a little further below.

(i) Value as types of beliefs

According to Rokeach (1968), there are three kinds of beliefs: descriptive beliefs, beliefs involving moral judgements, and subjective beliefs. Descriptive or existential beliefs are thought to be the objective beliefs or facts that are capable of being either true or false. For example, the belief that there is life on the planet Mars is assumed to be objective because it can be either true or false. Moral judgements, on the other hand, are based on the assumption of collective consciousness of what is right or wrong. Moral judgements are, for example, when people in a particular society hold collective beliefs that the donation of human parts for medical purpose is either "wrong" or "right".

The assumption of collective moral beliefs implies that values typically have an "oughtness" character. From Rokeach's (1973) point of view, the value concept is a personally relevant phenomenon, free from the "oughtness" character. "Oughtness", from Rokeach and others' perspective, does not conform to the definition of personally held values because it is represented as a cognised wish or requirement of the suprapersonal objective order, which has an invariant reality, and whose validity transcends the point of view of any one person (Heider, 1958).

According to Rokeach (1973), values are beliefs of a third type, that is, a personally relevant belief, wherein an individual judges some "means" or "ends" of action to be personally desirable or undesirable. The personal relevance

character of values is consistent with Allport's long held contention that "a value is a belief upon which a man acts by preference" (Allport, 1961, 454). Some researchers in more recent work on values also make specific reference to the concept of personal values (see Klenosky et al, 1993; Mulvey et al, 1994; Reynolds and Gutman; Valette-Florence and Rapacchi, 1991).

(ii) The value concept refers to goals, modes of conduct, or end states of existence

Many researchers conceive of values as instrumental or terminal types (e.g. Claeys et al, 1995; Rokeach, 1973). Terminal values refer to the preferred end states of existence. The concept of terminal values is therefore equivalent to that of life themes, which guide behaviour (see Rokeach, 1973). Terminal values can also be thought of as goals that an individual might aim to attain for their own sake, rather than as instruments for achieving higher goals. Instrumental values, on the other hand, refer to preferred modes of behaviour that facilitate the achievement of certain terminal states of existence. Instrumental values are therefore conceived of as outcomes that individuals prefer, not for their own sake, but as instruments for achieving higher goals or terminal values.

In more recent studies (Gutman, 1982) the concept of consequences, replaces that of instrumental values and terminal values are referred to as personal values or simply values. Most researchers with an interest in means-end theory prefer to adopt the concepts of consequences and personal values in the respective places of Rokeach's concepts of instrumental values and terminal values (e.g. Botschen and Hemetsberger, 1998; Botschen et al, 1999; Claeys et al, 1995; Graeff, 1997; Klenosky et al, 1993; Olson and Reynolds, 1983). Gutman's (1982) conceptual framework consisting of consequences and values instead of instrumental values and terminal values was adopted for this study because the framework is simpler and posses fewer risks of confusing researchers. For example, the original framework contains two different conceptual categories (instrumental values and terminal values), both of which refer to values. This tends to confuse as to what really the essence of values is. Gutman's model, on the other hand offers a clearer framework in which all outcomes, other than "end states" are called "consequences". The term "values" is, only reserved for "terminal consequences". Values are therefore considered to be beliefs about "end states" of being, rather than instrumental states or consequences.

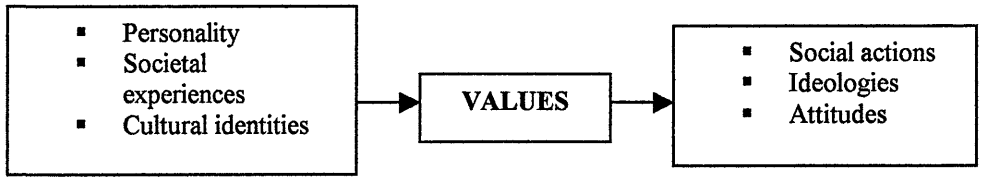
(iii) Values are personally preferred end states, represented by goals or outcomes of behaviour

It is widely assumed that values arise mainly from the human need for personal esteem, and social identity (cf. Gutman, 1982; Schwartz 1994). It is, therefore, assumed that the antecedents of values are the individual's' personality, societal experiences, and cultural identities. Individuals are thought to weigh between goals that are primarily concerned with self-relevant needs and the goals for starting or maintaining (even terminating) social identities. The type of goals, between the "self-centred" and social related goals, which an individual prefers, reflects that particular person's values (Swartz, 1994).

(iv) Values as guides to behaviour

Researchers agree that the consequences of values are attitudes, ideologies, and social action (Rokeach, 1973; Schwartz, 1994). It is argued that ideologies are beliefs and ideas that form the basis of an individual economic and political theory. Social actions, in turn, are thought to be human actions by which individuals communicate meaning (Neuman, 1994). For example, hugging another person to express fondness for that particular person can be considered a social action. In contrast, yawning is not a social action because it is an involuntary action. Figure 1 below summarises the antecedents and consequences of values.

Figure 1: Antecedents and consequences of values



Source: Adapted from Rokeach, 1973

Figure 1 suggests that values come from an individual's personality, and from the person's societal and cultural experiences. In accordance with this line of thought, a person's values are largely responsible for that particular individual's social actions, ideologies, and attitudes towards specific objects in particular use-situations. Personality explains individuals' unique characteristics and values whilst societal experiences and culture account for the

values shared by people living in the same society, or who identify with the same culture.

The salient characteristics of the value concept, which persist in the definition of values quoted in the literature, are that: - *values are types of abstract goals, representing a particular person's preferred end states of existence.* To this end, many researchers, in their work on means-end theory, refer to values as *"personal values"* (Mulvey et al, 1994; Klenosky et al, 1993; Reynolds and Gutman, 1988; Valette-Florence and Rapacchi, 1991). This study, therefore, adopted the definition of values, which includes the concepts of abstract goals and personally relevant end states of existence, as

> *" Abstract goals, representing personal beliefs that certain end states of existence are personally desirable" (cf. Gutman, 1982; Rokeach, 1973; Schwartz 1994).*

Having defined the concept of values, the next step was to review the approaches used to classify values.

Typologies of Values

The interpretation of "end states" as values can result in different value classifications. Different classes of values would make it difficult to compare values elicited by different researches. Early researchers, realising this problem, suggested the interpretation of values within standard classes, known as typologies. Typologies are broad categories used for grouping personal constructs that refer to similar kind of values. There are wide ranges of typologies of values (e.g. Allen, 2001; Allport et al, 1960; Hofstede, 1980; Kluckholm and Strodtbeck, 1961; Kahle and Kennedy, 1989; Rokeach, 1973; Sheth et al, 1991; Swartz, 1994). Of these typologies, Rokeach's Value Survey (RVS) is the widely adopted benchmark used in developing other typologies (see Allen, 2001; Kahle and Kennedy, 1989; Sheth et al, 1991; Swartz, 1994). Table 4 [4(a) and 4 (b)] on the next two pages presents the value constructs contained in the two lists of the RVS of terminal and instrumental values. Instrumental values are in table 4(a) whilst table 4(b) contains the terminal values.

Table 4: The Rokeach value survey list (RVS)

(a) Terminal values

Value constructs	Explanation of the value constructs
• A comfortable life	• A prosperous life
• An exciting life	• Adventurous life
• A world of peace	• Freedom from conflicts
• Equality	• Equal opportunities for all
• Freedom	• Free choice
• Happiness	• Contentment
• National security	• Protection from attacks
• Pleasure	• Enjoyment, indulgence
• Salvation	• Saved, eternal life
• Social recognition	• Respect, admiration
• True friendship	• Close companionship that can be relied upon
• Wisdom	• A full understanding of life
• A world of beauty	• Beauty of nature and the arts
• Family security	• Taking care of family members
• Mature love	• Relationship that seeks fulfilment
• Self respect	• Self esteem
• A sense of accomplishment	• Long lasting contribution to knowledge
• Inner harmony	• Freedom from inner conflict

(b) Instrumental values

Value construct	Explanations of the value construct
• Ambitious	• Aspiring, hard working
• Broad-minded	• Open-minded
• Capable	• Competent, effective
• Cheerful	• Light-hearted, joyful
• Clean	• Neat, tidy
• Courageous	• Brave, valiant
• Forgiving	• Willing to pardon
• Helpful	• Welfare oriented
• Honest	• Sincere, truthful
• Imaginative	• Creative
• Independent	• Self reliant, self-sufficient
• Intellectual	• Intelligent, reflective
• Logical	• Consistent, rational
• Loving	• Affectionate, tender
• Obedient	• Dutiful, respectful
• Polite	• Well-mannered
• Responsible,	• Dependable, reliable
• Self-controlled	• Restrained, self-disciplined

Source: Adapted from Ness and Stith, 1984, 235

RVS typically consists of two sets of value constructs: terminal and instrumental values. Social scientists seldom use the RVS in its original form. Some researchers consider the RVS to be inherently ethnocentric and lacking in theoretical foundation, having been derived by empirical studies in the American context only (see Allen, 2001; Swartz, 1994). Other researchers also consider the 36 value constructs in the RVS to be too many for administration in measuring values.

Allen (2001) recently developed value typology, also referred to as value domain, from the RVS and Swartz's (1994) scheme of value classification (see table 5 below). Allen's (2001) value typology was the basis on which the value domains were developed for the classification of the "end state" responses. The value domains adopted for this study, together with their equivalencies from Allen's typology (in brackets), are enjoyment (pleasure), inner harmony (universalism), social belonging (similar with Allen's typology), and social responsibility, which referred to the need to carry out the duty or responsibility of looking after the needs of other members of the family.

Table 5: Domains of values

Value domain	Contents of the value domain
• Hedonism (pleasure)	• Indulgence, a pleasurable life
• Achievement	• Sense of accomplishment, ambitious, capable
• Self-direction	• Independent, imaginative, intellectual
• Power	• Social influence, recognition
• Conformity	• Obedient, politeness
• Social belonging (Security)	• Family security, national security
• Benevolence,	• Forgiving, helpful, loving, honest
• Universalism (Happiness)	• Equality, a world of peace, social justice, inner harmony, wisdom, spiritual salvation, self-respect, a world of beauty, broad-minded

Source: Adapted from Allen, 2001, 107

Given that values are widely considered to be standards that people use to judge alternative courses of action, several attempts have been made to provide a framework for explaining how values influence behaviour (e.g. Gutman, 1982; Howard, 1977; Rokeach, 1973; Vinson et al, 1977; Young and Feigin, 1975). The research effort in consumer behaviour has followed two streams: the macro and micro research approaches.

The Macro Approach to Values Research

The macro approach characteristically involves the researcher in survey research methods. Attempts are made to establish the values of a particular person or group of people (see Kahle and Kennedy, 1989; Rokeach, 1973). Researchers who adopt the macro research approach typically ask the respondents to rank or rate an a priori list of value constructs. Usually, the list used are the RVS or some of its variations, such as Kahle and Kennedy's 9 list of values (LOVs), Swartz's (1994) typology of values, or Allen's (2001) domains of values. The measurements of values obtained in the macro approach are usually used for segmenting markets and positioning products (see Goldsmith et al, 1993; Goldsmith et al, 1997; Gutenberg and Kleist,

1982; Hojat, 1998; Ness and Stith, 1982; Powel and Valencia, 1982; Prakash, 1982).

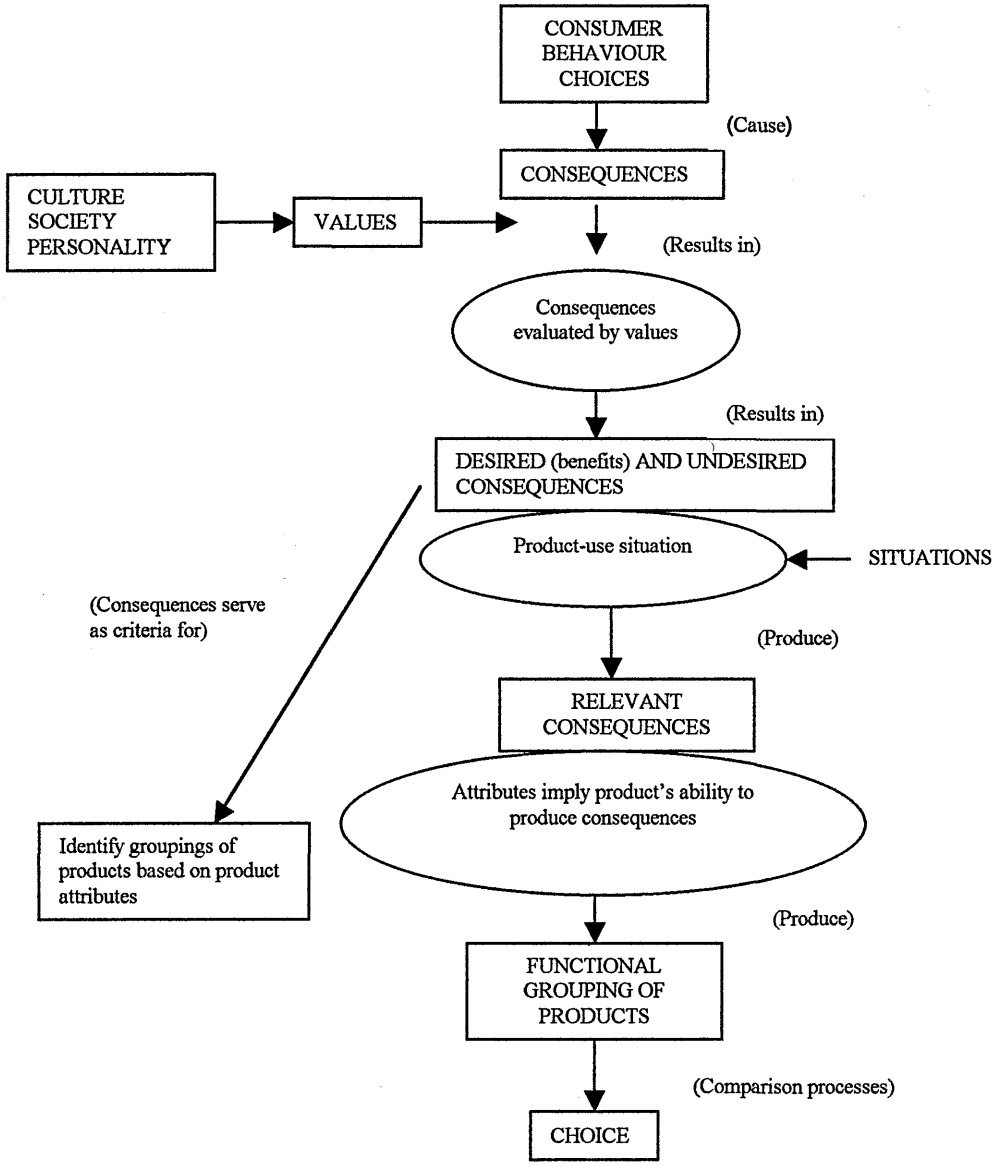
The advantage of the macro approach is that it lends itself to easy data collection, especially when the value constructs involved in the study are few. Some researchers also commend the macro approach for producing quantitative data that is suitable for "sophisticated" statistical analyses (Gutenberg and Kleist, 1982; Powel and Valencia, 1982; Prakash, 1982). The macro approach was, however, not suitable for this study because it is not amenable to establishing linkages between values and behaviour (Gutman, 1982). The macro approach is specifically suitable for establishing associations between different sets of values and behaviours rather than linkages between values and behaviour (Rokeach, 1973). The micro approach to values research offers theoretical and conceptual frameworks that have been used for explaining linkages between values and choice behaviour (see Gutman, 1982; Reynolds and Gutman, 1988; Walker and Olson, 1991).

The Micro Approach to Values Research: Means-End Theory

Psychology theories, which explain linkages between values and choice behaviour, fall under the rubric of the micro approach to values research (Reynolds and Gutman, 1988). Means-end theory is widely used in explaining linkages between values and choices (e.g. Botschen et al, 1999; Grunert and Grunert, 1995; Nielsen et al, 1998; Walker and Olson, 1991)

Gutman's (1982) means-end chain model is built on earlier contributions by Howard (1977), Rokeach (1973), Vinson et al, (1977), and Young and Feigin (1975). It provides the framework for explaining how product or service selections facilitate the achievement of desired end states of existence (see figure 2 below).

Figure 2: Gutman's means-end chain model



Source: Gutman, 1982, 62

In brief, Gutman's model shown above in figure 2 illustrates the following:

Values, which arise from a person's personality, societal and cultural experiences, give the consequences of choice actions their *valence* (direction, i.e. whether accepted or not accepted) and weight (importance). The product use-situation modifies the weight of the consequences. The relevant consequences, which result from the re-evaluation of the weights of all the consequences in the use-situation, are the bases for the choices of product categories that are considered most likely to produce the relevant consequences. The person in the choice situation selects products that possess attributes promising to produce the relevant

consequences and simultaneously minimises or altogether avoids those consequences considered to be less desirable for that particular situation.

Means-end theory is, thus, conceived of as cognitive linkages connecting values to product choices, represented by chains linking product attributes ("means") to the consumer's desired consequences, and personal values ("ends") (Botschen et al, 1999; Bredahl, 1999; Claeys et al, 1998; Mulvey et al, 1994; Reynolds and Gutman, 1988). The key characteristics of the means-end model are attributes, consequences, and values, i.e. the three levels at which conceptual categorisation, abstraction, and generalisation take place (Gutman, 1982; Reynolds and Gutman, 1988; Walker and Olson, 1991). Having already discussed the concept of values in previous sections, the other two key concepts of *attributes*, and *consequences* are explained in the following section to facilitate understanding of how the processes of categorisation, abstraction, and generalisation take place.

Attributes

Attribution theory provides a theoretical framework for understanding why people attach attributes to products. Attribution theory explains that people, in their search for meaning in objects and other stimuli, attach distinguishing characteristics to the stimuli (Dittmar, 1992; Hirschman, 1980; Richins, 1994; Sheth et al, 1991). Attributes are usually classified as tangible or intangible (see Allen, 2001; Allen and Ng, 1999).

Tangible attributes are the physical or functional, objective characteristics, or perceptual standards that individuals use in describing or distinguishing stimuli (Allen and Ng, 1999; Sheth et al, 1991). For example, the objective characteristics of food, such as taste, texture, or pungency are referred to as the tangible attributes.

Intangible attributes, on the other hand, refer to the psychological or other personally relevant constructs, which individuals use as perceptual standards in describing stimuli (McCracken, 1988). According to Allen and Ng (1999), intangible attributes are related to the "affective" or "holistic" judgement of products, in which individuals assign personal meaning to the stimuli. For example, when an individual describes food as sumptuous, delicious, invigorating, or disgusting, he/she is using subjective, personally relevant, constructs to attach personal meaning to the whole stimulus. Such constructs, used as personally

relevant perceptual standards in describing or distinguishing stimuli, are known as intangible attributes. Intangible attributes are, typically, concerned with the overall, rather than piecemeal, evaluation of the stimuli (see Allen, 2001; Allen and Ng, 1999). Consumers do not necessarily desire product attributes *per se*, but rather the consequences the attributes give rise to or prevent (Gutman, 1982).

Consequences

Consequences are defined as the physiological or psychological outcomes that individuals expect to accrue from their consumption or use of products (Gutman, 1982). Consequences can either be desirable (benefits) or undesirable (Haley, 1968; Myers, 1976). A person accrues desirable physiological consequences when, for example, he/she satisfies hunger by eating food. Gaining self- esteem or confidence by achieving high grades at school as a result of studying harder is an example of accruing psychological consequences. According to Gutman (1982), a person has to engage in an act of consumption of products or services in order to realise desired consequences.

The link between product attributes, consequences and values is explained below using the three key principles of categorisation, generalisation, and abstraction (cf. Allen, and Ng, 1999, Feather, 1975; Pieters et al, 1995). Figure 4 given below illustrates how the processes of categorisation, generalisation, and abstraction can be used in explaining the linkages between product attributes, consequences, and values.

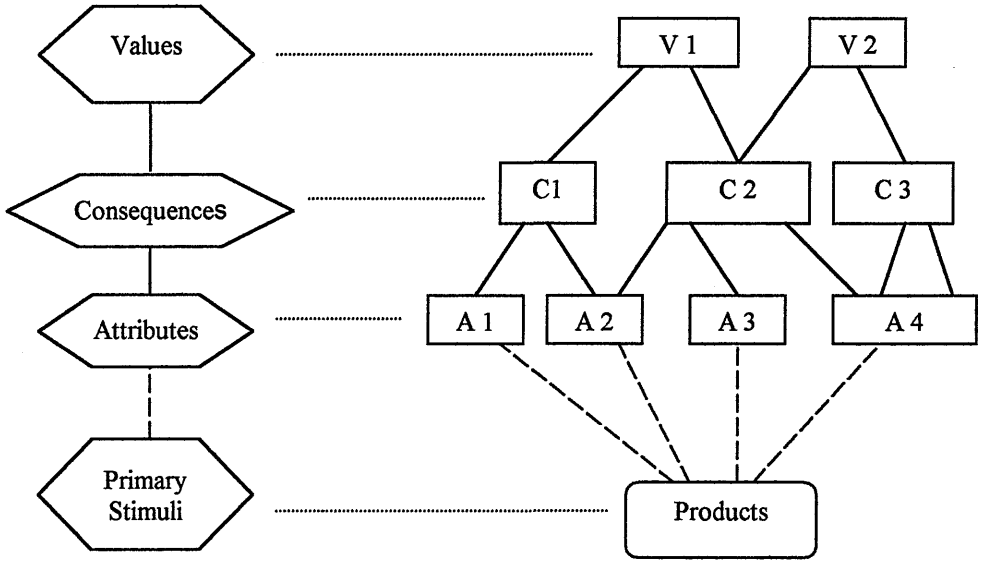
Categorisation, generalisation, and abstraction

The process by which product attributes are linked to consequences and values starts with product categorisation. Categorisation is a perceptual process by which individuals segment stimuli in their environment into meaningful groups by creating equivalencies among nonidentical stimuli (Gutman, 1982; Rosch, 1978). People, faced with a multitude of stimuli that exist in the environment, organise the stimuli into clusters to aid recognition and avoid confusion that could be brought about by information overload (Tvesky and Gati, 1978).

Given the multitude of products in the environment and relatively few values held by individuals, people organise their cognitive processes about different stimuli through processes called distinction and grouping (Gutman, 1982). Grouping, which is closely associated with categorisation, refers to the process by which the perceiving individual allocates specific stimuli to the conceptual categories. Distinctions can be conceived of as the terms by which individuals differentiate stimuli. Distinction is defined, formally, as "the dichotomies representing the end points of dimensions along which objects may be compared" (Gutman, 1982, 63). According to Allen and Ng, (1999), following Feather (1975) and Rokeach (1973), categorisation and abstraction begin when an individual has a positive or negative experience with objects. The individual, through the processes of distinction and grouping, attaches objective (tangible) and /or subjective (intangible) attributes to the objects.

As the process of stimuli distinction and conceptual categorisation shifts from concepts of low abstractness (attributes) to those of higher abstractness (i.e. consequences or values), the level of inclusiveness of conceptual categories increases (Gutman, 1982). As the level inclusiveness increases, the number of conceptual categories becomes fewer.

Figure 3: Conceptual categorisation and levels of inclusiveness in Gutman's means-end model



Source: Manyiwa and Crawford, 2002

Figure 3 illustrates the inverse relationship between the levels of conceptual abstractness and inclusiveness. The category of attributes, the least abstract of the conceptual categories, has, in this case, four groupings, i.e. A1, A2, A3, and A4. On the other hand, the category of values, which is the most abstract of the concepts, contains two groupings represented in the diagram above by V1 and V2.

In Gutman's means-end model, generalisation of findings is undertaken at the three conceptual categories of attributes, consequences, and values. The processes of conceptual categorisation, abstraction and levels of generalisation underlie the theory involved in uncovering the linkages between the three conceptual categories of attributes, consequences, and values.

Uncovering linkages between conceptual categories: Laddering interviews

The uncovering of linkages between attributes, consequences, and values in Gutman's model is often done using "laddering", an in-depth interview technique that was specifically developed for means-end studies (see Reynolds and Gutman, 1988). Laddering essentially involves three steps, i.e. (i) choosing the stimuli to be used during the interviews, (ii) eliciting constructs that respondents use to

describe and/or differentiate the stimuli, and (iii) linking the three categories of attributes, consequences, and values.

First, the researcher chooses the stimuli to be used in the study. These are usually product brands in the same product class. The same set of products is used as stimuli across all the respondents in the study for the elicitation of attributes of the products, the consumers' desired consequences, and values (see Gutman, 1982; Reynolds and Gutman, 1988). In this discussion, it is argued that the choices of products to be used in the elicitation of values constitute part of the research objectives to be determined during the study, given a social context and relevant consumption occasion.

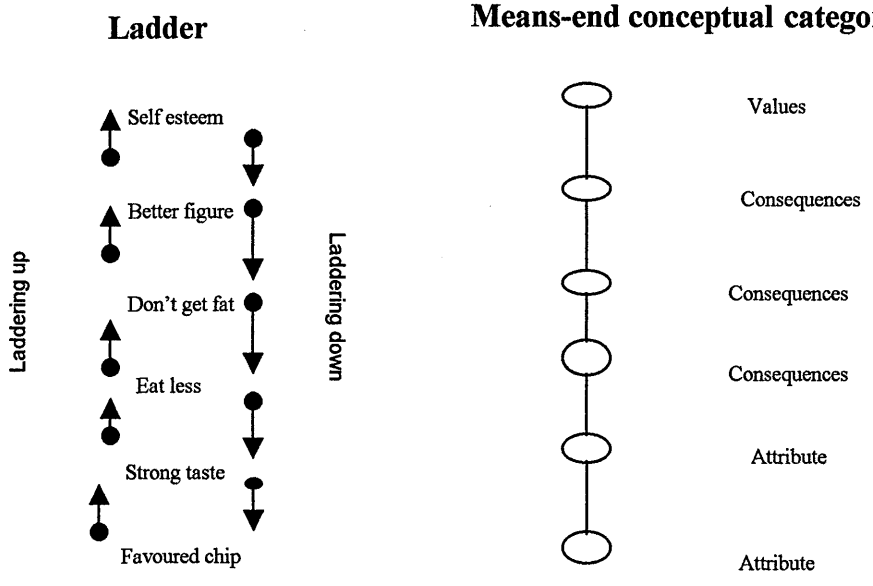
Laddering can involve any of several techniques to elicit the constructs that the consumers use to describe and/or differentiate the products presented to them. These elicitation techniques include triadic sorting, free sorting, direct elicitation, ranking, and picking from a list of attributes that the researcher might provide (see Bach-Larsen et al, 1997). The constructs that are elicited are product attributes, which are then used as the bases for eliciting the respondents' self-relevant consequences and values.

Finally, the consequences, values, and the linkages between the three conceptual categories are established by continuous probing with questions of the type "why is that important to you" (see Reynolds and Gutman, 1988). The responses provide bases for further probing. The repetitive questioning of the form "why is that important to you" or a variant of that form of questioning is called "laddering up". This type of questioning is called "laddering up" because the "why" type of questions are meant to elicit responses indicating conceptual categories in higher level of abstractness. Laddering up is meant to "force" the respondent to link his or her response to more abstract desired outcomes (cf. Gutman, 1997; Reynolds and Gutman, 1988; Valette-Florence and Rapacchi, 1991). The interviewer usually stops "pushing" the respondent up the ladder of abstraction when the respondent keeps on rephrasing the same response or insists that he/she does not know the answer.

Where a respondent appears to have skipped some less abstract categories, a researcher might "ladder down". This line of questioning, involving "how" types of questions, is called "laddering down" because it is meant to elicit responses indicating conceptual categories in lower level of abstractness. Laddering down involves asking questions of the type "how is that outcome achieved". Once the skipped category has been established by laddering down, laddering

up continues from that category until a full ladder is established. A full ladder is a chain of linkages emanating from an initial response, joining attributes to consequences and values (see figure 4 below). The last response in a ladder is usually assumed to reflect the respondent's values that are relevant to the stimuli and the use context. Figure 4 below is an illustration of complete ladder and the conceptual categories for snack-chips.

Figure 4: An illustration of a complete ladder and the concomitant conceptual categories for flavoured chips: Gutman' model



Source: Adapted from Reynolds and Gutman, 1988

Reynolds and Gutman (1988), in designing the laddering data collection technique, warned that the efficacy of the data collection technique could be affected by at least two problems. They pointed out that, first, the respondents might not know the answers required to complete the ladder, and, secondly, that the questions could be so sensitive that the respondents might be reluctant to give honest answers. Reynolds and Gutman (1988) recommended some techniques of laddering which they thought could alleviate the two problems of the laddering data collection method. The techniques are summarised in table 6 below

Table 6: Techniques of improving the efficacy of the laddering data collection method

Posturing the absence of the stimuli

- The technique is used to help respondents to verbalise responses when he or she is no longer able to move on beyond a certain point during the laddering interview
- Example: *"Imagine that you did not have (this), how would you feel?"*

Negative laddering technique

- This involves asking questions in negative form, especially when the respondent starts to give answers in negative forms
- Example of response in negative form: *"Having this (outcome) is **not** good for my health"*
- Example of negative laddering: *"Why is this (outcome) **not** important for your health?"*

Forward/ backward laddering

- In cases where respondents give "higher order consequence" responses, skipping concrete attributes, the interviewer may ask questions of the type "how" or "why" for backward laddering to establish lower-order responses that had been "skipped".
- Example, first question: *"Why are fruits for breakfast important to you?"*
- Higher order response: *"Because fruits are healthy"*
- Backward laddering question: *"Why do you think fruits are healthy?" Or "How (in what way) are fruits healthy for you?"*
- Otherwise forward laddering question would have been like: *"Why is good health from eating fruits important for you?"*

Adapted from Reynolds and Gutman, 1988

Many researchers (e.g. Bredahl, 1999; Claeys et al 1995; Klenosky et al, 1993; Nielsen et al 1998; Thompson and Chen, 1998) have adopted laddering as a standard procedure for collecting data in means-end studies. Some researchers, however, complain that laddering procedure, in its original form, has serious limitations (see Hofstede et al, 1998; Steenkamp and Van Trijp, 1996). For example, Hofstede et al suggest that

> *"Laddering has served as a very useful qualitative technique to reveal means-end chains. However, it also has its limitations. Because the laddering interview is time consuming and must be carried out by trained interviewers, it is an expensive data collection technique. Moreover, it places a serious burden on*

> *respondents, and the quality of the data may be affected by respondent fatigue and boredom. In sum, laddering is not suitable as an instrument to be used in large representative samples, nor was it intended to be used in this context, (Hofstede et al, 1998, 39).*

The criticisms of laddering, however, seem to be centred on logistics rather than theory. It could be argued that most data collection methods also require some training, and usually impose some obligations on the researcher and respondents.

Faced with the apparent difficulties of the original laddering method, researchers involved with means-end theory, are increasingly adopting a modified laddering procedure. The modified laddering procedure involves the respondents in filling in self-administered questionnaires (see Barczak et al, 1998; Botschen and Hemetsberger, 1998; Botschen et al, 1999; Graef, 1997; Gutman, 1997; Murgraff and Phillips, 1998; Pieters et al 1995; Walker and Olson, 1991). Researchers who have adopted modified laddering procedures claim that self-administered questionnaires are as effective as one-to-one laddering interviews (see Pieters et al, 1995; Walker and Olson, 1991). There is, however, no evidence to support the claim. The modification, largely, appears to be for practical expediency rather than based on theoretical arguments

Grunert and Grunert (1995) point out some ambiguities in theories underpinning the laddering technique. They argue that literature on means-end theory does not take a clear stand on the theory underpinning laddering. The alternative two theories that researchers implicitly adopt when doing laddering are motivational view and cognitive structure view (Grunert and Grunert, 1995). Motivational view would imply that means-end theory and laddering are concerned with obtaining insight into consumers' buying motives, e.g. in the way basic motives are linked to choices. In that case, the main criteria for determining the validity of laddering would be establishing the extent to which respondents think that ladders reflect their motives for the behaviour under consideration (Grunert and Grunert, 1995).

The cognitive view, on the other hand, is the view that means-end structures are a model of consumers' consumption-relevant cognitive structures, i.e., the way consumption related knowledge is stored and organised in human memory (Grunert and Grunert, 1995). According to Grunert and Grunert (1995), the main criteria, in that case, would be the predictive ability of the estimates of the

cognitive structure obtained. Current research work has, however, not yet developed methodological procedures for establishing the predictive validity of cognitive structures from means-end studies.

In the absence of theories underpinning the laddering interview technique, this study was based on the assumption that means-end theory and laddering are concerned with cognitive structures of individuals (cf. Gutman, 1982; Jolly et al, 1988; Olson, 1990; Olson and Reynolds, 1983; Peter and Olson, 1990; Reynolds and Gutman, 1988).

Summary

The discussion in this chapter was centred on reviewing the various concepts of values used by different researchers and the major approaches to value research. The concept of values adopted for this study integrates two main characteristics, namely, the end states of existences, and the goal orientation. Values are therefore conceived of as personally relevant abstract goals, representing a particular person's desired end states of being. A typology of values, which offers broad categories in which idiosyncratic values constructs can be grouped, is developed, adapting the current typologies for more consistency. The categories of values suggested in the typology for this study consist of the following broad constructs: enjoyment (pleasure), inner harmony (happiness), social belonging, and social responsibility

It is explained, in the literature review, that the macro approach and the means-end theory (the micro approach) are the two methods used in value research. The macro approach was, however, not applicable to this study because it cannot be readily used to establish the linkages between behaviour and values. Means-end theory, the framework that is currently widely used in explaining how choices are linked to behaviour, was reviewed. The main components of the means-end model in extant literature are product attributes, the consumer's self-relevant consequences, and values. Establishing choices to values, using the current means-end model, involves cognitive mapping, in which the consumer's perceptions of the relevant product attributes are linked to that particular consumer's desired end states. The process of linking attributes to consequences and values is done through two key stages of construct elicitation and laddering interviews. The current means-end model is based on the assumption that, once the linkages between product attributes, consequences and values have been linked, then,

by implication, linkages between choices and values would have been established.

The assumptions in the means-end theory reported in existing theory is, implicitly, based on cognitive psychology, in which mental states and processes are assumed to be valid indicators of choice behaviour. Empirical studies, however, cast doubt on the efficacy of cognitivism alone in providing a theoretical framework for determining choice behaviour. Researchers are increasingly interested in incorporating the behavioural perspective in theories explaining choice behaviour (see Dick and Basu, 1994; Foxall, 1997, Nord and Peter, 1980; Ryan and Bonfield, 1980). In the next chapter, the cognitive and the behavioural perspectives, the two philosophical views from which marketing theories are derived, are reviewed. The discussion in this and the next chapters laid the foundation for locating the research problem within the framework of the published literature.

Chapter

THREE

Theories of Consumer Behaviour

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The focus of this study, as already explained in previous chapters, was on developing a means-end theory linking values to behaviour. Values and behaviour are, therefore, key concepts of the proposed model. Having discussed the concept of values in chapter two, this chapter, in turn, is centred on reviewing the concept of consumer behaviour.

The two perspectives that underlie the theories of consumer behaviour, which are social cognitivism and the behavioural perspective, are reviewed, highlighting their strengths and weaknesses in providing the bases of linking choice behaviour to values. Next, the literature review is summarised and the research problem is restated in the context of what is reported about means-end theory in existing literature.

Consumer Behaviour: The Social Cognitive Perspective

Models of consumer decision-making, which have provided paradigmatic hegemony in consumer research since the 1960s, blend theories from cognitive psychology and social psychology (Andreasen, 1965; Engel et al, 1968; Howard and Sheth, 1969; Nicosia, 1966). Cognitive psychology is primarily concerned with explaining behaviour based on mental states and processes, such as motives, attitudes, and intentions (Bagozzi and Foxall, 1996; Bettman, 1979; 1986). Social cognition, on the other hand, concentrates on highlighting the importance of the social environment in determining behaviour (Eiser, 1980; 1986; Fiske, 1993; Ostrom et al, 1981; Wyer and Srull, 1986; 1989). In most consumer decision models built on social cognitivism, the concept of consumer behaviour is based on the combination of theories supporting the view that behaviour is largely a matter of mental processes and theories supporting the view that behaviour is concerned with actual choices. For example, Foxall (1997) suggests that consumer behaviour:

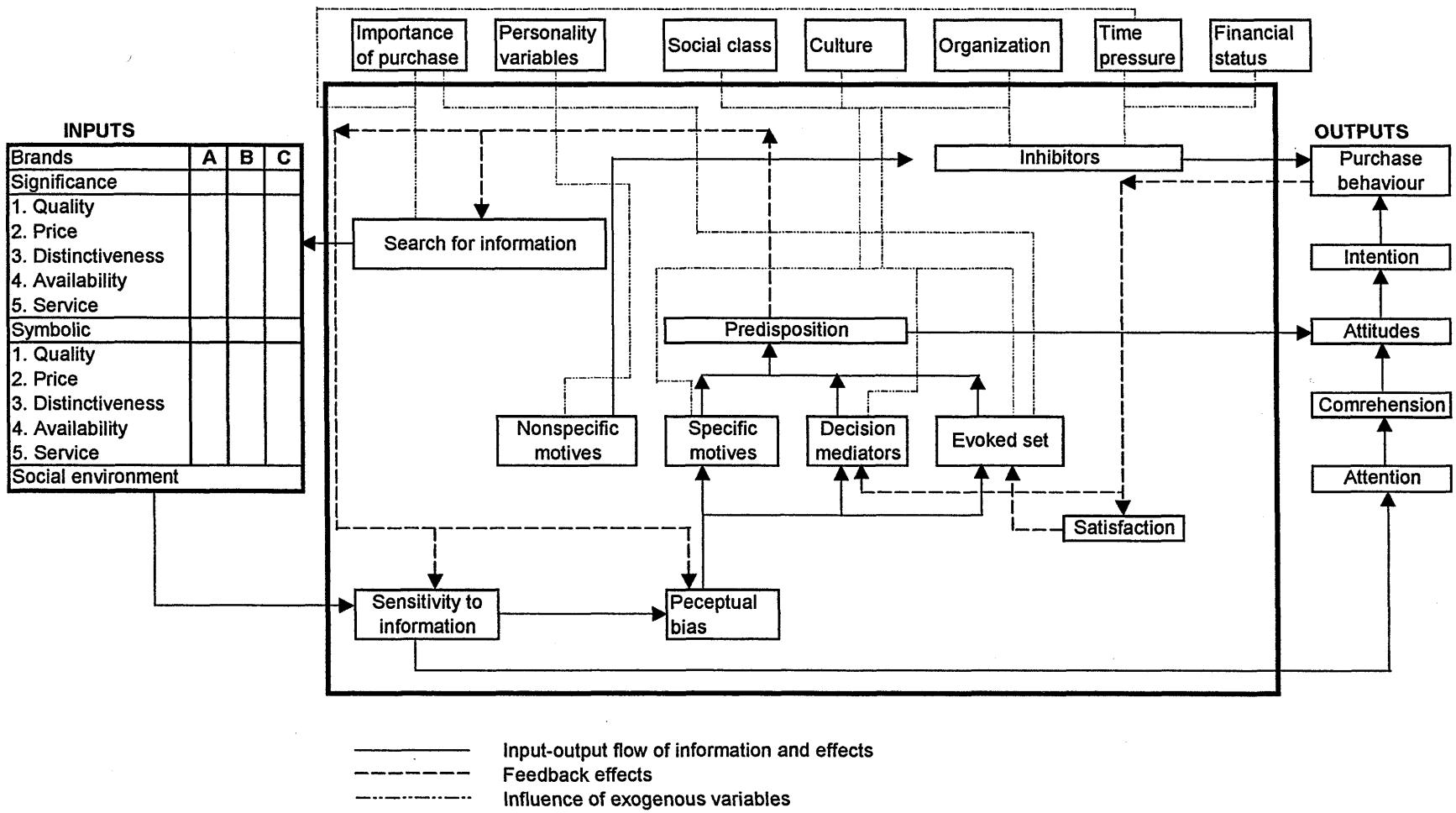
> *"embodies all the activities of buyers, ex-buyers and potential buyers from pre-purchase to purchase, consumption to discontinuation" (Foxall, 1997, 17)*

In the same vein, other researchers posit that consumer behaviour extends from the awareness of a want through the search and evaluation of possible means of satisfying it, the act of purchase, to the evaluation of the purchase item in use, which directly impacts upon the probability of purchase (cf. Albar et al, 1991; Foxall, 1997; Schiffman and Kanuk, 2000).

Howard and Sheth's (1969) model, shown in figure 5 overleaf, illustrates the process of consumer decision-making, following the social cognitive perspective. The model essentially consists of four parts. The first part, located at the top of the diagram, consists of the exogenous variables. Exogenous variables are the factors that are outside the decision-maker's control, such as personality, culture, and social class of that particular decision maker. The second part, the "inputs", is on the left side of the diagram. The "inputs" part represents the stimuli variables, such as the marketing mix elements for various products on the market and the social environment. The central rectangular box, which is the third part of the model, constitutes the decision- maker's cognitive variables. The cognitive variables consist of motives, decision mediators, decision inhibitors, and the decision-maker's predisposition. The fourth part, located on the right hand side of the diagram, is the "outputs". The "outputs" consists of five variables, namely, attention, comprehension, attitudes, intention, and purchase behaviour. The model characteristically presents consumer decision-making as a context nested goal directed process. As shown in the "outputs" components of the model, it is assumed that the decision-maker goes through five stages in making a choice, i.e. attention, comprehension, attitude formation, intention, and making the final choice.

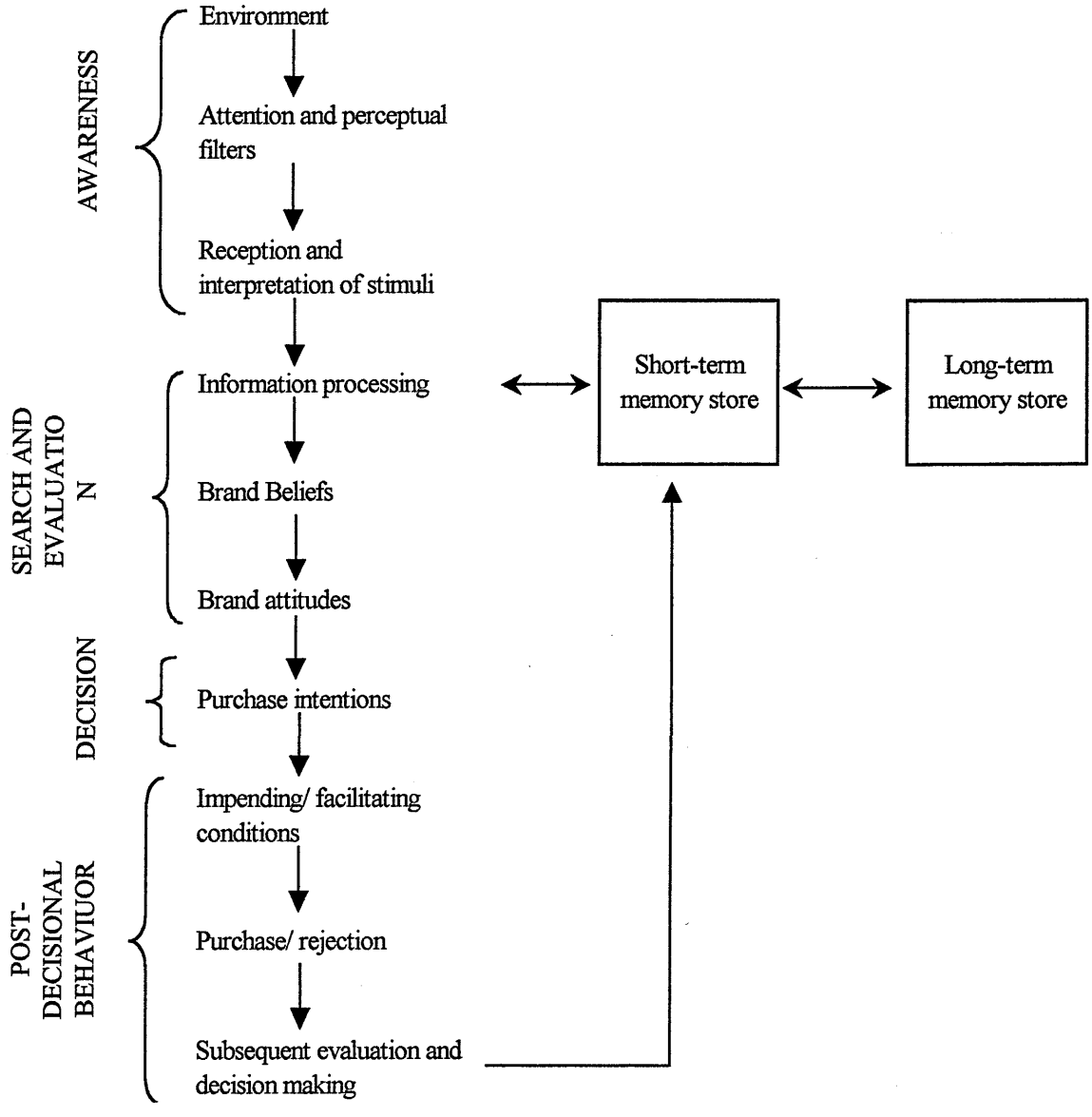
The "outputs" component of the Howard and Sheth's model is shown in more detail in figure 6 on page 41. As suggested in figure 6, the decision-making process starts with awareness of the problem or needs, followed by search evaluation, then the actual decision, culminating in post-decision behaviour. The decision-making process is typically depicted as being sequential, with attitudes and intentions preceding the actual behaviour.

Figure 5: Howard and Sheth's consumer decision-making model



Source: Enis and Cox, 1988, 109

Figure 6: A simplified version of a consumer decision-making model



Source: Baker (ed.), 1994, 196

In summary, the Howard and Sheth's model, which is based on the social cognitive perspective, presents the following arguments:

- Consumers engage in decision-making processes involving goal-directed movement through: message reception, encoding, representation, and response (choice behaviour) (see Engel et al, 1968 Howard and Sheth, 1969; Nicosia, 1966).
- Cognition and choice behaviour are linked in the "belief-attitude-intention-behaviour" sequence (see Foxall, 1997), and that

- An individual's mental states and processes such as attitudes towards products, and intentions to behave in certain ways can be used to predict that particular person's actual choice behaviour (see Assael, 1995; Foxall and Goldsmith, 1994; Kotler, 1997)

The assumption in Howard and Sheth's model is that changes in cognitions (awareness, interest, and attitudes) translate into changes in intentions to behave in certain ways. It is also assumed that the intentions determine choice behaviour. This assumption of the efficacy of cognitions in determining choice behaviour, suggested in Howard and Sheth's model, is the theoretical basis of the traditional (Gutman's model) means-end theory (see Gutman, 1982). However, empirical research casts doubt on the efficacy of attitudes in predicting choice behaviour.

The attitude-behaviour relationship

According to Foxall (1997) the pervasive assumption that attitude is consistent with behaviour is born out of the foundational conceptualisation of the attitude concept. Consider, for example, Bogardus (1925) and Likert's (1932) pioneering conceptualisation and measurement of the attitude construct. The researchers conceive of attitudes as organocentric predispositions to behave consistently towards the object to which it refers wherever it is encountered. Allport (1935), in support of this view, defines attitudes as

> *"mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, 810)*

Implicit in the definitions of attitudes is that knowledge of someone's attitude towards an object facilitates the prediction of that particular person's choice behaviour (see Doob, 1947; Fazio, 1986; Grunert and Grunert, 1995; Mulvey et al, 1994; Olson and Reynolds, 1983). However, long-standing empirical research work elsewhere falls short of supporting the widely held assumption of attitudinal-behavioural consistency. A typical example is Wicker's (1969) conclusion, based on his review of forty-two experimental studies on attitudes-behaviour consistency, which was:

> *"... taken as a whole, these studies suggest that it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviour*

than that attitudes will be closely related to action (Wicker, 1969, 65)

Fishbein (1972) endorses Wicker's conclusion about the attitudes-behaviour consistency. Fishbein concludes that:

> *"What little evidence there is to support any relationship between attitude and behaviour comes from studies showing that a person tends to bring his attitudes into line with his behaviour than from studies demonstrating that behaviour is a function of attitudes" (Fishbein, 1972, 21).*

On the basis of these observations, it can be argued that there is no compelling evidence supporting the assumption that attitudes determine behaviour. This is because only a small proportion of the empirical research on the attitude-behaviour consistency suggests just an association between attitude and behaviour. None of the empirical research ever established a causal relationship between attitudes and behaviour. An understanding of a person's attitudes, therefore, hardly implies an understanding of that particular person's behaviour.

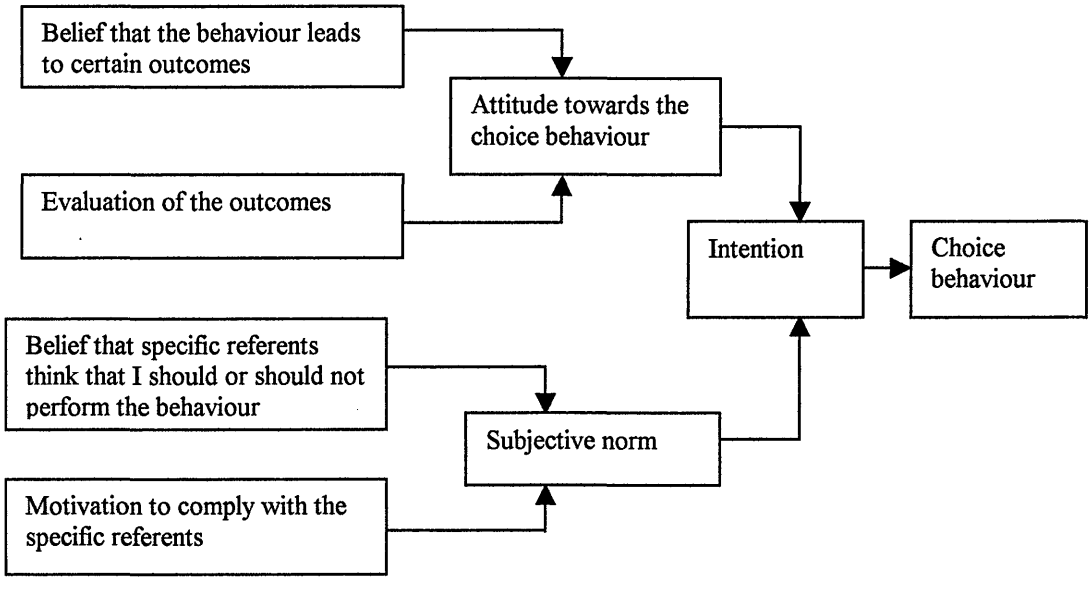
Researchers, however, react differently to the lack of empirical evidence supporting direct causal linkages between attitudes and behaviour. One group of researchers, which includes Fazio and Zanna (e.g. 1978a; 1978b; 1981) holds to the original theories of causal linkage between attitudes and behaviour. The researchers concentrate on studies aimed at demonstrating the attitude-behaviour consistency.

A second group of social researchers, predominantly associated with Ajzen, Bagozzi, Fishbein, and Warshaw (e.g. Ajzen, 1988; Ajzen and Fishbein, 1980; Bagozzi and Warshaw, 1990; Fishbein and Ajzen, 1975), react by advocating the reformulation of the attitude-behaviour relationship. The researchers respond to the criticism of attitude-behaviour consistency by re-conceptualising the attitude construct and restructuring the measurement of attitudes and behaviour. However, the re-conceptualisation of the attitude construct and the re-constructing of the measurement methods of attitudes do not seem to give support to the "intention-behaviour" linkage theory.

Consider, for example, Fishbein and Ajzen's (1975) "theory of reasoned action" (TRA) model summarised in figure 7. The TRA model is an attempt to present a more credible explanation of the relationship between cognition and choice behaviour. As can be seen in figure 7 on the next page, the

model is based on the assumption that the intention to behave in a certain way is a function of two factors: the individual's attitude towards the choice behaviour and the individual's subjective norm. According to Fishbein and Ajzen (1975), an individual's attitude is a result of the interaction between the individual's belief that the intended choice behaviour can lead to certain outcomes and the individual's personal evaluation of those outcomes. The subjective norm, on the other hand, is assumed to be a function of the individual's belief that specific referents (the significant others) think that he/she should not perform and his/her motivation to comply with the referents. The interaction between the individual's attitudes and subjective norm then result in the person's "intention" to behave. As shown in figure 7, the individual's "intention" to behave is assumed to be determinant of the person's choice behaviour.

Figure 7: A simplified version of the Theory of Reasoned Action (TRA)



Source: Schiffman and Kanuk, 2000, 207

The formula version of the TRA is shown in table 7. In accordance with the model in figure 7, the formula version consists of two main components that are added together to obtain the behavioural intention (BI), which, in turn, is the basis for predicting the choice behaviour (B). The first component, located on the far right hand side of the formula, is the subjective norm (SN), or the influence of important people on the decision. This subjective norm is a result of the summed products of the decision-maker's (consumer) normative belief (NB), (i.e. the consumer's belief that a certain person or group of people expects them to perform or not perform the behaviour) and that particular consumer's motivation to comply or not comply with the expectations in the normative belief (MC).

The second component is the consumer's attitude (Aact) towards performing behaviour. The consumer's attitude is obtained by summing the products of the consumer's belief (b), i.e. the subjective probability that performing the behaviour results in certain consequences, and the consumer's evaluation of the consequences (e). The two main components of the consumer's attitude towards performing the behaviour (Aact) and the subjective norm (SN) are weighted by factors W1 and W2 respectively, which are empirically determined by regression analysis, as a way of reflecting the relative influence of each component on behaviour intention (BI). The details of how the formula is applied in determining the behavioural intention and estimation of the choice behaviour (B) are given in table7 on the next page.

Table 7: The Theory of Reasoned Action: Concepts and measurements

The Theory of Reasoned Action is represented by the formula:

$$B \cong BI = (W_1)(A_{act}) + (W_2)(SN)$$

(Each part of the formula is measured separately and combined.) Where:

B = a specific consumer behaviour such as brand choice

Might be measured as an actual choice from a selection of brands, the results of a diary of product purchases, or the records of purchase recorded by a supermarket scanner.

BI = behaviour intentions, what the consumer intends to do

Might be measured by asking a question such as:

The next time you go shopping, how likely are you to buy Fox jeans?

Extremely likely - 1 2 3 4 5 6 7 - Extremely unlikely'

A_{act} = Consumer's attitude toward performing behaviour B

Is a complex variable derived from the formula: $A_{act} = \sum b_i e_i$, where

b = belief, the subjective probability that performing the behaviour results in consequence *i*

e = evaluation, or the subjective feeling of goodness or badness of consequence *i*

n = number of relevant behaviour beliefs

The b's might be measured with a scale like this:

Wearing Fox jeans will make me sexy.

Very likely ___: ___: ___: ___: ___: ___: ___ Very unlikely

+3 +2 +1 0 -1 -2 -3

And the e's might be measured this way:

If jeans make you sexy, that is...

Very good ___: ___: ___: ___: ___: ___: ___ Very bad

+3 +2 +1 0 -1 -2 -3

SN = subjective norm, or the influence of important people on the decision

Is a complex variable derived from the formula: $SN = \sum NB_j MC_j$, where

NB = normative beliefs, regarding a consumer's belief that the *j*th person or group expects them to perform or not perform the behaviour

MC = the consumer's motivation to comply or not comply with the expectations of the *j*th person or group

j = the number of relevant other persons or groups

NB might be measured like this:

My friends think I should buy Fox jeans

Extremely likely - 1 2 3 4 5 6 7 - Extremely unlikely

And MC might be measured by this scale:

Generally, I do what my friends think I should do:

All the time ___: ___: ___: ___: ___: ___: ___ never

+3 +2 +1 0 -1 -2 -3

W_1 and W_2 are weights empirically determined , by regression analysis ,reflecting the influence of each factor on BI.

Source: Foxall and Goldsmith, 1994

The TRA model has a number of strengths in explaining choice behaviour. First, the widely accepted interaction of cognition and the subjective norm in determining choice behaviour is clearer in the TRA model than in Howard and Sheth's model. Second, the formula version of the TRA model facilitates the operationalisation of the model. On the other hand, Howard and Sheth's model cannot easily be operationalised because it does not have a formula version.

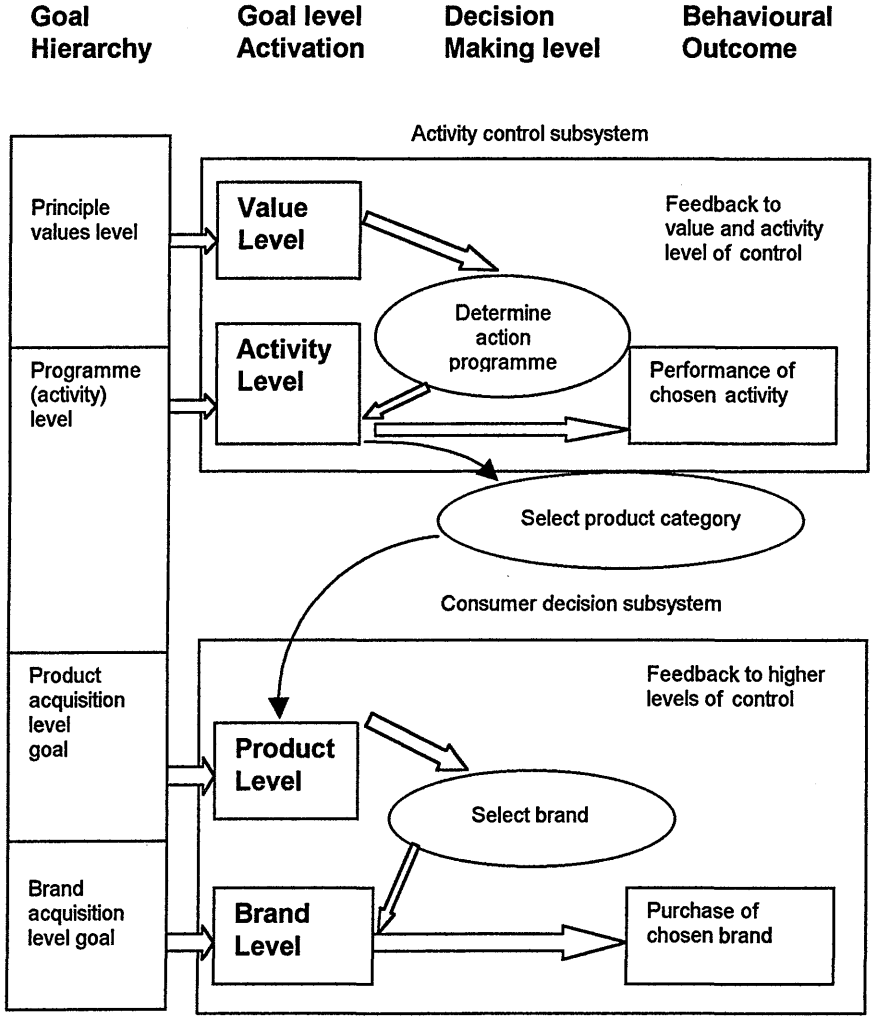
However, the TRA has some limitations in providing an explanation of choice behaviour. The main limitation of the TRA model is that the model relies on the discredited linkages between "intention" and "behaviour" to explain individuals' choice behaviour. A number of studies, summarised in table 8 on the next page, suggest that the predictability of choice behaviour from intention improves significantly if other theoretical factors are taken into consideration. The factors are shown in the first column of table 8. The researchers who contributed to each of the factors are listed in the second column of the table. The implication of the research findings to means-end theory is significant. These results provide further empirical evidence that the traditional means-end theory, based on the assumed "intention-behaviour" linkages, cannot be relied upon in explaining linkages between choice behaviour and values.

Table 8: Factors that improve the predictability of behaviour

Theoretical consideration	References
• Affect	• Bagozzi, 1994; Bagozzi and Moore, 1994; Bagozzi et al, 1996
• Amount of reasoning during intention formation	• Pieters and Verplanken, 1995
• Attitude function	• Maio and Olson, 1994
• Availability of relevant skills, resources, and co-operation	• Liska, 1984; Fishbein and Stasson, 1990
• Action control	• Bagozzi and Kimmel, 1996
• Past behaviour/habit	• Bagozzi, 1981; Bagozzi and Kimmel, 195; Bagozzi and Warshaw, 1990; 1992; Bentler and Speckart, 1979; 1981; East, 1992; 1993; Fredericks and Dossett, 1983; Towler and Shepherd, 1991/2
• Perceived control/confidence	• Giles and Cairns, 1995; Marsh and Matheson, 1983; Pieters and Verplanken, 1995; Sparks et al, 1992; Terry and O' Leary, 195
• Personal norm	• Beck and Ajzen, 1991; Boyd and Wandersman, 1991; Manstead and Parker, 1995; Parker et al, 1995; Richardson et al, 1993

A recently developed consumer decision model developed by Lawson (1997), following Carver and Scheier (1990), provides a promising framework that could be used for explaining the linkages between choice behaviour and values. Lawson's (1997) model extends the social cognitive decision-making model in developing a hierarchical goal structure connecting choices to values (see figure 8 below).

Figure 8: An outline of consumer decision-making processes within a hierarchical goal structure



Source: Lawson, 1997, 432

Lawson's decision-making model has four parts: the goal hierarchy, goal activation, decision-making, and behavioural outcome levels. The model presents consumer decision-making as goal-oriented process, which starts with need recognition, followed by product choices that are aimed at satisfying desired end states (values). The values, in turn, control the choice behaviour, as shown by the embedded feedback loop.

According to Lawson (1997), the hierarchical structure of the framework implies that the goal-driven consumer decision-making process is activated when values become salient in a consumer related context. The embedded feedback loop structure of the theory suggests that abstract goals, when serving as controlling reference values, lead to a decision-making process in which the consumer considers various alternatives at each level of the goal hierarchy.

Lawson's (1997) decision-making model presents a promising framework for developing a means-end structure in which context-nested choices are linked to values. The model is, however, not clear on two critical points. First, the model does not give an explanation of how consumer behaviour could be determined. Second, it is not clear from the model how researchers could, if at all, establish linkages between consumer behaviour and values.

Having reviewed the social cognitive theories of consumer behaviour, the behavioural perspective of consumer choice is analysed in the next section.

Consumer Behaviour: The Behavioural Perspective

Pavlov (1849-1936), Skinner (1904-1990) and Watson (1875-1958) are credited with initiating and developing the behaviourist perspective in which only observable actions are considered to be valid behaviour (see Cohen, 1987; Skinner, 1987; Thompson, 2001). Radical behaviourists contend that mental states and processes are irrelevant in explaining actual choice behaviour (Cohen, 1987; Skinner, 1987). The radical behaviourists, however, face a dilemma in giving adequate explanation of human behaviour. Consider, for example, the often-cited logic for justifying extreme behaviourism (cf. Thompson, 2001):

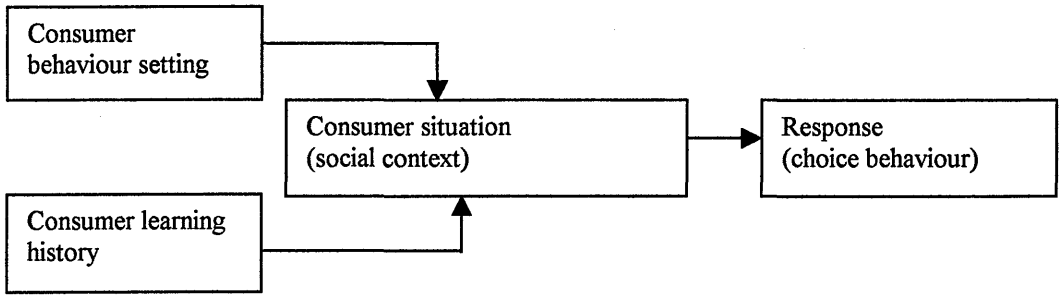
- You can't observe thought
- Therefore any one account of the thought that gave rise to an action is as good as any other since it is not open to independent verification of any sort

- The only option is to ignore thought in determining behaviour and concentrate on what can be observed and independently verified, i.e. overt behaviour

The behaviourists, however, can hardly ignore that human behaviour is so complex and so obviously related to overall views, conscious decision-making, and goals that it is practically impossible to give adequate descriptions, let alone explanations, without bringing in cognitive states and processes (Bagozzi, 1985; Fazio, 1986; Lawson, 1997; Thompson, 2001). In addition, the extreme behaviourists' views are often discredited because they are subject to the fundamental attribution error (Fiske and Taylor, 1991). Fundamental attribution error occurs when an observer attributes another person's overt actions to his or her own dispositional orientation (Fiske and Taylor, 1991; Heider, 1958; Ross, 1977). As an example, an attribution error occurs when two individuals, who appear to be "quarrelling", disagree that they are "quarrelling", but are, instead, "arguing", or "debating". The observer's attribution of the overt behaviour, in this case, differs from the actors' attributions of the same behaviour. An error has, therefore, occurred, because two different attributions of the same behaviour cannot be both correct.

One way out of the dilemma of extreme behaviourism is to reject the position and consider the emerging behaviourist paradigmatic shift, which acknowledge that cognitive states and processes play a part in determining choice behaviour (Foxall, 1997). According to Foxall (1997) and Nord and Peter (1980), choice behaviour is a function of the consumer's learning history and the current behaviour setting, which interact, forming a consumer situation or social context that directly influence the choice action (see figure 9 on the next page).

Figure 9: Summative behavioural perspective model



Source: Foxall, 1997, 101

The behaviour setting comprises the discriminative stimuli, which signal the likely consequences of producing a particular response (Foxall, 1997). Behaviour setting could also be conceived of as the social and physical environment as well the temporal and regulatory frames (see Foxall, 1997). For example, a coffee shop, which sometimes host international celebrities, usually play "cool" classical music in the background, and where coffee is sold at price levels well above that of the rest of the coffee shops in the vicinity, might present a behavioural setting that suggests luxury and exclusivity.

The concept of learning history, in turn, is based on the assumption that prior experiences are major determinants of current behaviour (Foxall, 1997). An individual's learning history embodies that particular person's experiences that largely account for his/her individuality, giving the individual a unique response potential to stimuli whenever the response is activated in a behavioural setting. The combination of behavioural setting and a person's learning history constitutes a *consumer situation* or a *social context* that locates the subsequent choice behaviour in space and time (Foxall, 1987, Nord and Peter, 1980). The importance of social contexts in influencing choice behaviour is well documented (e.g. Bearden and Etzel, 1982; Burnkrant and Cousineau, 1975; Deutsch and Gerard, 1955; Kelman, 1961).

The influence of social context on behaviour

The two known types of social influences on behaviour are *informational* and *normative* influences (Burnkrant and Cousineau, 1975 quoting Deutsch and Gerard, 1955). Whilst informational influence often comes from the information obtained from another as evidence of reality existing in the

individual's environment, normative influence is the requirement to conform to the expectations of another person (Burnkrant and Cousineau, 1975). Informational influence takes place through a process called *internalisation*, whereby an individual assents to be influenced because he/she perceives the influence to be conducive to the maximisation of personal values (Kelman, 1961).

On the other hand, normative influence takes place either through one of two processes: 'identification', or 'compliance' (Burnkrant and Cousineau, 1975). Identification occurs when an individual behaves in a way that associates or dissociates with the behaviour and opinions of another person or group (Burnkrant and Cousineau, 1975). Compliance occurs when an individual conforms in order to realise a reward or avoid punishment (Bearden and Etzel, 1982; Burnkrant and Cousineau, 1975).

Types of behavioural responses

The behaviourist perspective, essentially, consists of three types of behaviour: conditioned behaviour, operant (instrumental) behaviour, and habitual behaviour (Skinner, 1965; 1969; Nord and Peter, 1980). Conditioned behaviour is concerned with involuntary responses that are a result of contiguous and repetitive associations between a given stimulus and a respondent (see Schiffman and Kanuk, 2000).

Operant behaviour, on the other hand, is a form of response that an individual exhibits following altered events or consequences. Operant responses can be classified as positive reinforcement, negative reinforcement, or punishment avoidance (see Nord and Peter, 1980; Schiffman and Kanuk, 2000). According to Schiffman and Kanuk (2000), positive reinforcement occurs when an individual acts in anticipation of rewards based on his/her experience of the same behaviour setting. Negative reinforcement, on the other hand, encourages behaviour by means of inducing an anticipation or experience of unpleasant or negative outcomes. For example, an advert showing a model with wrinkled skin as a way of encouraging people to buy a skin cream is form of negative reinforcement. Punishment is when a negative or aversive outcome discourages behaviour. A fine, for instance, imposed for parking vehicles on certain unauthorised places is an example of a form of punishment for discouraging behaviour.

Habitual behaviour, in turn, is a type of action that individuals do automatically, without conscious deliberation, mainly as a result of previous sequentially reinforced

behaviour (Assael, 1992; Foxall, 1997; Ronis, 1989). Habitual behaviour has two components. The first component is *initiation*; the part of habitual behaviour that requires deliberation in making a decision, which occurs before the behaviour becomes automatic (Ronis, 1989). The second part, *persistence*, which implies automaticity or lack of conscious choice, follows episodes of positive reinforcement. Habitual choice behaviour, compared with more complex choice behaviours, involves minimal information processing and evaluation of alternative choices (Newman and Werbel, 1973).

Marketers who adopt the behavioural perspective implement marketing programmes that seek to manipulate external factors as a way of changing the behaviour of consumers (see Bandura, 1978; Staats, 1975; Nord and Peter, 1980). Table 9 on the next page shows the methods of behaviour manipulation, which are listed under four principles of behaviour modification, i.e. (1) respondent principles, (2) operant conditioning principles, (modelling principles, and (4) ecological modification principles. As can be seen in table 9, the methods of behaviour modification under the first principles, i.e. respondent principles, are (i) conditioning responses to new stimuli, and (ii) the use of familiar stimuli to elicit responses. The use of familiar stimuli to elicit responses is the same method used to elicit means-end structures in the traditional means-end theory (see Gutman, 1982).

The second principles, operant conditioning principles, are based on the assumption that consumers adopt behavioural patterns in anticipation of rewards or to avoid punishment. The behavioural modification methods under the operant conditioning principles include the use of purchase reward schemes, behaviour shaping techniques, and the use of behaviour discriminative techniques as shown in table 9. The third behavioural modification principle, modelling, involves the use of models in adverts in an effort to influence the behaviour of consumers. The fourth principle, the ecological modification, involves the designing of shopping environments for the purpose of influencing the behaviour of consumers. The design modifications include the change of store layout, enhancing in-store mobility, and the manipulation of in-store music, in-store odour, and lights.

Table 9: Illustrative applications of the behavioural modification perspective in marketing

1. Some applications of respondent principles

1.1. Conditioning responses to new stimuli

Unconditioned or previously conditioned	Conditioned stimulus	Examples
Exciting event	A product or theme song	Gillette theme song followed by sports event
Patriotic events o music	A product or person	Patriotic music as background in political commercial

1.2. Use of familiar stimuli to elicit responses

Conditioned stimulus	Conditioned response(s)	Examples
Familiar music	Relaxation, excitement, "good will"	Christmas music in retail store
Familiar voices	Excitement, attention	Famous sportscaster narrating a commercial
Sexy voices, bodies	Excitement, attention, relaxation	Noxema television ads and many others
Familiar social cues	Excitement, attention, anxiety	Sirens sounding or telephones ringing in commercials

2. Some applications of operant conditioning principles

2.1. Rewards for desired behaviour (continuous schedules)

Desired behaviour	Reward given following behaviour
Product purchase	Trading stamps, cash bonus or rebate, prizes,

2.2. Rewards for desired behaviour (partial schedules)

Desired behaviour	Reward given
Product purchase	Prize for every second, or third, etc. purchase Prize to some fraction of people who purchase

2.3. Shaping

Approximation of desired response	Consequence following approximation	Final response desired
Opening a charge account	Prizes, etc, for opening	Expenditure of funds
Trip to point-or-purchase location	Loss leaders, entertainment, or event at the shopping center	Purchase of products
Entry into store	Door prize	Purchase of products
Product trial	Free product and / or some bonus for using	Purchase of product

2.4. Discriminative stimuli

Desired Behaviour	Reward signal	Examples
Entry into store	Store signs	50% off sale
	Store logos	K-Mart's big red "K"
Brand purchase	Distinctive brandmarks	Levi tag

3. Some applications of modelling principles

Modelling employed	Desired responses
Instructor, expert, salesperson using product (in ads or at point-of-purchase)	Use of product in technically competent way
Models in ads asking questions at point-of-	Ask questions at point-of-purchase which highlight
Models in ads receiving positive reinforcement for product purchase or use	Increase product purchase and use
Models in ads receiving no reinforcement or receiving punishment for performing undesired behaviours	Extinction or decrease undesired behaviours
Individual or group (similar to target) using product in novel enjoyable way	Use of product in new ways

4. Some applications of ecological modification principles

Environmental design	Specific example	Intermediate behaviour	Final desired behaviour
Store layout	End of escalator, end-aisle, other displays	Bring customer into visual contact with product	Product purchase
Purchase locations	Purchase possible from home, store	Product or store contact	Product purchase
In-store mobility	In-store product directories,	Bring consumer into visual contact with product	Product purchase
Noises, odors, lights	Flashing lights in store window	Bring consumer into visual or other sensory contact with store or product	Product purchase

Source: Nord and Peter, 1980, 36

The main strength of the behavioural modification model (BMM) is its practical appeal to marketers. Marketers often adopt the model in the attempt to manipulate choice behaviour by implementing marketing campaigns such as advertising, promotions, changing in-store layout the in-store sensory environment.

However, the BMM has some limitations as a framework for linking choice behaviour to values: First, the model focuses on external determinants of choice behaviour, ignoring the role of cognitive states and processes in determining goal-oriented behaviour. Moreover, the efficacy of the BPM model in controlling choice behaviour in shopping environments has not been conclusively established. Research findings on the BPM established in closed environments can not readily generalised to less closed environments. For example, Nord and Peter argue that,

> *"While retail stores and shopping malls provide relatively closed environments, they do not permit the type of control that experiments in hospitals, schools, prisons, and even work organisations have" (Nord and Peter, 1980, 45)*

Thus, the behavioural modification model alone is also not appropriate for establishing a means-end framework linking choices to values because the perspective does not give adequate consideration to the role of cognitive states in determining behaviour.

Summary: The State of Knowledge of Means-End Theory and the Research Gap

In summary, means-end theory can be conceived of as a conceptual model that relates products to consumers by positing a hierarchical structure involving linkages between attributes of products, consequences of product use, and values of the consumers (Botschen et al, 1999; Claeys et al, 1995; Graef, 1997; Grunert, 1995; Hofstede et al, 1998). The central tenet of means-end theory is that product meanings, also known as cognitive structures, which are stored in consumers' memory, consist of a chain of hierarchically related concepts. The chain typically starts with product attributes and establishes a sequence of links with the self-concept (personal values) through the perceived consequences or benefits produced by the product (Claeys et al, 1995).

A "means-end chain" is formed, in that attributes are the "means" by which the product provides the desired

consequences, which, in turn, connect to the consumer' values, the "ends". The implicative relationships between the concepts in means-end theory offer a framework for understanding how concrete (tangible) product attributes gain self-relevance and desirability to consumers (Gutman, 1982; Reynolds et al, 195). Put differently, researchers assume that means-end chains represent a particular consumer's cognitive structures linking the consumer's values to his or her choice behaviour. The determination of a consumer's means-end chains starts with establishing the consumer's cognition for a given set of products. The consumer's cognition is determined by establishing how the consumer thinks about a given set of products (Klenosky, 1993), the consumer's declarative knowledge of the products (Graef, 197; Grunert, 1995; Hofstede et al, 1998), or the consumer perceptions of the products (Reynolds et al, 1995). The consumer's cognition is, then, linked to that particular consumer's values by a one-to-one, in-depth interview technique called laddering.

Once means-end chains linking a consumer's cognition for a given set of products to the consumer's values have been established, it is, often, assumed, by implication, that the link between the consumer's values and choice behaviour with respect to the given products has been established (Gutman, 1982; Reynolds et al, 1995; Reynolds and Gutman, 1988; Nielsen et al, 1998). The assumption that cognitive structures predict behaviour is based on theories from social cognitive psychology (Engel et al, 1986; Foxall and Goldsmith, 1994; Howard and Sheth, 1969; Nicosia, 1966):

- Cognition (i.e. perception, knowledge, attitudes) and choice behaviour are linked in the belief-attitude-intention-behaviour sequence, and
- An individual's cognition is predictive of that particular person's choice behaviour

There is, however, no research evidence supporting the assumption that cognition alone can necessarily predict behaviour (see Fishbein, 1966; Fiske and Taylor, 1991; Foxall, 1997; Wicker, 1969; William, 1980). Researchers who subscribe to the behavioural perspective, on the other hand, reject the role of cognition in determining choice behaviour (Cohen, 1987; Skinner, 1987). The researchers, instead, suggest that choice behaviour can be determined by observing what individuals choose in specific situations. However, the possibility of attribution error, whereby individuals could erroneously attribute behavioural intentions on overt actions, based on their own behavioural tendencies rather than on the actors' expressed intentions,

casts doubts on the efficacy of the behavioural view in explaining how behaviour could be determined.

Each of the extreme views of cognitive theory and the behavioural perspective, therefore, seem to provide only a partial explanation of how choice behaviour could be determined. Thus, means-end theory, which is currently based entirely on the cognitive perspective, does not necessarily link values to the consumer' choice behaviour. Grunert et al (2001, 528), in support of this view, asserts that

> *"It should be noted, however, that the means-end approach allows insight into consumer perception of products, but that currently, no formal theory linking these perceptions to consumers (food) choices exists".*

The aim of this study was, therefore, to determine whether or not means-end theory could be extended to linking consumers' actual choice behaviour to values. The study aim and the research questions were formally stated as follows:

The aim of the study was:

> To determine whether or not means-end theory can be extended to linking choice behaviour in a given social context to values.

The research questions were:

1. What, if any, are the conceptual categories in the means-end theory linking choice behaviour to values?
2. How, if at all, are the conceptual categories in the means-end theory linking choice behaviour to values connected together?

The research methodology adopted for the study is discussed in the next chapter.

Chapter

FOUR

Research Methodology

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The methodology adopted for the empirical investigation of the research problem is discussed in this chapter. Figure 10 on the next page presents an overview of the research process followed. The overview outlines the two stages of the empirical research, namely, the desk research work, and the field research work. The standards used to ensure that the study was of acceptable quality (validity and reliability) are also outlined.

The rationale underpinning the choice of the case research method is outlined first. This is followed by a description of the case study design; specifying the unit of analysis in the case research design, geographical location of the study, the criteria used in selecting the cases, and the number of cases included in the study.

The conceptual model used in guiding the research study is, then, presented. The conceptual model is discussed in two parts. First, the concepts and linkages between the concepts, which were developed from the research questions, are given. The criteria for determining whether or not the research findings were consistent with the conceptual model are, then, explained in the second part.

Thereafter an account of the procedures followed in the collection and analysis of the research data is presented. The objectives of the pilot study and the procedure followed in the pilot study are explained, followed by the presentation of the main study. Figure 11 on page 62 presents an overview of the data collection and analysis plans. In brief, the main study consisted of data collection, inspection of the ladders for completeness, coding and categorisation of the responses, compiling the conceptual categories in a matrix of rows and columns, and building of hierarchical values maps from the matrix and ladders.

This chapter, on methodology, ends with an explanation of the possible limitation of the empirical study, the standards used in evaluating the validity and reliability of the study and a discussion of the ethical aspects of the empirical research.

Figure 10: Overview of the research process

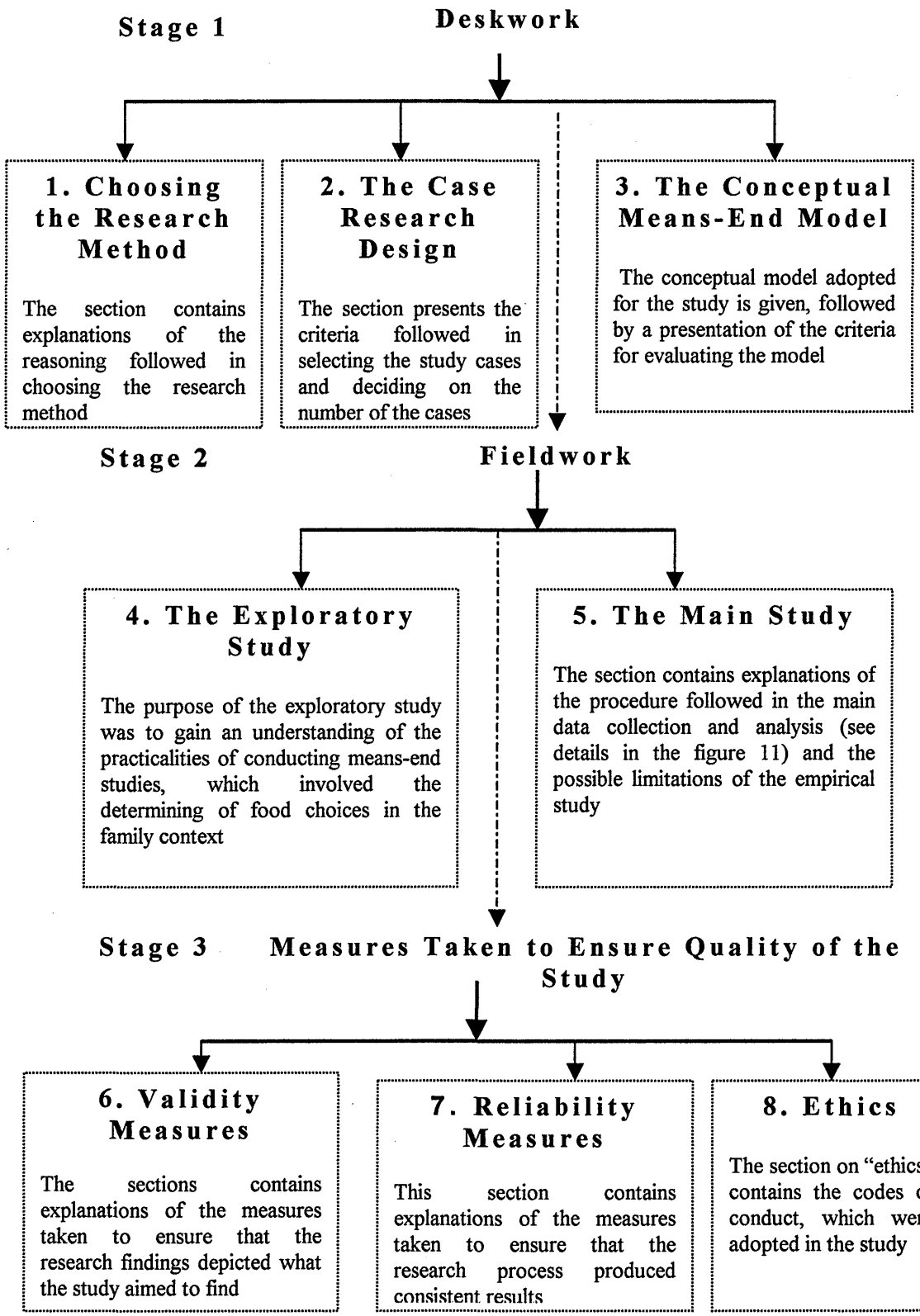
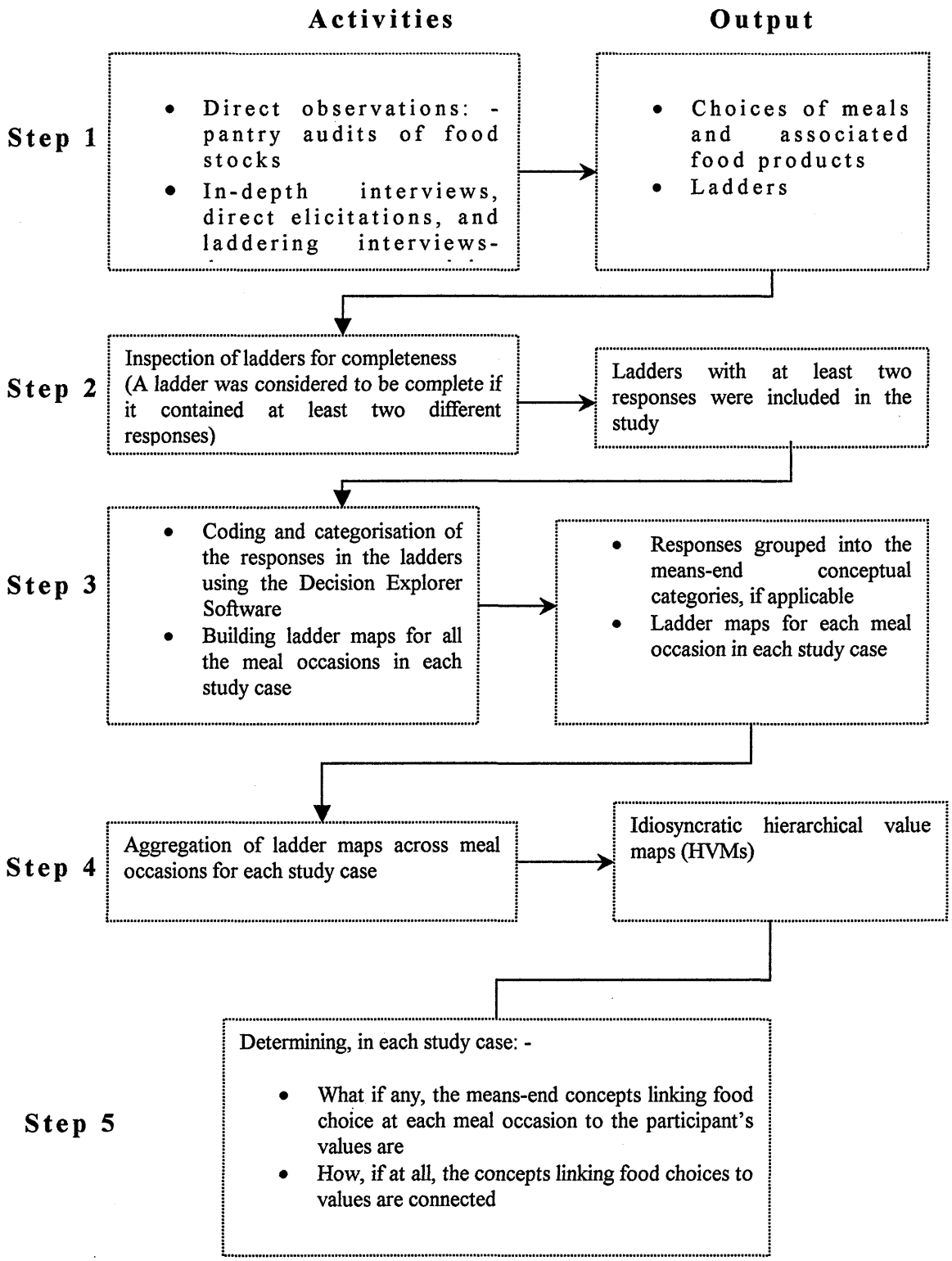


Figure 11: Overview of the procedure followed in the collection and analysis of the research data



Choice of the Research Method

The most common approach to means-end studies is the survey research method (Botschen et al, 1999; Bredahl, 1999; Claeys et al, 1995; Grunert et al, 2001; Jaeger and MacFie, 2001; Klenosky et al, 1993; Nielsen et al, 1998; Valette Florence, 1998). The survey research method, when applied to means-end studies, typically involves determining perceived attributes of a given stimuli, the desired consequences, and values of large and representative samples of respondents, and extrapolating the observations from the samples to a population. However, the survey research method could not be used in this instance because the study was particularly concerned with theory testing; determining whether or not means-end theory linking choice behaviour to values could be established, rather than extrapolating some observations to a given population. Thus, the research findings were generalised to means-end theory (analytic generalisation) linking choice behaviour to values, rather than generalising the findings of the choices and values to some population of study (statistical generalisation) (see Campbell and Stanley, 1963; Yin, 1994).

The methodology for this study was to be particularly suitable for the investigation of choice behaviour and values, phenomena that are typically social in nature (i.e. involving human beings). Choice behaviour and values, as social phenomena, are necessarily to be investigated within a social context because they are concerned with human actions and thought processes. Human actions and thought processes are best understood when they are studied within specific physical, time, or social frames of references (i.e. social contexts) (Dey 1993; Miles and Huberman, 1994). To this end, food choices in the family were used as the context of the study.

Food choices in the family were preferred for two reasons. First, it has already been established that food can be used as stimuli for determining values in means-end studies (e.g. Bredahl, 1999; Grunert, 1995; Grunert and Juhl, 1988; Grunert et al, 2001; Jaeger et al, 2001). Second, food choices in the family context occur with such frequency and regularity that they afforded many opportunities for the recall and measurement of choice behaviour (Alderson, 1941; Carlson and Grossbart, 1988; Commuri and Gentry, 2000; Davis, 1976). This is especially so because most people grow up and live in families in which the relationship between the

family members is characterised by frequent, prolonged, face-to-face, and emotional contact (Heffring, 1980). The influence of the family on individuals' choice decisions lasts long because it is not only felt in formative years, but also extends throughout life (Schiffman and Kanuk (2000).

In choosing the family as part of the study context, it was recognised that there are many different and overlapping concepts of the family reported in literature (Chisnall, 1995). For example, the nuclear family can also be the family of origin, i.e. the family in which one is a member by birth, or the family of procreation, i.e. the family in which one is a member by virtue of being a parent. For this reason, an operational definition of "family" was adopted, viz: - a social unit whose members are related by blood or marriage. More specifically, the type of family included in this study consisted of two adults (male and female) who considered each other husband and wife with one or more children (own or adopted) and all the family members ordinarily lived together at the same address. It was recognised that the type of family included in this study was not representative of the families in the UK. However, it was not necessary to study representative families in this study because the research results were not meant for generalisation to a wider population of families. Instead, the results were to be generalised to means-end theory linking choice behaviour to values. Consequently, any type of family could be included in the study as long as that type of family was easily identified and accessed for the study.

Within each of the participating families, the mother was chosen to be the study participant. Mothers were chosen because they are most likely to be responsible for purchasing and preparing food at home. However, it was recognised that the choice behaviour and values of mothers often reflect shared values of the family members, mediated by the social processes of power, conflict, decision-making, and influence (Bagozzi and VanLoo, 1978). Mothers' values largely depend on the specific dyadic relationships involved, such as husband-wife, mother-daughter, mother-son, father-daughter or father-son (Bagozzi and VanLoo, 1978).

It was, therefore, neither practical nor desirable to study the phenomena of choice behaviour and values separately from the contexts of the mother's food choices in the family. This was especially so because the boundary between values and choice behaviour, on the one hand, and the social contexts of the mother's food choices and values in the family, on the

other hand, are blurred (cf. Blaikie, 2000; Silverman, 1993; Yin, 1994).

Furthermore, the study was to be conducted within the contemporary time context, which was a time frame of at most "past-7-day-week" in this study. Longer-term time frames were to be avoided because they would have involved the participants in recalling incidences of choices and values underlying the choices. Recalling historical incidences by regressive techniques, though possible, would have involved the reliance on the consumer's cognition in determining values; the very approach this study meant to avoid.

In the light of all the characteristics of the study cited above, the case research method was chosen. The case research method is a widely accepted method of social scientific enquiry (Easton, 1994; Eisenhardt, 1989; Parkhe, 1993; Perry, 2001; Tsoukas, 1989; Yin, 1994). Moreover, the case research method is, by its very nature, eclectic and so facilitates the integration of data collection methods, such as in-depth interviews and laddering interviews (Perry, 2001; Yin, 1994). Direct observations were also important for determining food choices within the family context. In-depth interviews and laddering interviews were carried out in the investigation of the types of linkages between choice behaviour and values (see Reynolds and Gutman, 1988).

The Case Research Design

The unit of analysis of the study

The unit of analysis, which refers to what constitutes the case (Carson et al, 2001; Perry, 2001; Yin, 1994), was the mother within the family. Mothers, rather than families, were the cases because the study was concerned with theories related to psychological perspectives, i.e. *choice behaviour* and *values* of a particular person (Perry, 2001). The unit of analysis would have been different, if, for example, the study were about theories related to social groups. In such a case, the unit of analysis could have been the family unit, or another social group. Families, in this study, were therefore the context in which the investigations of the study phenomena were carried out.

The geographical location of the study

This study was undertaken in Flitwick, United Kingdom, because the researcher was based at Cranfield University near Flitwick. The confinement of case studies to a particular geographical area is usually subject to criticisms. The case research method is often criticised for producing research findings that are weak on external validity (see Miles and Huberman, 1984, Yin, 1994). External validity, i.e. the extent to which findings are generalised to the population of study, is usually considered to be weak due to the perceived lack of representativeness of the study cases.

Such criticisms, however, reflect enduring prejudice against the case research method (see Hamel et al 1993). Researchers, who criticise the case research method for lacking in representativeness, implicitly compare case studies with surveys (Yin, 1994). It is erroneous to conceive of statistical generalisation when carrying out case studies. This is so because findings of case studies are not based on statistical theory, which requires sufficiently large and representative samples for generalisation to wider populations (Campbell and Stanley, 1963; Blaikie, 2000). Instead, case research findings are generalised to the theory under investigation. In accordance with the case research method, findings in this study were generalised to means-end theory linking choice behaviour to values, as it was expressed in the research objectives that gave rise to this study in the first place (see Bassey, 1981; Blaikie, 2000; Campbell and Stanley, 1963; Yin, 1994). As already stated, the objectives of this study were twofold, i.e. (i) what, if any, are the conceptual categories involved in means-end theory connecting choice behaviour to values, and (ii) how, if at all are the conceptual categories linking choice behaviour to values in means-end theory linked together.

The criteria used in selecting the study cases

A multiple case research design was adopted following the replication logic so that the research findings could be compared across the study cases. Thus, relevance, rather than representativeness was the criteria in the selection of the study cases (Stake, 1994). In other words, the focus, in the selection of the research participants, was more on "examples", rather than on "samples", of relevant cases to be included in the study of food choices and values.

To this end, people in the same ethnic group and socio-economic status were selected for the study (Davies, and

Worral, 1998; Jamal, 1998). The families included in the study, first of all, consisted of parents who identified themselves as being of "Anglo-Saxon" origin. The self-identification method for ethnic identity was used on the assumption that people adopt behaviour in accordance with their own perceived, rather than "objective", identity (see Burnkrant and Cousineau, 1975; Deutsch and Gerard, 1955). Next, the families had to exhibit the characteristics of the middle classes. The participants were chosen from the "middle class" because the researcher already knew a number of people in the socio-economic class. Furthermore, the participants were selected from the middle class because most people in the middle class can abstract when speaking. According to Bernstein (1971), people in the middle class can abstract because they possess elaborate language codes in addition to the restricted language codes. The people in the middle classes possess elaborate codes because they have better opportunities for travelling more widely and have access to better education than people in the working class (Bernstein, 1971). It was necessary to select participants who could abstract in order to establish as many complete ladders as possible. Complete ladders helped in determination the respondents' values. Davies and Worral's (1998) guidelines were used to identify families with middle class status. According to Davies and Worral (1998), a family is of middle class if at least one of the parents is in full-time managerial or professional employment, and the family live in a privately owned, at least three bed roomed, semi-detached or detached house.

The study participants were well known to the researcher. Some of the research participants were close neighbours; others attended the same church with the researcher. Another was a staff member at Cranfield University, and others were known from teacher-parent meetings attended at the local school. The participants had been briefed about the study and were willing to form a close working relationship with the researcher. There was a need for close relationships between the study participants and the researcher based on trust because the study involved the observation of food stocks in the participants' pantries and asking the participants about personal values, which could be sensitive information.

Number of cases

Eight case studies were conducted. The decision about the number of cases followed the anecdotal advice of a number of prominent researchers. Eisenhardt, for example, states:

> *"While there is no ideal number of cases, a number of between 4 and 10 cases often works well. With fewer than four cases, it is often difficult to generate theory with much complexity, and its empirical grounding is likely to be unconvincing"* (Eisenhardt, 1989:545).

Eisenhardt's view is shared by a number of authorities who propose that the widest accepted range of cases falls between 2 to 4 as the minimum and 10, 12, or 15 as the maximum (see Carson et al, 2001; Hedges, 1985; Miles and Huberman, 1994). Without the use of a software to analyse the research data, a large number of cases can make a study "unwieldy" because of the richness (detail) of the data involved in case research methods. The Decision Explorer software was used in the analysis of the research data in this study. Although other software such as INVIVO or NUD•IST (QSR) could have been used for the data analysis, the Decision Explorer was selected because it was the least cost option.

A Conceptual Means-End Model: Linking Choice Behaviour to Values

A conceptual model was chosen to guide the study in answering the research questions, which, in turn, facilitated the addressing of the study aim. It will be remembered that those research questions, were:

1. What, if any, are the conceptual categories in the means-end theory linking choice behaviour to values?
2. How, if at all, are the conceptual categories in the means-end theory linking choice behaviour to values connected together?

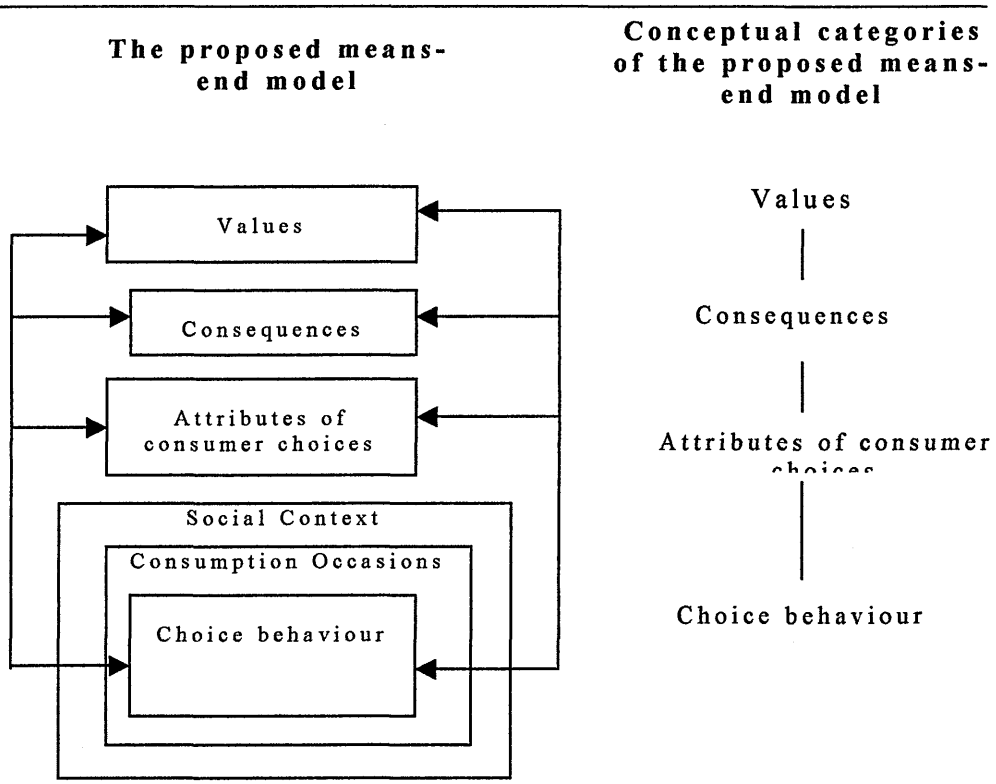
Conceptual models are widely used in studies that follow the integrated deductive-inductive research approach (see Blaikie, 2000; Carson et al, 2001, Gutman, 1982). The models are meant to provide illustrations of the researcher's initial assumptions about the concepts and the relationships between the concepts in the proposed theory. In this study, the ultimate purpose of the conceptual model was to provide the terms and relations that were initially assumed to be involved in means-end theory linking choice behaviour to values. The empirical research would either confirm or disconfirm the conceptual model. If the empirical research confirmed the conceptual model, then the model would become a formal means-end theory (cf. Willer, 1967). On the other hand, if the research data failed to confirm or validate the conceptual model, one course of action would be to carry out more studies to test the conceptual model further. Alternatively, the proposed means-end theory could be either modified or rejected. The conceptual model used in this study is outlined in the section that follows.

The conceptual means-end model linking choice behaviour to values

In addition to the three concepts of the traditional Gutman's means-end model of attributes, consequences, and values, the conceptual model used in guiding this study had a fourth concept, choice behaviour (see figure 12). One of the main differences between the existing Gutman's means-end model and the conceptual model used in guiding this study lies in the stimuli used in determining linkages between values and choice behaviour. With Gutman's model, the researcher provides the products used as stimuli in the elicitation of

values. Once the linkages between the product attributes, the consequences of the product use, and the consumer's values have been established, it is often erroneously assumed that the linkages between the consumer's values and choice behaviour have been established. The model used in guiding this study, on the other hand, was based on the assumption that values were directly and indirectly linked to actual choice behaviour as explained in the section below figure 12 (see Dick and Basu, 1994; Foxall, 1997; Nord and Peter, 1980).

Figure 12: A conceptual model of means-end chains linking choice behaviour to values



Source: Manyiwa and Crawford, 2002:60.

The conceptual model was based on the assumption that linkages between a consumers' choices and his/her values could be established by, first, determining the choice behaviour within a particular social context, and, then, eliciting the consumer hierarchical goals underlying the overt behaviour (cf. Bagozzi and Dabholkar, 1994; 2000; Lawson, 1997; Pieters et al, 1995). It was further expected that the hierarchical goals, which underlie the observed behaviour, range in level of abstractness from concrete goals at the lower level of the hierarchy to abstract goals that reflect the consumer's desired end states of existence or

values (Gutman, 1997; Lawson, 1997; Pieters et al, 1995). The abstract goals would serve as reference values that guide and monitor choices (Carver and Scheier, 1990; Lawson, 1997). The feedback loop mechanism shown in the conceptual model suggests the influence of values in guiding choices. The provisional concepts used in guiding this study are explained in table 10 below. The first column of the table contains the four provisional concepts: choices behaviour, attributes of the choices, consequences, and values. The second column of table presents the definitions of each of the concepts. The examples of each concept are in the third column of the table.

Table 10: Summary of concepts in means-end theory linking choice behaviour to values

Concept	Definition of the concept	Examples of the concept
Choice behaviour	The deliberate selection *of products*	For breakfast taken at home, in a family context, a person might choose to have *cereals, milk, toasted bread, and tea*
Attributes of the choices	Constructs or terms by which individuals describe or differentiate choice stimuli	Crunchy cereals, semi skimmed milk, hot tea, healthy breakfast, filling (bread)
Consequences	Physiological and/or psychological outcomes that individuals expect to accrue in their consumption or use of products	Health, enjoyment, relaxation, well being
Values	Abstract goals, representing beliefs that certain end states of existence are personally desirable. The responses, which were in form of end states in ladders, were grouped into general categories called value domains	(i) Enjoyment, pleasurable life (*hedonism*) (ii) health, well-being, contentment, long life (*Happiness*)

The criteria for evaluating the conceptual means-end model

The main purpose of the conceptual model, as reported already, was to guide the study in addressing the research questions. The criteria for determining whether or not the study findings were consistent with the conceptual model were specified so that other researchers could compare the conceptual model with the research findings. The study findings could turn out to be either consistent or inconsistent with the theoretical predictions as expressed in the conceptual model. If the research findings were consistent with the conceptual model, then, the conceptual model could be accepted as possible representation of means-end theory linking choices to values. However, if the research findings were found to be inconsistent with the theoretical predictions of the conceptual model, then, doubts would be cast on the validity of linkages between choice behaviour and values. This would, then, raise questions about the usefulness of means-end theory, which is supposed to offer explanations of how values are linked to choice behaviour.

Criteria for establishing conceptual categories in means-end model linking choices to values

In accordance with the theoretical proposals described within the conceptual model, it was expected that four concepts were involved in connecting choices to values: choices, attributes of the choices, consequences, and values. Each of the concepts was defined in table 10. Table 11 presents the criteria used in determining whether or not each of the concepts had been established. The linking of the research data to the research questions, shown in table 11, is also known as "pattern-matching", because patterns of conceptual occurrence and linkages for each case are compared or matched with the theoretical predictions expressed in the research questions (see Yin, 1994).

Table 11: Criteria for establishing concepts in the means-end theory linking choice behaviour to values

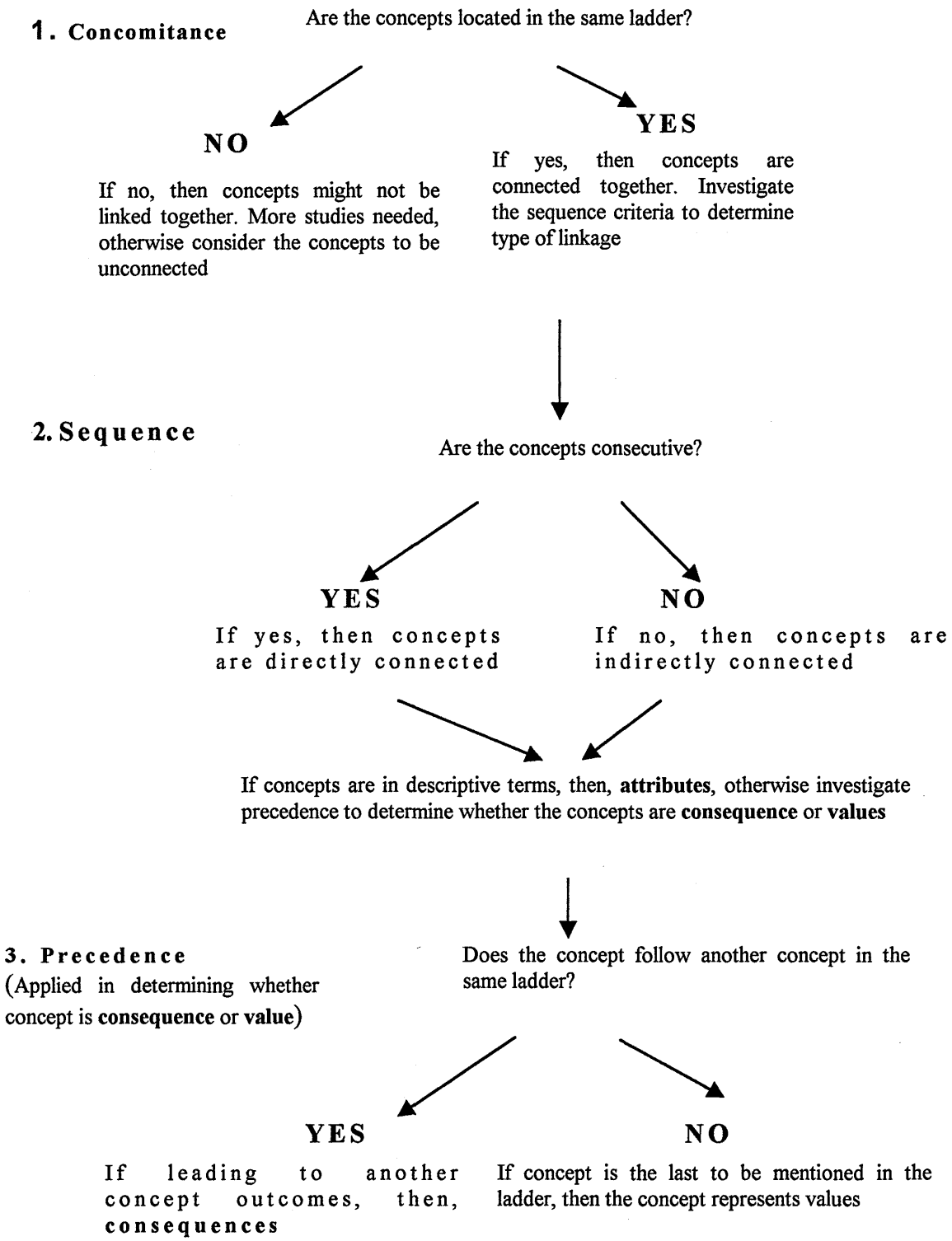
Concept	Criteria for establishing the concept
Choices	Choices were food products that individuals selected within the family context. Choices were established by direct observation and interviews
Attributes of choices	Attributes of choices are terms by which individuals described or differentiated the choices. The attributes were expressed as characteristics or descriptors of the stimuli. The attributes were establishing, by in-depth interviews and direct elicitation techniques
Consequences	Consequences were outcomes that individuals expected to accrue from the consumption of the food choices. Consequences were in the form of states of being in the ladder, other than the end states e.g. health, enjoyment, or well-being.
Values	Values were terminal responses in a ladder represented by states of being, e.g. enjoyment (hedonism), health, contentment or happiness. Values were established by laddering interviews, extending from responses about choices, attributes, or consequences. Responses were called values if they were end states located at the end of the ladder.

Criteria for establishing connections between concepts linking choices to values

The interest in this study was in establishing how, if at all, the concepts in means-end theory connecting choices to values are themselves linked together. Linkages involved in means-end theory are, implicitly, assumed to be causal, i.e. they are based on the assumption that there is a causal relationship between values and choices. However, there is no empirical evidence of a causal relationship between concepts of the means-end theory. Moreover, the literature is not clear on whether values cause choices or vice versa.

It could be argued that means-end theory, at best, is concerned with "connotative" or "implicative" linkages between the concepts. Connotative linkages are concerned with the suggested or implied meaning of linked concepts (cf. Gutman, 1982; Hofstede et al, 1998; Reynolds et al, 1995). Connotative meanings were investigated, in this study, by asking the "why" and "how" type of questions during the laddering interviews. Thus, the three standards used to evaluate the connotative linkages were concomitance, sequence, and precedence (cf. Dey, 1993). Figure 13 below illustrates the process of determining the connotative linkages between the concepts involved, as explained below.

Figure 13: Decision-making procedures on the linkages between concepts in means-end theory in algorithmic form



In means-end theory, concomitance is concerned with the existence of concepts in the same ladder. If two or more

concepts are established within the same ladder, then the concepts are linked together. For example, if a respondent's ladder contains the concepts "sweetness" and "enjoyment", it is assumed that the respondent considers "sweetness" to be related to "enjoyment". The next standard, sequence, can be determined by establishing whether or not the concepts in the same ladder are contiguous. If the concepts are contiguous, then, the concepts are directly linked together, and if they are not consecutive, then, they could be indirectly linked. The last criterion, precedence, helps to determine whether or not the concepts, given that they are in the form of outcomes, are consequences or values. If the outcome concepts precede another or other concepts, then the concept is a consequence. On the other hand, if the concept, in the form of an outcome, is the last to be mentioned in the ladder, then, the concept represents values.

The Procedures Followed in the Collection and Analysis of the Research Data

Data collection was carried out in two phases, starting with the exploratory study, followed by the main study.

The exploratory study

The purpose of the exploratory study was to gain a preliminary understanding of the practicalities of conducting means-end studies in the context of food choices in the family. On *prima facie*, the methods of determining food choices in the family and eliciting the related values were to be different from those of the traditional means-end studies. Consider, for example, that in traditional means-end studies, based on the cognitive view of the choice behaviour, a small number of predetermined, context-free stimuli are used in the elicitation of values. Thus, there is little or no attempt, in the traditional means-end studies, to establish the respondents' choices, since the stimuli used in the studies are determined *a priori*. On the contrary, this study of means-end theory, based on the integrated cognitive and behavioural conceptual framework, required that choices in specific contexts be determined before the laddering interviews. Thus, the exploratory study was focused on seeking an understanding of the practical procedures that could be followed in determining choices and values.

The exploratory study was also conducted to gain an understanding of the best practice in conducting laddering interviews when food choices are used as the stimuli. It was

observed from the published literature that most ladders from the empirical means-end studies contain fewer response categories than those in the theoretical discussions. It is suggested, in theoretical discussions, that ladders of up to six responses can be elicited (see Gutman, 1982, Reynolds and Gutman, 1988). However, most means-end studies often yield ladders with only two to three responses (see Botschen et al, 1999; Bredahl, 1999; Grunert et al, 2001; Klenosky et al, 1993; Mulvey et al, 1994; Nielsen et al, 1998). According to Botschen et al (1999), ladders elicited from respondents who are more involved with a product or service contain more responses than those from less involved respondents. Researchers usually employ a combination of techniques of laddering, such as backward laddering, posturing absence of stimuli from the respondent's choice set, and third person reference techniques (see chapter 2 for details) in an effort to increase the number of responses in ladders. The objectives of the exploratory study, in sum, were focused on gaining a preliminary understanding of the following:

1. The practical steps that could be followed in determining food choices in the family context
2. The language used by participants in describing food choices and responding to the laddering questions
3. The limitations faced by the participants in verbalising the responses to the laddering questions.

An overview of the cases included in the exploratory study

Code names were used in identifying the cases, as a way of preserving the anonymity of the participants. The three cases involved in the exploratory study were SB_1, MA_2, and HM_3. As explained earlier, the participants were selected on the following criteria: (i) that both parents in the family identified themselves as being "Anglo-Saxon" origin, and the family exhibited socio-economic characteristics of the middle class. The specific socio-economic circumstances of each of the participants included in the exploratory study are summarised in table 12 below. The socio-economic factors included in the analysis of the cases are in the first column of the table.

Table 12: Overview of the cases used in the exploratory study

Characteristics	Case SB_1	Case MA_2	Case HM_3
1. The participant's role in the family	Mother	Mother	Mother
2. Participant's age group (years)	40 to 50	30 to 40	30 to 40
3. Participant's occupation	Part-time office assistant	Teacher (Currently not formally employed)	Medical doctor (In full-time employment)
4. Occupation of the participant's spouse	Stores Manager	Social services officer	Senior tax inspector
5. Number of children			
▪ Less than 5 years	-	2	2
▪ 5 years old, less than 16 years old	-	2	2
▪ 16 years or older	2	-	-
6. Type of family accommodation	Owner occupied, 3 bedrooms, semi-detached	Owner occupied, 3 bedrooms, detached	Owner occupied, 4 bedrooms, detached

Each of the three participants was in a specific socio-economic circumstance that presented an opportunity to learn how mothers cope with different demands on their limited time in making food choices in the family. Consider, first, the participant in case SB_1. She had more free time than the other two participants did. Her children, who were over sixteen years of age, required the least attention, and she was also in part time employment.

On the other hand, participant MA_2, though a qualified teacher had left employment to look after the children full time. The third participant, in case HM_3, was the busiest of the three. She worked full time as a medical doctor and was also responsible for four children. Two of the children were under the age of five years. She had to balance her time between full time job and looking after the children. The data collected following the procedure explained below

reflected the differences in the socio-economic circumstances of the participants.

Data collection

The participants were either visited or contacted by telephone about one week before the interview to fix the interview dates and times. The objectives of the pilot study were explained to the participants on that visit, assuring them of anonymity. The participants were also assured that the study was concerned with their personal opinions, and, therefore, the responses would not be judged as either correct or wrong. Appointments were, then, secured for the data collection exercise.

The exploratory studies were carried out over a period of two months. Each participant was visited twice, i.e. during the weekdays and on weekend. The interviews were carried out at the participants' homes so that they would be as at ease as possible. A second person accompanied the researcher to the interviews. The second person remained talking to any other people in the living room whilst the researcher carried out the discussions with the participant. If both parents were present at home at the time of the interview, both were interviewed as a way of reassuring the father over what was being discussed. The responses of both parents were also helpful in determining the mother's food choices at home.

The interviews were conducted on a one-to-one basis in the kitchen so that the participant could be isolated from the rest of the family in order to limit instances when participants might have found it difficult to speak with others present (see Fisher and Katz, 2000). It was also expected that the kitchen environment would be ideal for the participant's recall of the food products that she selected on different meal occasions. A schedule was used as an interview guide (see appendix 1). First, the participant was asked to give an account of time and the people with whom she usually ate food at home. In-depth and laddering interviews were then carried out.

Results: Practicalities of determining food choices in the family context

Table 13 below presents the participants' pattern of food consumption at home. The meal occasions, given by the participants, included breakfast, lunch, evening meal times, and unspecified times on which snacks were usually eaten. The meal occasions are in the first row of the table. The first column contains the days of the week. A cell entry of ( ) shows the presences of the mother on the meal occasion. The presence of the father and children on the meal occasion is shown by entries of ( ) and ( ) respectively.

Table 13: Exploratory study: Patterns of food choices at home

	Breakfast			Lunch			Evening meals			Unspecified meal times		
Days	SB 1	M A 2	HM 3	SB 1	M A 2	HM 3	SB 1	M A 2	HM 3	SB 1	M A 2	HM 3
Monday						-						
Tuesday						-						
Wed.						-						
Thurs.						-						
Friday						-	-					
Sat.												
Sunday												

Key: = mother, = father, = children

The pattern of food consumption at home for each of the participants reflected the socio-economic circumstances of that particular participant. Take, for example, the participant in case SB_1, who had the least pressure of her time. She had time to eat food at home alone for breakfast, and lunch. She had snacks on other unspecified times. On the other hand, the participant in case MA_2, who spent most of her time with children at home, ate food on the traditional meal occasions of breakfast, lunch and evening meal times, together with her children. Lastly, the participant in case HM_3, who worked full time in addition to the responsibilities on her children, ate breakfast at home alone and lunch at work.

In all the three cases, the evening meal occasions and Sunday lunch were described as family meal occasions. The participants considered these meal occasions as opportune moments for building family relations.

The practicalities of determining food choices in the family

As one might expect, the exploratory study indicated a complex pattern of food choices in the family. Each participant adopted a programme of eating food at home that was most convenient in her particular circumstance. Thus, if a complete record of the mother's food choices were required, then an intensive and sustained monitoring of the mother's lifestyle would have to be done. This would be a daunting task. Luckily, this study was not centred on compiling a complete record of mothers' lifestyle activities. Rather, the interest of the study was on determining linkages between the mother's food choices in a given specific choice context or situation. It was decided, based on the results of the exploratory study, that linkages between food choices and values could be investigated on the three meal occasions of breakfast, evening meals, and Sunday lunch. The three meal occasions were selected for the main study because the results of the exploratory study showed that mothers in the exploratory study made choices of food for themselves and other members of the family on these occasions. Having decided on the meal occasions to be included for the main study, the next task was to analyse the process of laddering based on food choices in the family context.

The practicalities of conducting laddering interviews using food choices in the family context

The interviews were undertaken in two stages. The participants were, initially, asked to describe and differentiate the relevant food products, and the occasions on which the food was eaten. Questions of the type "in what ways are these (food products, or meal occasions) similar or different from these others" were asked. This type of questioning, termed a direct elicitation technique, was meant to facilitate the determination of the attributes of the selected food products and/or meals occasions. The laddering interviews followed the in-depth discussions. Questions of the type "why is this (food product, or meal occasion) important or not important to you" were asked in the attempt to elicit complete ladders. Table 14 overleaf presents the summary of the responses in the ladders, which reflected the language used by the participants in the laddering interviews. The responses are grouped into three conceptual categories, namely, attributes of the food products and the meal occasions, consequences, and "end states", which represented values. The criteria given in table 11 were used in the grouping of the responses into the three conceptual categories. The responses, which were categorised as attributes of the stimuli, are shown in section (a) of the table. The consequences and "end states", representing values, are in section (b) of the table.

Table 14: The language for attributes of the food products and meal occasions, consequences, and "end states" representing values

Section (a): Attributes of the food choices and the meal occasions

Food products	The language for attributes of the food products
Cereals	High roughage content, sugar coated, fortified, wide variety
Potatoes	Bulky, filling, cheap, roast, mashed, baked, boiled, roast, deep fried
Meat (including fish)	Good taste, nutritious, wide variety, red meat, cooks quick, has good oil
Vegetables (including beans)	Two vegetables per meal, high fibre contain, healthy
Bread	Toast, liked by children
Fruits	Healthy, good taste
Milk	Full fat, good flavour
Tea	Hot drink, without sugar, without milk
Snacks	Liked by all, unhealthy, controlled food

Meal occasions	The language for attributes of the meal occasions
Breakfast	Self-service, quick
Evening meal	Supper, dinner, tea time, family occasion
Mid week lunch	Quick lunch, light meal
Sunday lunch	Traditional, main meal of the week, family meal, convenient, social occasion

Section (b): consequences and values

Food choices on specific meal occasions	The language for consequences	The language for the "end states"
Food choices at breakfast	Convenience, good taste, get warmth, don't like it, saves time, relaxing and cared for	Make family members happy, to enjoy, healthy life, to make children happy, I just like them
Food choices on mid week lunch	Waiting for evening meals	Saves time
Food choices for evening meals	Satisfying, convenience, wide variety, keeps regular, family occasion	Builds relationships, healthy life, enjoyment, togetherness, pleasing others, feel comfortable, please children
Food choices for Sunday lunch	Treat, good taste, avoid heart diseases	Tradition, enjoyment, please visitors, convenience

Language used in the laddering interviews

The language used for the attributes of food products was mainly in terms of objective, sensory characteristics, such as "high fibre content", "hot tea", and "sugar-coated cereals". The participants also described food products in terms of preparation methods of the food. For example, potatoes were described as baked, mashed, roast, or boiled. Objective terms do not convey much personal meaning attached to the product or relevance of the product to the respondent.

The attributes of the occasions on which the food was eaten at home were in "subjective" or "holistic" terms. Terms such as self-service, family time, convenient, were used as attributes of the meal occasions. The subjective attributes of the meal occasions indicated the personal meaning of the stimuli to the participant or the relevance of the stimuli to that particular participant.

The terms used for the constructs of consequences and "end states" were oriented towards personal and "others'" needs. The personally oriented constructs included terms such as "I feel good", "it makes me happy", "it makes me comfortable", and "I enjoy it". The "others" oriented consequences and "end states" were terms such as "building relationships", "good for children's health", "to please family members", "to please others". The "end states" in the ladders suggest that the participants were driven by the values of pleasure, happiness, and social belonging in making the food choices.

The practicalities of conducting laddering interviews based on food choices in the family context

This study, unlike the traditional means-end studies, involved many stimuli in the elicitation of the ladders. The large number of the food products used in the laddering interview posed some difficulties. For example, some of the techniques of laddering, such as triadic sorting, could not be used. The use of these techniques would have resulted in long laddering interviews in an effort to draw ladders from every stimulus. The long ladders could have confused and/or bored the participants, introducing errors.

Another lesson learnt was that some participants were more articulate than others in giving responses. For example, the participant in case HM_3 was articulate and motivated to talk about food choices. As a result, more "full ladders" were elicited from her than from the other three participants. The participant in case MA_2, on the other hand gave short

answers to the laddering questions. More probing was required to elicit "full ladders". These lessons learnt in the exploratory study were applied in conducting the main study.

The main study

Data collection

Each participant was visited four times for the data collection exercise. Two visits were in the evening of weekdays, which were convenient to the participant. These visits were centred on the investigation of the participant's food choices and values for breakfast and evening meal occasions. The other two visits were on Sundays, in the afternoon. The data collection exercise, on these two visits, was focused on determining the participant's food choices and values for Sunday lunch.

Data collection took place in three stages: - direct observations or pantry audits, in-depth interviews, and laddering interviews. Pantry audits were carried out to establish the food items in stock (Allen and Ng, 1998). The interviewee was asked, at the study session, to show the types of food that she had in stock on that particular day. The participants opened their pantries, refrigerators, and other storage facilities to show their food products. The food products were, then, recorded on a schedule (see appendix 1). The lists of food stocks, obtained through the pantry audits, were used as a guide in verifying what the participants claimed to be their food choices.

The pantry audits were followed by the in-depth interviews. The in-depth interviews were centred on establishing what the participant chose for breakfast and evening meals on that particular day and the other days of that week. A study session typically lasted for forty minutes to an hour. The interviews also sought to establish food taken at the immediate past Sunday meals.

Questions in the following forms were asked during the interview: "At what times (or at what occasions) did you have food at home (today, yesterday, the day before yesterday, or other days, during the week and at weekends)?" For each consumption occasion established, the following questions were asked: "With whom did you take your food on the last (consumption occasion*)?" "What food did you

* The words "consumption occasion" are used as placeholders for the relevant occasion, such as breakfast or evening meal occasion

have on the last (consumption occasion), the last time you had it in this house?" "What food do you normally have on the (consumption occasion)?" As the interview proceeded, the researcher recorded the responses and asked for clarification for any apparent inconsistencies between the responses and the food list compiled during the pantry audits.

Having listed the food items, which the participant chose for him/herself and dependants, the next step was to elicit the constructs used by the participant to describe or differentiate the choices. Several techniques could have been used for attribute elicitation. The direct elicitation technique was used because more complicated techniques, such as triadic sorting, do not out-perform the simpler method (Bech-Larsen et al, 1997). The direct elicitation questions were of the following form: "You mentioned that you eat roast potatoes more often than boiled potatoes on Sunday lunch. Why do you often eat roast potatoes on Sunday lunch?"

Direct elicitation and laddering were combined because responses from direct questioning readily lead into laddering questions. For example, once the participant answers the question of the form: "Why do you often eat roast potatoes on Sunday lunch?" Assuming that the participant says, "We eat roast potatoes on Sunday lunch to give ourselves a treat", the researcher followed up with a laddering question of the form: "Why is it important to give yourselves a treat on Sunday lunches?" Once the data collection exercise was complete, the next step was to analyse the data.

Data Analysis

Traditionally, means-end studies, the data analyses procedures involve aggregating different idiosyncratic ladders obtained through surveys into a group level structure known as a hierarchical value map (HVM). This is often done by, firstly, coding and categorising the constructs, and secondly, by constructing an implication matrix, with rows and columns defined by the categories resulting from the coding process (Nielsen et al, 1998; Reynolds and Gutman, 1988). An implication matrix with cell entries that refer to the number of respondents who have mentioned the column category as the consequence of the row category is often the basis for constructing the HVM (Nielsen et al, 1998). Aggregation of ladders across cases was not done because the results from study cases are not amenable to aggregation (Yin, 1994). Furthermore, the aggregation of ladders across

respondents in means-end studies has been criticised for lack of a theoretical basis and for tending to change the idiosyncratic meaning attached to each original ladder (see Grunert, 1995).

Codes were allocated to the cases so as to protect their identities. The codes allocated for the 8 cases were Case 1, Case 2, Case 3, Case 4, Case 5, Case 6, Case 7, and Case 8. The analysis of the results was carried out in two stages. The first stage was concerned with determining the conceptual categories linking choice behaviour to values. The second stage, in turn, was centred on the investigation of the types of linkages between the conceptual categories linking choice behaviour to values.

Analysis of choice behaviour, attributes of the choices, consequences, and values

The analysis of the conceptual categories started with the investigation of the concept of "choice behaviour". The investigation of choice behaviour was centred on determining whether or not the participants', in selecting food on breakfast, evening meals, and Sunday lunch occasions, exercised "free choice". The exercising of "free choice" in selecting food was important because "values" are essentially related to choices that are a result of self-drive. Considered, for example, the widely accepted concept of "choice behaviour", in the marketing literature. The concept includes "free-will", within the constraints of the social context in which the choice behaviour is carried out (Andreasen, 1965; Engel et al, 1968; Howard and Sheth, 1969; Nicosia, 1966). Foxall (1987), supporting the view of "freedom of choice" within the constraints of social contexts, points out that "choice behaviour" incorporates mental constructs of attitudes, motives, and intentions, in addition to the behavioural activities, such as purchasing, product use, and disposal.

Accordingly, this study adopted the view that consumer choice behaviour is a function of the consumer's learning history (the cognitive view) and the behaviour setting (the behavioural perspective) (Foxall, 1997). The two interact to form context-nested consumer decision-making process that directly influences the choice behaviour (Foxall, 1997, and Nord and Peter, 1980). The view that choice behaviour is a function of the decision- maker' learning history and the choice context is consistent with the theories underpinning decision-making in the family context. According to Bagozzi and VanLoo (1978), decision-making within the family

reflects a compromise between individual needs and the overall needs of other family members.

The participants' selections of food on the three meal occasions of breakfast, evening meal times, and Sunday lunch were the bases of determining "choice behaviour". Though the participants ate food and/or gave food to other members of the family on many other occasions at home, the three traditional meal occasions were selected to be the study context for two reasons. First, it was unnecessary to monitor the participants' food choices on all occasions. This was so, because the interest of the study was on means-end theory rather than on food choices. More specifically, the study was concerned with determining whether or not means-end theory could be extended to linking choice behaviour to values. In other words, the study was not particularly centred on determining food choices and values of a particular group of people. The food choices in the family were the context in which the investigation of means-end theory was carried out. Second, the meal occasions of breakfast, evening meals, and Sunday lunch, which usually involve groups of people eating together, provided an opportunity to investigate how, if at all, food choices were linked to "self" and "social" oriented values.

The ladders, which were developed from the in-depth and laddering interviews, were the basis for determining the conceptual categories of attributes, consequences, and values. All sets of ladders were labelled and inspected for completeness. Ladders that contained at least two responses were included in further analysis. Examples of complete ladders of food choices on breakfast are given in figure 14 on the next page. Each of the ladders begins with the stimulus of the meal occasion or the food products eaten on the occasion. The stimulus of meal occasion was only included in cases where the participant's responses developed into full ladders. The dotted lines in the ladders indicate linkages between a particular stimulus and one of the elicited attributes. The bold lines in ladders indicate the conventional linkages in ladders between the conceptual categories of attributes and consequences, and values (see Reynolds and Gutman, 1988). The responses in ladders were classified as "choices", "attributes of choices", "consequences", or "values", following the procedure given in table 11, in chapter 4. Colour codes were used to identify the main conceptual categories of choices, attributes, consequences, and values. The colour codes were included in the HVM. The codes are shown in the ladders below to give an example of the coding procedure.

Figure 14: Explanatory ladders for the breakfast occasion and the food choices on the occasion

1. Breakfast ····· take alone — for convenience — to please everybody
2. Cereals ····· frosted wheat — sugar coated — good taste — I enjoy them
3. Milk ····· full fat — more flavour — enjoyable
4. Tea····· hot drink — warmth — healthy

Key: Conceptual categories	Colour codes
Stimuli, which was the basis for determining choices	Milk
Attributes of the stimuli	Full fat
Consequences	Good
Values	Enjoyable

The meal occasions and food products selected on the meal occasions were coded as the choices. Attributes of the choices were the terms used to describe or differentiate the choices. Attributes were, therefore, the characteristics of the meal occasions or food products, which were given by the participants. For example, "take alone" was the attribute of breakfast meal in figure 14 above. The attributes of milk and cereals, in turn, were full fat, and frosted, respectively. Responses in ladders were classified as "consequences" if they satisfied the following two criteria: (i) that the response represented an "outcome" that was relevant to that participant, and (ii) the response was preceding another response in the ladder (i.e. the response was not at the end of the ladder).

The fourth conceptual category to be investigated was the values. As already explained in chapter two, values are defined as

> "Personal abstract goals, representing beliefs that certain end states of existence are personally

desirable" following Gutman (1982), Rokeach (1973), and Schwartz (1994)

The first step in determining values was to establish responses in ladders, which were in the form of "end states". The end states are the responses in the form of "outcomes" at the end of each ladder. The "end states" were, then, classified into the "value domain", which best fitted the particular "end state". The values domains included in this study were enjoyment, inner harmony, social belonging, and social responsibility. The criteria followed in allocating responses to each of the value domains are given in table 15 overleaf. According to these criteria, the "end state" of "pleasing everybody" is classified in the value domain of "social belonging" because the "end state" is centred on enhancing a sense of belonging. The "end states" of "I enjoy them" and "enjoyable" are classified into the value domain of "enjoyment". The "end state" of "health" was allocated to the value domain of "inner harmony" because health was needed for well-being.

Table 15: Criteria for allocating "end states" that are in figure 14 into value domains

Value domains and the "end states"	Criteria for allocating "end state" in to value domains
1. Enjoyment I enjoy them, enjoyable	The end state is about the need for "pleasure, or to enjoy food, including the desire of food for taste or other sensory characteristics
2. Inner harmony Health	The "end state" is about the need for peace of mind, happiness or satisfaction from eating food or associating with other people on a particular meal occasion
3. Social belonging To please everybody	The end state is about the need for enhancing or enhancing family relationships or the need to please family members and other people.
4. Social responsibility	The end state is concerned with the duty or requirement for looking after the interests of other members of the family

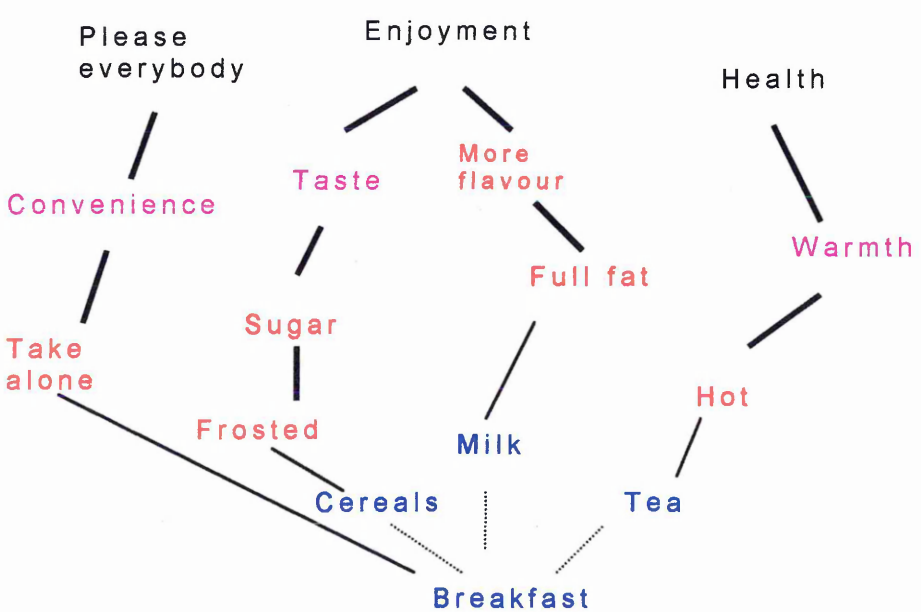
Investigation of the linkages between the consequences

The second stage of data analysis involved the investigation of the types of linkages between the conceptual categories. Hierarchical value maps (HVMs), which were constructed from the ladders, were the means of determining the types of linkages between the conceptual categories. Consider the HVM in figure 15 as an example. The HVMs contain three types of linkages between the conceptual categories. The first type of linkages are dotted lines connecting the meal occasions to the food products chosen on those particular occasions. These dotted lines can be conceived of as "denotative" linkages because they provide an explicit indication of the food products chosen on each occasion. The second type of linkages shown in the HVMs is in the form of thinner solid lines. The thinner solid lines indicate connections between the stimuli (i.e. meal occasions and the relevant food products) to the corresponding attributes. The

thicker solid lines connect the stimuli or attributes of the stimuli to the outcomes of the choice behaviour, i.e. to consequences, and/or values.

The solid lines represent "connotative" type of linkages between conceptual categories. Connotative linkages, which are also called "implicative linkages", are important in means-end theory because they provide the basis of understanding the personal meaning that a respondent or participant attaches to a stimulus (Nielsen et al, 1998; Reynolds and Gutman, 1988). The participant in the laddering interview attaches meaning to a stimulus when he/she, for example, responds to a question of the type "why is that important or not important to you". Take, for instance, a consumer, who is asked a question on the taste of sugar-coated cereals during a laddering interview: - "Why are sugar-coated cereals important to you?" Assume that the consumer gives the response: - " I prefer sugar-coated cereals because they have good taste" The link between "sugar-coated cereal" and "good taste" in the ladder and HVMs would be an example of "connotative" or "implicative" linkage because the respondent would be attaching personal meaning of "good taste" to choosing "sugar coated cereals".

Figure 15: Explanatory HVM for food choices on breakfast occasion



The two types of "connotative linkages", which were of interest in this study, were the direct linkages between adjacent conceptual categories, and direct linkages between the nonadjacent conceptual categories (cf. Bech-Larsen and Nielsen, 1999; Reynolds and Gutman, 1988). Adjacent conceptual categories are those categories of means-end theory, which are next to each other in HVMs. Consider, for example a means-end conceptual category consisting of four categories of choice behaviour, attributes of choices, consequences, and values, hierarchically linked together (see figure 15 above). Examples of direct linkages between adjacent conceptual categories would be those linkages between the following pairs of conceptual categories: (i) choice behaviour and attributes, (ii) attributes and consequences, and (iii) consequences and values. Direct linkages between nonadjacent conceptual categories, on the other hand would consist of the following pairs of conceptual categories: (choice behaviour and consequences, (ii) choice behaviour and values, and (iii) attributes and values. In accordance with the traditional practices of data analysis in means-end studies, content analysis was the method of determining the dominant linkages between the conceptual categories in the HVMs (see Reynolds and Gutman, 1988). Table 16 below gives an example of results of content analysis of the direct linkages based on the HVM in figure above 15.

Table 16: Illustration of the computation of the number of direct linkages between the conceptual categories

	Choice behaviour	Attributes	Consequences	Values
Breakfast occasion and the food choices		4	0	0
Attributes			3	1
Consequences				3

Frequencies in the diagonal cells represent the direct linkages between adjacent conceptual categories, i.e. choice behaviour to attributes of the stimuli, attributes to consequences, and consequences to values. Entries in cells formed by similar conceptual categories in the corresponding row and column (e.g. attributes to attributes, or consequences to consequences) are necessarily empty because a conceptual category cannot be linked to itself. Entries in non-diagonal cells represent the frequencies of direct linkages between nonadjacent conceptual categories (i.e. choice behaviour to consequences, and attributes to values).

The results show higher frequencies along the diagonal of the table than those on the side of the diagonal. The higher frequencies along the diagonal indicate the dominance of direct linkages between the adjacent conceptual categories. The dominance of direct linkages between adjacent conceptual categories suggests that the hierarchical linkages between the conceptual categories of choice behaviour, attributes, consequences, and values can be established.

The Validity and Reliability of the Research Study

This study, being of the *critical realist ontology*, was focused on the following measures of ensuring acceptable level of quality of the study: - face validity, construct validity, internal validity, and the study reliability (Dey, 1993; Perry, 2001).

Face validity:

The research findings were grounded in the empirical data, thus linking empirical observations with the conceptual model. A detailed account of how the empirical data was categorised and linked together in the formulation of the theory was presented earlier (see tables 10 and 11.

Construct validity:

The conceptual and empirical definitions of the key concepts were developed so that the key concepts used in the study could be as close to those in published literature as possible. The key concepts involved were choices behaviour, attributes of choices, consequences, values, (see table 10).

Internal validity

Pattern matching was conducted using the algorithmic framework given in figure 13. The pattern matching exercise was focused on identifying the extent to which "why", and "how" questions linked the key concepts conceptual means-end model linking choice behaviour to values.

Reliability of the study

Measures taken to ensure that the study was reliable include the use of case study databases and replicating the study cases eight times.

The Ethical Considerations

Social studies, characteristically, involve human beings in the inquiry. The involvement of human beings requires that the social researchers adopt codes of ethics. This study adopted the codes of ethics in conventional format, covering requirements for informed consent, avoiding deception, ensuring privacy and confidentiality, and accuracy in reporting the research findings (see Christian, 2000).

Informed consent

The principle of informed consent is meant to respect freedom (Christian, 2000). The principle contains two conditions, covering the need to ensure voluntary participation in research studies. First, participation must be without physical or psychological coercion. Second, the agreement to participate must be based on full and open information. The principles of informed consent are also enshrined in the Article of the Nuremberg Tribunal and the Declaration of Helsinki, which both state that subjects must be told of the duration, methods, possible risks, and the purpose or aim of the study (see Soble, 1978; Veatch, 1996).

Pre-interview discussions with the research subjects were conducted, seeking the subjects' agreement about the type of information that the subjects would be expected to provide, and the use to which the information would be put. The subjects were also told of their rights to withdraw whenever they thought, for any reason, that they could not continue to be part of the research subjects.

Deception

This study was based on the view that deception is "neither ethically justified nor practically necessary, nor in the best interest of an... academic pursuit" (see Bulmer, 1982:217). The respondents were, therefore, dealt with as honestly as was possible.

Privacy and confidentiality

Subjects in social studies are entitled to their privacy and confidentialities with respect to the information obtained by the researcher in the course of his/her studies. According to Punch (1994) and Reiss (1979), the single most likely source of harm in social science inquiry is the disclosure of private knowledge considered to be damaging the subject' reputation and other interests.

Thus, pseudonyms were used to identify the research participants in order to facilitate the maximum possible anonymity for the respondents.

Accuracy

One of the codes of ethics in social research is to report the findings accurately (Christian, 2000). Researchers are

obliged to avoid fabrications, fraudulent materials and other errors of commissions and omissions.

This researcher took all possible measures to ensure that the report was accurate. Participants were assured that once findings had been successfully presented for examination, the report would be available to the public in the library at Cranfield University.

Summary of the Research Methodology

This discussion, on the research methodology, started with a review of the nature of the research problem. The research problem was reviewed so that the most appropriate research method could be adopted. The study was about theory building. More specifically, the study was concerned with determining whether or not means-end theory could be extended to linking choice behaviour to values. Thus, the research results were to be generalised to means-end theory, rather than to a given wider population. The survey research method, usually adopted for means-end studies, was, therefore, not appropriate for this study. In addition, the study was to be conducted within the context of the mother's food choices in the family. The boundary between the phenomena of food choices and values, on one hand, and the context of a mother's food choices on a particular occasion within a family, on the other hand, was blurred. It was neither easy nor necessary to separate the study phenomena from the study context. Thus, any research method adopted had to be suitable for the investigation of context-nested phenomena. Furthermore, the study of linkages between choice behaviour and values were to be conducted within the contemporary time context. In the light of these characteristics of the research problem, the case research method was adopted.

The case research design was then defined, specifying the area in which the study was to be conducted, the criteria used in selecting the study cases, and the number of study cases included in the study. The study was to be conducted in Flitwick town, because Flitwick was conveniently close to Cranfield University where the researcher was based. Middle class families, in which the parents identified themselves as of Anglo-Saxon origin, were included in the study. Mothers within these families were selected to be the research participants. Mothers were selected for the study because they are usually the most involved in activities of buying food, and preparing the food at home. The next step was to

present the conceptual model of means-end theory that was to be used in guiding the study. The model, based on the initial theoretical assumptions about means-end theory linking choice behaviour to values, provided the study effort with focus and clarity.

Thereafter, the procedures followed in the collection of the research data were explained. Data collection was done in two stages, starting with the exploratory study, and followed by the main study. Three cases were included in the exploratory study. The purpose of the exploratory study was to gain an understanding of the practicalities of conducting means-end studies using the context of food choices in the family. Based on the results of the exploratory study, the main study was focused on breakfast, evening meals, and Sunday lunch, in the investigation of linkages between choice behaviour and values. The language used to describe the occasions on which the participants ate food at home and the food choices suggest the participants thought of the food choices in terms of social belonging, pleasure (enjoyment), and happiness (contentment). The main study, on its part, included 8 study cases. The cases were chosen following the replication logic. The chapter ended with a presentation of the measures adopted to ensure that the study results were valid, and that the study was reliable and based on widely accepted standards of ethics in social research. Having presented the procedure followed in conducting the study, the next chapter presents results of the main study.

Chapter

FIVE

The Study Results

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The first part of the discussion in this chapter is centred on the investigation of the conceptual categories of means-end theory linking choice behaviour to values. The investigation of the conceptual categories started with the concept of choice behaviour, followed by attributes of the choice behaviour, and then consequences, and values. The concept of "choice behaviour" was the first to be investigated because the determining of "attributes of choices", "consequences", and "values" was to be based on a known pattern of choices. Put differently, it was only when "choice behaviour" was known that the "attributes" of the choices, the participant's desired "consequences", and the "values" underlying the choice behaviour could be investigated (cf. Gutman, 1981; Reynolds and Gutman, 1988). This procedure of determining the conceptual categories of means-end theory starting from the stimulus up to the respondent's consequences and values is based on the theory of categorisation (Tversky, 1978). Categorisation theory, essentially, explains how the stimulus in the environment activates an individual's self-schema (see Gutman, 1981). The activation of the self-schema, then, facilitates the determining of the conceptual categories of the attributes of the stimulus and the respondent's abstract consequences and values. A more detailed explanation of how categorisation theory helps in determining the conceptual categories of means-end theory was given in chapter 1.

The second part of this report was focused on the investigation of the linkages between the conceptual categories of means-end theory linking choice behaviour to values. The results of the linkages between the conceptual categories were, first, organised into hierarchical value maps (HVMs). The linkages between the adjacent and non-adjacent conceptual categories in the HVMs were then content analysed following the procedure explained in chapter 4. Content analysis of the linkages between the conceptual categories in the HVMs was carried out as a way of determining the dominance of the linkages between the conceptual categories. The details of the results were then organised as explained in following section.

Organisation of the Study Results and the Overview of the Study Cases

The details of the results for each of the eight cases are given in appendix 2 in the form of tables, ladders, and HVMs. As pointed out in the methodology chapter, the eight cases included in this study were identified by code names for their anonymity. The code names of the cases were: 1, 2, 3, 4, 5, 6, 7, and 8. Table 17 on the next page, presents the overview of the cases used in this study. All the participating families consisted of both parents and dependent children. Six of the participants (1, 2, 5, 6, 7, 8) had young children under the age of 13 years. The young children were given more guidance in the selection of food than the teenage children. One participant (Case 8) had children under the age of five years. The children in cases 3 and 4, on the other hand, were teenagers. It had been expected that the teenage children would be more independent in their choice of food than the younger children. Most of the participants were either employed part time or devoted their time to looking after children and house keeping. The main income earners, in all cases, were the fathers. The fathers in the participating families were in either managerial or professional employment. The specific types of the employment are given in appendix 2.

Table 17: Overview of the cases used in the main study

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8
Characteristics								
1. Employment status of the participant	Full time, on leave	Part time professional	Part time office worker	Part time professional	House wife	House wife	Part time skilled	Professional, Full time house wife
2. Occupation of the participant's spouse	Full time professional	Full time professional	Full time managerial	Full time professional	Full time minister of religion	Full time skilled employee	Full time business man	Full time managerial
3. Children under 5 years old	-	-	-	-	-	-	-	2
4. Children: 5 year old, less than 13 years	1	1	-	-	2	2	2	2
5. Children 13 years of age or older	-	1	2	2	2	-	-	-

The Conceptual Categories of Means-End Theory Linking Choice Behaviour to Values

The results of the investigation of "choice behaviour" are presented first, followed by the results of the conceptual categories of "attributes", "consequences", and "values".

The conceptual category of "choice behaviour"

Data analysis, in this section, was centred on determining whether or not food selections on the three meal occasions of breakfast, evening meals, and Sunday lunch occasions constituted "choice behaviour". As already explained in chapter 3, "choice behaviour" implies that the participants: - (i) had alternative food products to choose from, (ii) evaluated the alternatives from a particular choice set, and (iii) made deliberate selections of food products from the choice set (see Schiffman and Kanuk, 2000). The bases of determining choice behaviour across the cases were the types of food eaten by the participants and given to young children at breakfast, evening meals, and Sunday lunch across the eight cases, and the family members who ate the food together with the participants. The types of food included in meals were expected to give indications of the range of alternative food products that were available to participants.

Details of food products selected by each of the participants at breakfast, evening meals, and Sunday lunch are given, in appendix 2, in tables A2, A7, A12, A17, A22, A27, A32, and A37. The summary of the food products eaten at breakfast, evening meals, and Sunday lunch across the eight cases is given in table 18 below. The food products, which were eaten at each of the meal occasions, are listed in the first column. The food products are listed in broad categories to facilitate ease of comparison of the food products across the cases. Listing of the food in categories, however, tended to mask the details of the food products. A balance had to be struck between the need for inter-case comparison of food choices and the need to retain specific identity of the food items.

Letters (B), (E), and (S), in the sub columns under each of the eight cases in the table, represent the breakfast, evening meals, and Sunday lunch meal occasions. These are the occasions on which the participants' food choices were investigated. The letters (W) and (R) written within some of the table cells stand for "white meat" and "red meat respectively. The category of white meat includes chicken, pork, and fish. Red meat, in turn, includes beef and mutton. The cells containing the letters (W) and/or (R) indicate the occasions on which these categories of meat were eaten by the participant in the corresponding case. Ticks (✓) in cells show the meal occasions on which the participants in each of the eight cases ate the food categories in the first column, other than meat.

Table 18: Summary of food products eaten at breakfast, evening meals, and Sunday lunch across the eight cases

Categories of the food products	Meal occasions on which the food products were included across the eight cases																							
	Case 1			Case 2			Case 3			Case 4			Case 5			Case 6			Case 7			Case 8		
	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S
Bread	✓			✓						✓			✓						✓			✓		
Cereals	✓			✓			✓						✓			✓			✓			✓		
Fresh milk	✓			✓			✓						✓			✓						✓		
Milk products		✓																						
Pudding									✓												✓			✓
Meat: (R)=red, (W)=white		W R			W R	W R		W R	W R		W	W		W R	W R		W R	W			W R		W	W
Casserole					✓																			
Vegetables		✓			✓	✓		✓	✓		✓	✓		✓	✓		✓	✓		✓	✓		✓	
Potatoes		✓			✓	✓		✓	✓		✓	✓		✓	✓			✓		✓	✓		✓	✓
Fruits	✓	✓																					✓	
Fruit juice	✓		✓	✓																		✓		
Hot drink: tea or coffee	✓		✓				✓			✓			✓			✓			✓					
Rice					✓																			
Pies		✓																						✓
Sandwiches			✓																					
Burgers																	✓							
Eggs																				✓				
Beans/peas		✓			✓									✓	✓						✓			
Vegetable soup		✓																						

It should be remembered that the focus of data analysis, in this section, was on determining whether or not the participants' selection of food products at breakfast, evening meals, and Sunday lunch constituted "choice behaviour". In other words, the investigation was not particularly centred on establishing the details of the food products eaten by the participants on each of the meal occasions. Food products eaten on the three meal occasions were the context for determining the concept of choice behaviour. Food products were only of interest in as much as they gave indications of the similarities and/ or differences in the participants' choice behaviour.

Thus, if the results of the study had been inconsistent with the expected patterns of the participants' food choices and values, then the confidence in accepting the linkages between choice behaviour and values would be low. These results, which were largely consistent with the expected patterns of the participants' food choices and values, therefore provide a high level of confidence in the outcomes of linkages between choice behaviour and values. As expected the results indicate that breakfast cereals*, bread, and milk were some of the most favoured breakfast foods. Six of the eight participants included cereal in their breakfast meals. Some of the participants (e.g. Case1) included cereals in their breakfast as a way of encouraging their young children to take milk with the cereals. The two participants who did not include cereals in their breakfast had teenage children only. These participants did not have young children. It could be of interest to note that, though these participants did not like cereals themselves, a wide range of cereals were in stock in the house for other family members. Milk was considered to be important for children health and well-being. Two participants (Case1 and Case 8) indicated that they also included fruit juice for the children.

The food products included in evening meal occasions and Sunday lunches were mostly potatoes, beef, chicken, pork, lamb, different kinds of vegetables, and disserts. The main differences between food eaten on evening meal occasions and Sunday lunch were in the methods of preparing the food. Food eaten on evening meal occasions were mostly prepared in traditional ways, such boiling, mashing potatoes, or casserole dishes. Ready meals were also included at some of the meal occasions. Sunday lunch, on the other hand, was mostly in the form of roast potatoes and beef, two different kinds of vegetables, and disserts. It should be noted that some foods, which were not included in this list were, never

* Details of the different types of the breakfast cereals are shown for each study case in appendix 2.

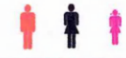
the less, usually in stock in the pantries. Food products that were in stock but not included under any of the three meal occasions were mostly snacks, such as chocolates, crisps, biscuits, and sweets.

As expected, the participants adopted broadly similar food choices because they shared similar socio economic background and lived in the same area. More specifically, all the participants identified themselves with the "English" ethnic identity of the "Anglo Saxon" origin, were in the same socio- economic class, and were selected from the same geographical area of Flitwick. The variations in food choices between the participants could be due to differences in the composition of family members who usually ate food with the participants and the individual food preferences.

The family members who participated in meals together with the mother on the three meal occasions, in each case, are shown in table 19 overleaf. The cases are shown in the columns of the table. The three table rows contain the three meal occasions of breakfast, evening meals, and Sunday lunch. The table cells contain the categories of the people who, in each case, ate food together with the mother (i.e. the participant in the study). The interpretation of the graphics representing the categories of the people who ate food together with the participant on each meal occasion is shown at the bottom the table.

The results in the table indicate that mothers with young (e.g. Case 1 and Case 8) children usually ate food at breakfast together with the children. These mothers decided about what to eat or to give to the children. The mothers whose children were older (e.g. Case 3 and Case 4) only made decisions about their own food on breakfast. These mothers had more freedom to choose what to eat at breakfast than those mothers who ate the food on breakfast with other members of the family. On the other hand, evening meal occasions and Sunday lunches usually involved all the family members. The evening meals occasions, in particular, involved the mother, father and children. The Sunday lunch, in turn, involved visitors, in addition to the family members. The participant's food choices on these meal occasions reflected a compromise, or joint interests, of all the people who participated in the meal occasions.

Table 19: Family members who ate food together with the mother at breakfast, evening meals, and Sunday lunch

Meal occasions	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8
Breakfast occasion								
Evening meal occasion								
Sunday lunch								

Key: = mother, = father, = children, = visitors

In summary, the results show that the participants' food choices could be established at breakfast meal occasions. Thus, food choices at breakfast were most likely to be linked to "self" oriented values, because the participants selected the food products in accordance with their own personal preferences. The food choices on evening meal occasions and Sunday lunch reflected compromises of food choices and joint preferences of the family members. The meal occasions of breakfast, evening meals, Sunday lunch occasions and food choices on these occasions were the bases of determining the conceptual category of attributes.

The conceptual category of "attributes of the choice behaviour"

The attributes of breakfast, evening meal occasions, Sunday lunch, and the food eaten on these occasions are given in tables A3, A8, A13, A18, A23, A28, A33, and A38 in appendix 2. These attributes are summarised in table 20 on the next page. The first column of table 20 contains the meal occasions and the categories of food products from which the attributes were elicited. The attributes of each of the category of the stimuli are listed in the second column.

As can be seen in table 20, the attributes of meal occasions were expressed in subjective terms, such as "sit down meal occasion", "take alone", or "family time". The subjective terms indicated the personal meaning attached to the meal occasions. The attributes of food products, in turn, were mostly objective sensory terms, such as, taste, colour, and ways of food preparation. These attributes show that the participants tended to think of the food products in "concrete" or objective terms, which could not be readily linked directly to the participants' needs. For example, if a participant described food as "high fibre content", or "roast" potatoes, these characteristics could not readily be related to the needs of the participants unless the participant indicated whether or not she preferred the attributes of "high fibre" content to "low fibre" content. On the contrary, if the participant described the food products in subjective attributes, such as, "healthy", or "junky", then, the meaning attached to the food by the participant can be readily known.

Table 20: Attributes of breakfast occasions, evening meal occasion, Sunday lunch occasions and food products included on these occasions

Meal occasions and the categories of food products	Attributes of the meal occasions and food products
Meal occasions	**Attributes of the meal occasions**
Breakfast meal occasion	Sit down meal occasion, take alone meal, good routine
Evening meal occasion	Family occasion, dinner, social occasion, family time, simple meal occasion
Sunday lunch	Light meal occasion, family occasion, social occasion, social event
Food products	**Attributes of the food products**
Tea, and fruit juice	Early morning, sugar free, hot, warm, refreshing, healthy, contain vitamins, children's choice
Cereals	Wide variety, sugar-coated, low sugar content, high fibre content, sweet, children's choice, fattening, fortified, chocolate content
Milk and related products	Semi-skimmed, full fat, more flavour, whole milk, high calcium content
Bread and buns	Brown, white, natural, hot, toast, crunchy, tasty, wide variety
Vegetables	Tasty, healthy, wide variety, two kinds per meal, cheap, easy to cook, full of goodness, high roughage content, good colouring
Meat products (including fish)	White, red, wide variety, roast, tasty, healthy, balanced diet,
Potatoes	Boiled, mashed, baked, roast, filling, staple, healthy,
Casserole	Wide variety, easy cook, quick meal,
Rice	Easy to prepare, easy to cook, tasty
Ready-to-eat meals (pies, sandwiches, pudding, custard cream, ice cream, crisps, chocolates)	Taste, treat, children's favourite, for visitors

In summary, the results show that more of objective or concrete attributes were elicited from the food products than subjective attributes. Subjective attributes were elicited from the meal occasions and some food products, indicating the personal meaning attached to the stimuli. Most participants considered evening meal occasions as family occasions. Participants with young, in particular, children described the breakfast meal occasion as family occasion. Participants with older children considered breakfast occasion as "take alone" meal occasions. The attributes of the food products were mostly in objective concrete terms, with few products, such as vegetables, given subjective attributes.

The conceptual category of "consequences"

Consequences are the physiological outcomes, which individuals expect to accrue from products, activities or other types of stimuli (Gutman, 1982; Reynolds and Gutman, 1988). The conceptual category of consequences, in mean-end theory, links the stimuli or attributes of the stimuli to the needs of the consumer. Laddering interviews were the bases for determining the consequences. Consider, for example, the ladders of cases 4 and 8, in figures 16 and 17 respectively. Ladders of the participant in case 4 were typical of the results of the participants who ate food at breakfast alone. Ladders of the participant in case 8, in turn, represented the results of participants who ate food at breakfast together with young children.

As was explained in chapter 4, the first word in a given ladder is the stimulus from which all other conceptual categories are derived. In this study, the stimulus was either the meal occasion or the food products eaten at that particular meal occasion. Consider, for example, the first ladder in figure 16. The stimulus was the breakfast meal occasion. This was the basis of determining the attributes, consequences, and values in that particular ladder. The participant conceived of the breakfast meal occasion as a "take alone" meal occasion. The term "take alone" represented the "attribute" of the breakfast occasion because it was the language used by the participant to describe the occasion. The link between the stimulus and the attribute is shown in dotted lines. Bold lines link the terms established by the laddering interview technique. Laddering interviews involved asking the respondent questions of the type: "Why is this (stimulus, attribute, or consequence) important to you?"

One of the noteworthy characteristics of these ladders is the sequential hierarchical order of the responses. Readers could get the impression that the participants gave response in sequential order. This was rarely so. In fact, the participants usually gave multiple "strands" or "lines of thoughts" in response to the laddering questions. Ladders were then developed from the "conversational" data, linking the responses to form a single line of related responses. For example, ladders 8, 9, and 10 of case 4 in figure 16 were all developed from the conversation about the participant's choice and perception of vegetables. The three different ladders were then written separately because each of them represented a separate theme as shown in the ladders.

Responses in ladders were classified as consequences on the basis of the following criteria: First, the responses representing consequences had to be in the form of the participant's self-relevant "outcomes". The second criteria was that the response, in the form of self-relevant outcome, was not at the end of the ladder. In other words, the "consequences" type of response necessarily follows another "outcome" response in that ladder. Consequences, in figures 16 and 17, are colour coded in pink to give examples of the responses representing consequences in a given ladder.

Figure 16: Typical ladders of food choices at breakfast, evening meals, and Sunday lunch for participants who ate food alone at breakfast: Case 4

Ladders for food choices on breakfast occasion

1. Breakfast ····· take alone —— convenience —— to have peace of mind
2. Bread ····· toast —— it is a habit
3. Bread ····· brown —— natural food —— Health
4. Tea ····· hot —— refreshing —— Feeling good

Ladders for evening meal occasions and the food choices

5. Evening meal ····· family time —— togetherness to —— preserve family relations
6. Potatoes ····· boiled —— good taste —— to enjoy
7. Potatoes ····· boiled —— wide variety —— to enjoy
8. Vegetables ····· cheap —— buy what we can afford —— keeps us happy
9. Vegetable ····· healthy food —— Healthy life
10. Vegetables ····· easy to cook —— convenience —— Feeling good
11. Meat ····· balanced diet —— healthy lives for the family
12. Meat ····· white meat —— healthy food —— good for health

Ladders for Sunday lunch and the food choices

13. Sunday lunch ····· social event —— to please friends —— to keep relations
14. Potatoes ····· roast —— tradition
15. Meat ····· white —— healthy life —— satisfying life
16. Meat ····· variety —— to avoid boredom —— to keep on enjoying meat
17. Vegetables ····· variety —— to enjoy
18. Vegetables ····· healthy —— for healthy life

Figure 17: Typical ladders of food choices at breakfast, evening meals, and Sunday lunch for participants who ate food with young children at breakfast: Case 8

Ladders for the breakfast occasion and food choices

1. Breakfast occasion ····· mum and children —— to make sure children eat well in the morning —— my responsibility as the mother
2. Cereals ····· fortified —— good for children's health —— my responsibility as the mother
3. Bread ····· toast —— taste —— to enjoy
4. Tea····· without milk —— taste —— to enjoy

Ladders for the evening meal occasion and the food choices

5. Evening meal ····· Family occasion —— togetherness —— Helps to preserve family relations
6. Potatoes ····· boiled —— filling —— satisfying
7. Potatoes ····· oven chips —— good taste —— to enjoy
8. Meat ····· wide variety —— good taste —— to enjoy
9. Chicken nuggets ····· Children love them —— Feel happy to see children eat what they want
10. Tuna····· tasty —— to enjoy
11. Vegetables ····· attractive colour —— to enjoy food
12. Vegetables ····· high roughage content —— healthy life

Ladders for the Sunday lunch and the food choices

13. Sunday lunch ····· social event —— builds relationships
14. Potatoes ····· roast —— good taste —— to enjoy
15. Meat····· roast —— tradition
16. Meat····· wide variety —— to enjoy
17. Vegetables ····· high roughage content —— healthy
18. Apples ····· a treat —— to please visitors
19. Custard cream ····· a treat —— to please visitors —— builds relationship
20. Yorkshire pudding ····· a treat —— to please visitors builds relationships

As can bee seen in figures 16 and 17, a number of ladders did not contain responses representing "consequences". This is because most ladders were very short, consisting of two or three responses only. One of the responses in the ladder was an attribute (characteristic of the stimulus) and the other was the only "outcome" in the ladder. A single "outcome" response in a given ladder was automatically categorised an "end state".

The small number of responses in the ladders produced in this study is comparable to those of the previous studies, which were concerned with the perceptions of food products. For example, the ladders produced in the study of consumers' cognitions with regards to genetically modified food across four European countries had one to three responses (Bredahl, 1999). The reason for the few responses in ladders for food choices could be that individuals can easily relate food to certain end states like "health" or "enjoyment". Once these "end states" have been mentioned in laddering interviews, the respondent, then, cannot give any other reason for liking or disliking that particular end state.

The ladders for the food choices in all the eight cases are given in figures A1, A3, A5, A7, A9, A11, A13, and A15. The consequences from these ladders are listed in the third column of tables A3, A8, A13. A18, A23, A28, A33, and A38. The consequences in these eight tables are summarised in table 21 on the next page. The first column of table 21 contains the meal occasion and food products from which the consequences were elicited. The consequences for each of the categories of the stimuli are in the second column.

The dominant consequences for the meal occasions were concerned with enhancing family relationships. Consequences for the food choices, on their part, included the participants' need for "enjoyment", "health", "convenience", and "satisfaction" from eating the food. The dominant consequences for food products were "variety", "taste", and "health". The participants with young children (i.e. Cases 1, 2, 5, 6, 7, and 8) gave the consequences that reflected the need to look after the children.

Table 21: Consequences of breakfast occasions, evening meal occasions, Sunday lunches and the food products included on the meal occasions

Meal occasions and categories of products included on the meal occasions	Consequences
Breakfast occasion and the food choices on the occasion	Family harmony, good taste, wakes me up, reminds me of my origins, weight gaining, healthy, preserves daughter's health, daughter enjoy it, treat, to avoid boredom, convenience, warmth, refreshing, to please children, to get nice figure
Evening meal occasion and food choices on the occasion	Togetherness, saves time, avoids monotony, wide variety, convenience, to enjoy, filling, health, balanced diet, to please children
Sunday lunch occasion and the food choices on the occasion	Building relationships, saves time, to enjoy, to please friends, good taste, health, to get variety, to please visitors

In sum, the results show that some ladders did not contain the conceptual category of consequences. These ladders had few responses, which represented the conceptual categories of attributes, and end states. The majority of ladders, however, contained the conceptual category of consequences. The consequences of the meal occasions were mostly related to the need for convenience and togetherness. The consequences for the food products were mostly related to the need to enjoy food, to be healthy, and to please other members of the family.

The conceptual category of values

The "end states" contained in each ladder were the bases for determining the values. "End states" are the responses that are located at the end of the ladder. Consider, for example, ladders of cases 4 and 8 in figures 16 and 17 in the previous section on consequences. The responses at the end of the ladders were classified as end states, representing values, on the following bases: First, the responses were expressed in the form of desired outcomes of the food products or the meal occasion. Second, these responses expressed in the form of desired outcomes were the last response given in a particular ladder. Once these responses had been given, the

participant would show some signs of having exhausted the answers to the laddering questions. These signs included the repetition of the same response, or admissions that she did not know. The "end states" of each of the eight cases included in this study are listed in appendix 2 in the fourth columns of tables A3, A8, A13, A18, A23, A28, A33, and A38. The end states were classified into the domains of values of "enjoyment", "inner harmony", "social responsibility", and "social belonging", following the procedure that was explained in chapter 4.

The dominance of each of the value domains in meal occasions and across the eight cases, determined by content analysis, is shown in table 22 on the next page. The value domains are in the first column of the table. The eight cases are shown in the second to the ninth columns. Sub columns under each of the cases contain the meal occasions of breakfast, evening meals, and Sunday lunch. Ticks (✓) in the cells show that the value domain in the corresponding row was established for the corresponding case.

The results show that most of the ladders contained the conceptual category of values. The "end states" representing the values of "enjoyment" were associated with most food choices across the eight cases. All, but one, participants indicated the importance of values of "enjoyment" in the three meal occasions. The exception was the participant in case 4, who did not associate food choices on breakfast with the need to enjoy. Participants with young children were mostly influenced by the values of "social responsibility" in selecting food products. Evening meal times and Sunday lunches, across the eight cases, were associated with the values of "social belonging". The evening meal occasions and Sunday lunch were considered to be family occasions, which were important for building family relationships. Food choices on these occasions were for enjoyment and cementing relationships.

Table 22: The value domains at the meal occasions across the eight cases

Domains of values	Case 1			Case 2			Case 3			Case 4			Case 5			Case 6			Case 7			Case 8		
	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S	B	E	S
Social belonging	✓	✓			✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓		✓	✓			
Inner harmony	✓			✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Enjoyment	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Social responsibility	✓		✓	✓									✓			✓	✓			✓	✓	✓	✓	✓

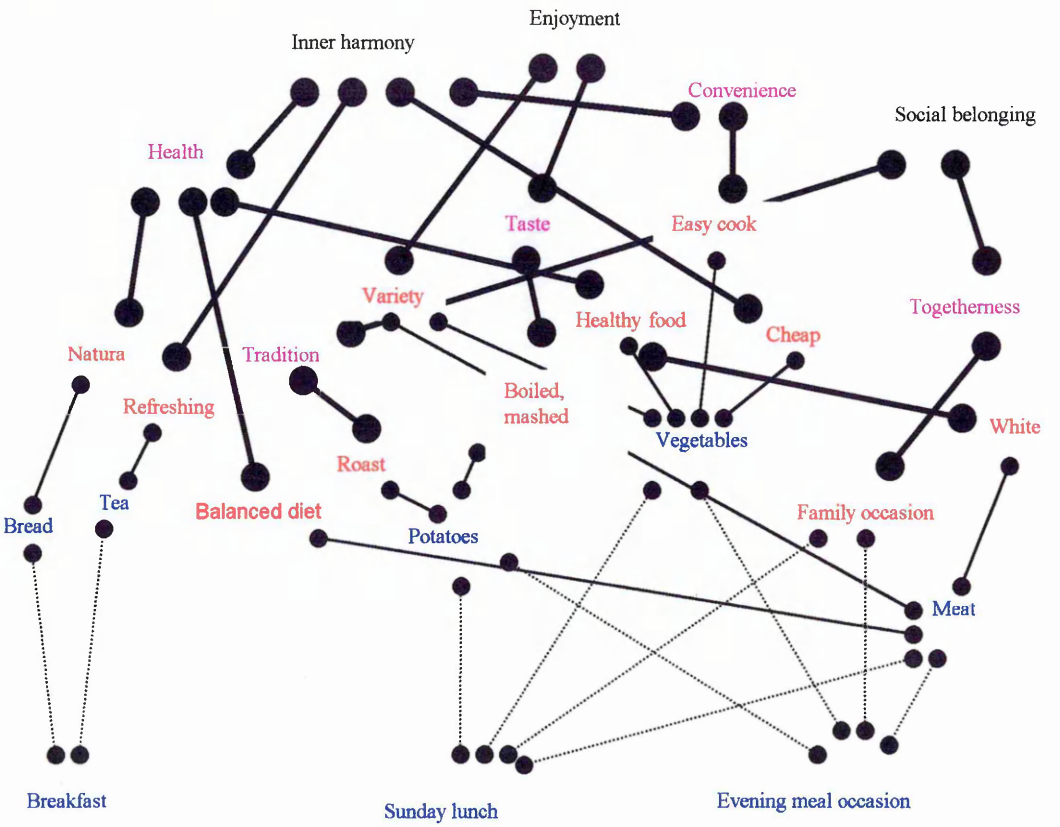
Key: B= breakfast occasion, E= Evening meal occasion S= Sunday lunch

Linkages between the Conceptual Categories

Data analysis, in this section, was centred on determining how the conceptual categories connecting choice behaviour to values were linked together. The linkages connecting the conceptual categories of choice behaviour, attributes of the stimuli, consequences, and values, in each case, are shown in the respective HVMs. Take, for example, the HVM of case 4, given in figure 18 overleaf. This was a typical HVM of the participants who ate food alone at breakfast because the children were old enough to eat alone. The food products eaten at breakfast in case 4, as can be seen in the HVM, were quite few, which, in turn, resulted in few attributes, consequences and end states. On the contrary, the HVM of the participant in case 8, shown in figure 19, contains more food products eaten at breakfast. This is because the participants in case 8 represented those participants who ate food at breakfast together with the young children. More food products were included in these cases to cater for different needs and interest of children and the mother. Tables 23 and 24 present the data indicating the dominance of linkages between the conceptual categories in the HVMs of cases 4 and 8 in figures 18 and 19 respectively.

The numbers of linkages on the diagonal of each of the tables 23 and 24 indicate the frequencies of direct linkages between the adjacent conceptual categories. The adjacent conceptual categories were: (i) choice behaviour and attributes, (ii) attributes and consequences, and (iii) consequences and values. The numbers of linkages between nonadjacent conceptual categories are on the right-hand side of the diagonal of the table. The nonadjacent conceptual categories were: (i) choice behaviour and consequences, (ii) choice behaviour and values, and (iii) attributes and values

Figure 18: Typical HVMs for food choices at breakfast, evening meals, and Sunday lunch by the participants without young children: Case 4



Key:

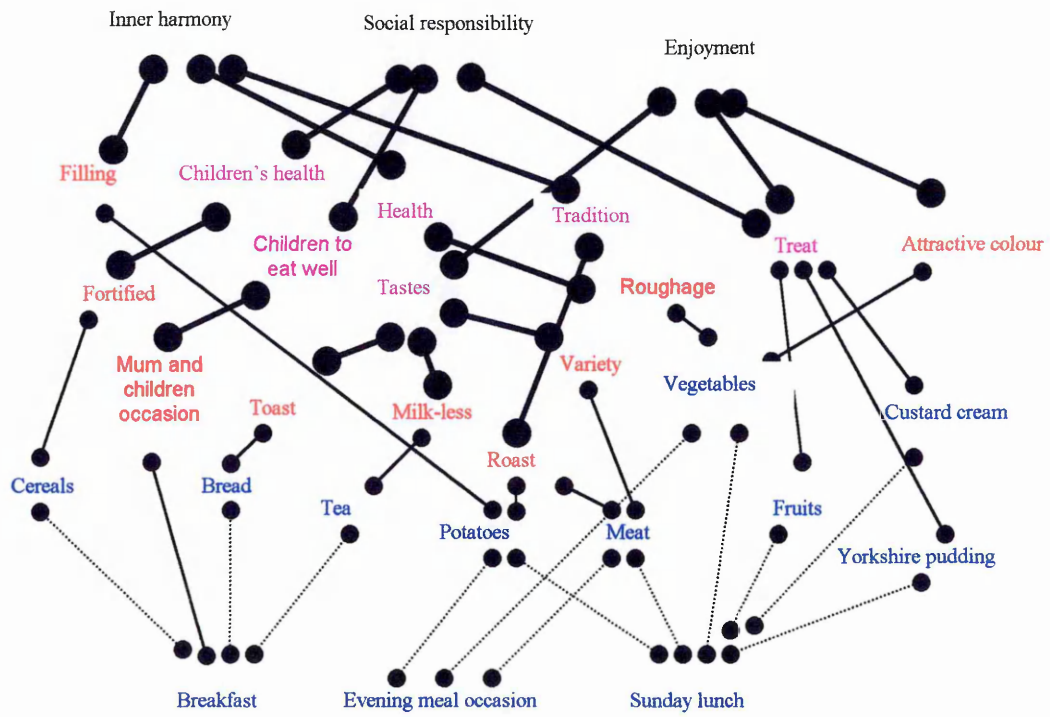
Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Figure 19: Typical HVMs for food choices at breakfast, evening meals, and Sunday lunch by the participants with young children: Case 8



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table 23: The number of direct linkages between conceptual categories in the HVM in figure 18: Case 4

	Choices	Attributes	Consequences	Values
Choices	-	13	0	0
Attributes	-	-	7	1
Consequences	-	-	-	4
Values	-	-	-	-

Table 24: The number of direct linkages between conceptual categories in the HVM in figure 19: Case 8

	Choices	Attributes	Consequences	Values
Choices	-	9	3	0
Attributes	-	-	6	2
Consequences	-	-	-	6
Values	-	-	-	-

The HVMs for the eight cases are given in appendix 2, figures A2, A4, A6, A8, A10, A12, A14, and A16. The content analysed frequencies are shown in appendix 2, tables A5, A10, A15, A20, A25, A30, A35, and A40. Table 25, on the next page, summarises the number of linkages between the conceptual categories across the eight cases. The first column, in table 25, contains the six possible direct linkages between the four conceptual categories. The eight cases are shown in the second through to the ninth column of the table. The frequencies of the linkages are higher between the adjacent conceptual categories than between the nonadjacent categories. This suggests more direct linkages between adjacent categories than between nonadjacent categories. Among the adjacent conceptual categories, the frequencies are highest between the conceptual categories of choice behaviour and attributes. The second highest is between the conceptual categories of attributes and consequences,

followed by the linkages between consequences and values. This result is consistent with widely held assumption of the inverse relationship between the levels of conceptual abstractness and the conceptual inclusiveness (see Gutman, 1982). In other words, as the abstractness of the conceptual categories increase from those of choices to values, the number of categories of each of the conceptual category decreases. This relationship holds because the "means" (choices and attributes of the choices) are much more than "end" (values) (see Gutman, 1982).

Table 25: Frequencies of direct linkages between the adjacent and nonadjacent conceptual categories across the eight cases

Direct linkages between the conceptual Categories	The Eight Study Cases							
	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8
Choice behaviour to Attributes	7	14	10	13	15	10	9	9
Choice behaviour to Consequences	6	1	2	1	0	3	1	3
Choice behaviour to Values	0	0	1	0	0	0	0	0
Attributes to Consequences	6	9	5	7	6	3	13	6
Attributes to Values	2	2	2	1	5	2	4	2
Consequences to Values	6	6	5	4	5	5	4	6

The highest frequency between the nonadjacent categories was between "attributes" and values, followed by linkages between choice behaviour and consequences. There were, virtually, no linkages between the conceptual categories choice behaviour and values. The relatively few counts of linkages between the nonadjacent conceptual categories seem to confirm the assumption of linearity between the conceptual categories in means-end theory.

Summary of the Study Results

Data analysis, in this chapter, was, first, focused on determining the conceptual categories of means-end theory linking choice behaviour to values. The conceptual means-end model presented in chapter 4 was the basis of the analysis of the conceptual categories linking choice behaviour to values. The conceptual means-end model, as can be remembered from the previous discussion, consisted of the four conceptual categories of choice behaviour, attributes of choices, consequences, and values. "Choice behaviour" was the first conceptual category to be investigated. This was so because all the other conceptual categories of "attributes of choices", "consequences", and "values" were to be developed from a particular pattern of "choices".

The results of the investigation of choice behaviour indicated influences of family members on food choices at different meal occasions. For example, the participants with teenage children tended to eat food alone at breakfast. The reason for eating food alone at breakfast was mainly for convenience of the family members. The convenience was realised in eating "what one wants", "when he/she wants". Participants with young children, on the other hand, ate food at breakfast with the children. These participants with children had to include a wider variety of food products so as to cater for the needs of the children and the mother. The participants indicated that children were also given snack foods in controlled measures between meals. The controlled snack foods consisted of chocolate, sweets, biscuits, crisps, and cakes.

The evening meal occasion and Sunday lunch involved most of the family members in all the cases. The evening meal occasion, in particular, was considered to be a family meal at which family members had a rare opportunity to sit together for a meal at home. Sunday lunch occasions were mostly considered to be social occasions to which visitors were regularly invited in some cases. The food products for Sunday lunch tended to differ from those eaten on evening meals mostly on the methods of preparations. For example, potatoes were boiled, baked, or mashed for evening meals. Potatoes and meat for Sunday lunch, on the other hand, were usually roasted. The food products at evening meals, and Sunday lunch suggest that food products included on family meals (the evening meals and Sunday lunch) were outcomes of negotiations and compromises, which indicated somewhat "restricted free choices". Values influencing these choices

were most likely to be related to the social needs, such as the needs of belonging, and social responsibility to please others.

The next conceptual category to be investigated was the "attributes" of the food products and meal occasions. The attributes of food products were expressed in objective sensory terms, which gave indications of independently verifiable characteristics of food, such as "sugar content", "fibre content" and "fortified foods". Attributes of the meal occasions, on the other hand, were expressed in subjective personal terms, which indicated the personal meaning attached to the meal occasions by the participants. Terms like "family occasions", "take alone meal", and "social occasion" were used to describe to meal occasions.

Most ladders contained "end states" representing values. "End states" in ladders were the basis of determining values. The end states were classified into values domains of "inner harmony", "enjoyment", "social belonging", and "social responsibility". The results indicate that the values of "social responsibility" and "enjoyment" underlay the food choices of mothers with young children. Participants with older children, on the other hand were mostly influenced by values of "enjoyment". Food choices at evening meal occasions and Sunday lunches were mostly influenced by values of enjoyment and the need for social belonging.

The second part of data analysis was determining linkages between the conceptual categories of choice behaviour, attributes of choices, consequences, and values. The conceptual categories were determined from the hierarchical value maps (HVMs). The linkages in the HVMs were content analysed to determine the dominant linkages between the conceptual categories. The results show a high frequency of linkages between adjacent conceptual categories, suggesting that the four conceptual categories of choice behaviour, attributes, consequences, and values, were most likely to be hierarchically connected to each other. The conclusions drawn from this study are presented in the next chapter.

Chapter

SIX

Conclusions, Contributions, and Recommendations of the Study

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This study was carried out in an attempt to close the gap between choice behaviour and values in means-end theory. More specifically, the aim of the study was to determine whether or not means-end theory could be extended to linking choice behaviour to values. The study was focused on answering two research questions as a way of addressing the study aim. The research questions were: (i) What, if any, are the conceptual categories of means-end theory linking choice behaviour to values, and (ii) How, if at all, are the conceptual categories in means-end theory linking choice behaviour to values connected together? This chapter presents the conclusions, contributions, and recommendations of the study, based on the results discussed in the previous chapter.

Conclusions about the Research Questions

What, if any, are the conceptual categories linking choice behaviour to values?

The conceptual model given in figure 11, chapter 4, was the basis for determining the conceptual categories of the mean-end model linking choice behaviour to values. As can be remembered, the conceptual means-end model consisted of four conceptual categories. The provisional conceptual categories were choice behaviour, attributes of choices, consequences, and values. The empirical study was centred on determining whether or not the four provisional conceptual categories of choice behaviour, attributes, consequences, and values could be established. Once the conceptual study had been established, then the study turned to the investigation of linkages between the categories. As already explained, the concept of choice behaviour was the first to be investigated. This was because all the other conceptual categories of the hypothetical means-end model (i.e. attributes of choice behaviour, consequences, and values) were to be developed from "choice behaviour".

The concept of choice behaviour

The determining of choice behaviour, in this study, was based on the principle of "limited rationality" (Foxall, 1997, Lambin, 2000). The principle of "limited rationality" underpins the concept of "free choice" within the bounds of individual' cognitive and learning capabilities (Lambin, 2000). Implicit in the principle of limited rationality are the assumptions that:

- Consumers make choices after deliberations, the extent of which depends on the scale of the consequences attached to perceived risks

- Choices are made in anticipation of favourable outcomes, or avoidance of unfavourable outcomes
- Choices are also guided by the principles of generalised scarcity according to which most humans act. This is because decisions bear opportunity costs (Gutman, 1982, Lambin, 2000, Schiffman and Kanuk, 2000).

The adoption of the principle of "limited rationality" was important for this study because values are necessarily based on the assumption that individuals "evaluate" alternative options before making a "choice". The study of choices was carried out within the context of mothers' food choices at breakfast, evening meals, and Sunday lunch. The following observations about the mothers' food choices in the family were made:

First, mothers were the most involved in the buying and preparation of food in their families. Both the father and mother agreed that the mother did most of the buying and preparation of food in the family. The involvement of mothers in the buying and preparation of food gave the mothers the opportunity to make decisions about the types of food to buy and the methods of food preparation. However, it was also recognised that the mother, in most cases, took into consideration the interests of other family members in buying and preparing the food.

The second indicators of choice behaviour were the food products given by the participants as their preferred food products on breakfast, evening meals, and Sunday lunch. The food products selected on each meal occasion are shown in tables A2, A7, A12, A17, A22, A27, A32, and A37. The participants specified the food products and the method of preparations they preferred on different meal occasions. For example, participants in cases 1 and 8 preferred tea without milk because they believed that tea without milk was tastier than tea with milk. However, the participants gave their children full fat milk, believing that children needed full fat milk for healthy growth.

Each of the family members who ate food together with the participants at breakfast, evening meals, and Sunday lunch in the family appeared to influence food choices. The family members who ate food together at meal occasions are shown in table 19 in chapter 5. The results show that mothers ate food alone or with young children at breakfast. It was more plausible to assume that the mothers decided about the types of food products they ate and/ or gave to their young children than to assume that the mothers did not make the

decisions. It was concluded that mothers' choice behaviour had been established, in the form of the food products they decided to eat and or give to others on the meal occasion as shown in chapter 5, table 18.

Attributes of the food choices and meal occasions

The meal occasions of breakfast, evening meals, and Sunday lunch as well as the food products on these occasions were the bases for determining the attributes of the choices. The attributes of the food choices were the terms by which the participants described or differentiated the meal occasions and food choices on these occasions. The summary of attributes of the meal occasions and food products, given by the participants in this study, are in table 20 in chapter 5. The list of attributes indicates that the participants described the food products mostly in objective sensory terms. The attributes of food products were expressed in terms such as "sugar-free" tea, "hot" drink, "semi- skimmed" milk, "brown" bread, and "easy-to prepare" rice. The few subjective attributes of food products elicited included terms such as "healthy", "wide variety", "full of goodness" and "treat". These subjective attributes indicated the personal meanings attached to the food products by the participants.

Attributes of the meal occasions, on the other hand, were almost exclusively expressed in subjective terms. As can be seen in table 20, terms such as, "sit down meals", "family occasion", "social occasion", and "social occasion" were described to describe breakfast, evening meal occasions, and Sunday lunch.

It was concluded from these results that: attributes of food choices at breakfast, evening meals, and Sunday lunch, as well as the attributes of these meal occasions could be established.

Consequences

Consequences are the outcomes expected from the choice behaviour. The consequence of the meal occasions and the food products eaten on these occasions are listed in appendix 2, in table A3, A8, A18, A23, A28, A33, and A38. The summary of these consequences is in table 21, in chapter 5. As can be seen in table 21, consequences of the meal occasions were expressed in social-oriented terms, such as "family harmony", "togetherness", and "building relations". Consequences of the food choices were in both "personal" terms and "social" terms. The personal terms were in terms of "enjoyment", "health", "convenience", "balanced diet", and "getting refreshed". Social related consequences, in turn, were oriented towards the need for: "pleasing children", "pleasing friends", and "pleasing visitors".

The results, therefore, show that the conceptual categories of consequences could be established from the meal occasions and food choices on the meal occasions.

Values

Values, in means-end theory, are widely conceived of as: "A belief that certain 'end states' of existence are personally desired". The end states elicited in this study across the eight cases are listed in appendix 2, in tables table A3, A8, A18, A23, A28, A33, and A38. The value domains into which these end states were categorised are shown in tables A4, A9, A14, A19, A24, A29, A34, and A39. The value domains into which the end states were grouped are "enjoyment", "inner harmony", "social belonging", and "social responsibility". These results suggest that the participants' values, which reflect the need for enjoyment, inner harmony, social belonging, and social responsibility influence food choices with the family context.

In brief, the results indicate that the conceptual categories of attributes of the food choices and the relevant meal occasions, consequences, and values could be established. Table 26 in the following page gives a summary of the conceptual categories established in this study. The four conceptual categories of choice behaviour, attributes, consequences, and values are in the first column of the table. The definitions of the conceptual categories are in the second column. The third column, in turn, contains the sources of evidences for the conceptual categories.

Thus, the study results show that the conceptual categories of choice behaviour, attributes of choices, consequences,

and values can be established from the study of food choices in the family context

Table 26: The conceptual categories established in the study of food choices in the family context

Conceptual categories	Definitions of the conceptual categories	Evidence of the conceptual categories
Choice behaviour	The free selections of food products eaten on breakfast, evening meals, and Sunday lunch	The food products selected by the participants at breakfast, evening meals, and Sunday lunch are in appendix 2, tables A2, A7, A12, A17, A22, A27, A32, and A37. The composition of family members on meal occasions is given in chapter 5, table 19.
Attributes of the choices	Attributes are the terms used by the participants to describe or differentiate between food products and meal occasions	The attributes of the meal occasions and food products for each participant are given in appendix 2, in tables A3, A8, A13, A18, A23, A28, A33, and A38. The summary of the attributes is in chapter 5, table 20.
Consequences	Consequences are the outcomes expected from the choices of products or other stimuli	The consequences of the meal occasions and food products elicited in each of the eight cases are listed in appendix 2, tables A3, A8, A13, A18, A23, A28, A33, and A38.The summary of the consequences are chapter 5, table 21
Values	Values are defined as the "personal belief that certain end states are personally desirable".	The participants' desired end states are listed in appendix 2 in tables A3, A8, A13, A18, A23, A28, A33, and A38. These lists were developed from ladders in appendix 2, figures A1, A3, A5, A7, A9, A11, A13, and A15

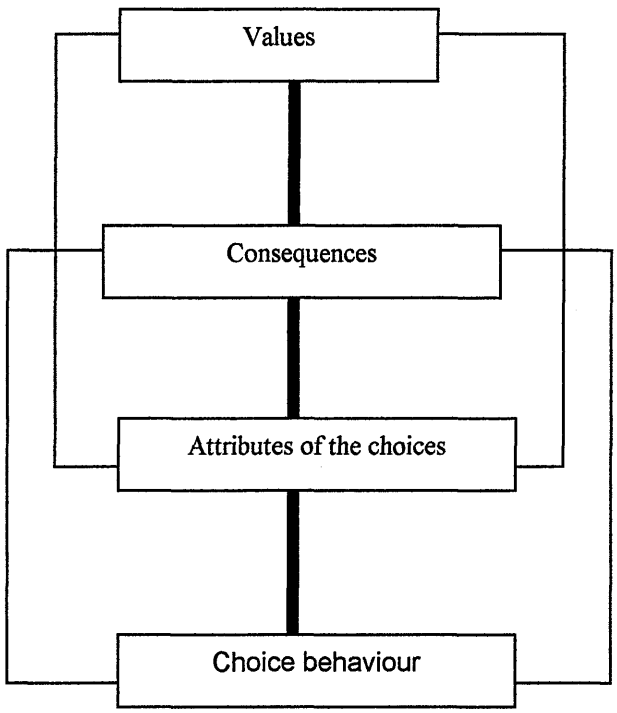
How, if at all, are the conceptual categories linking choice behaviour to values connected?

The first step was to determine whether or not the conceptual categories of choice behaviour, attributes of the choices, consequences, and values were linked together. The direct method of attributes elicitation was employed in the determining of the attributes of the meal occasions and food choices on these occasions. Consequently, the conceptual category of attributes is necessarily linked to the relevant stimuli, because the attributes describe the relevant stimuli.

Laddering was the method determining the consequences and values associated with each stimuli and attributes of the stimuli. Laddering interviews involved the researchers in asking questions of the type "Why is this (meal occasion, food product, or attribute of the stimuli) important to you?" The responses to this type of questioning linked the elicited consequences and values to the choices and attributes of the choices. In brief, it was concluded that "associative" or "implicative" linkages connected the conceptual categories of choices behaviour, attributes, consequences, and values.

The frequencies of direct linkages between the conceptual categories, shown in table 25, chapter 5, indicate more dominant linkages between the adjacent conceptual categories than between the nonadjacent conceptual categories. The diagram in figure 20 on the next page gives a graphical illustration of the dominance of direct linkages between the conceptual categories. The diagram consists of the four conceptual categories of choice behaviour, attributes of choices, consequences, and values. The sizes (thickness) of the lines connecting the conceptual categories represent the relative dominance of the direct linkages between the conceptual categories. Thick lines connecting the adjacent conceptual categories of choice behaviour and attributes, attributes and consequences, and consequences and values indicate the dominance of direct linkages between these connections. The thin lines connecting the nonadjacent conceptual categories of choice behaviour and consequences, and attributes and values indicate the few direct linkages established between the conceptual categories. Very few direct linkages were established between the nonadjacent conceptual categories of choice behaviour and values.

Figure 20: The dominance of the linkages between the conceptual categories: choice behaviour, attributes, consequences, and values.



The dominant linkages between adjacent conceptual categories confirm that the conceptual categories are hierarchically linked together, starting from choice behaviour, to attributes, consequences, and values.

Based on these results, it is concluded that:

1. The conceptual categories of the means-end model linking choice behaviour to values consist of choice behaviour, attributes of choices, consequences, and values can be established from the study of food choices in the family context

2. The conceptual categories of choice behaviour, attributes choices, consequences, and values are hierarchically connected together in the means-end model linking choice behaviour to values

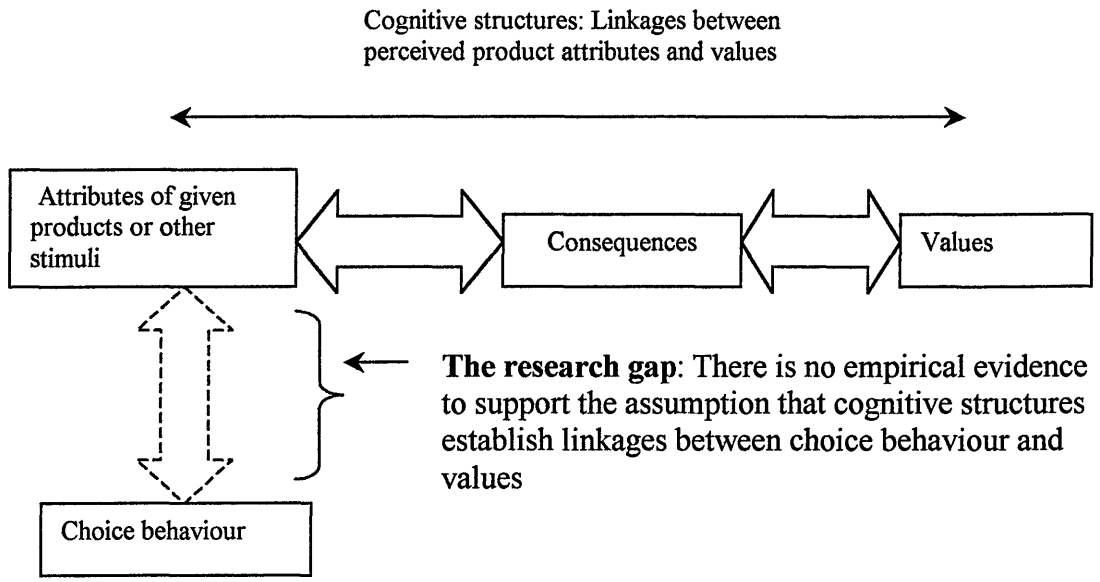
3. Means-end theory can be extended to linking choice behaviour to values, by first determining the choice behaviour in a particular context, and eliciting attributes of the choices, consequences, and values of the consumers linked to the choices.

Contributions of the Study

1. Contribution to means-end theory

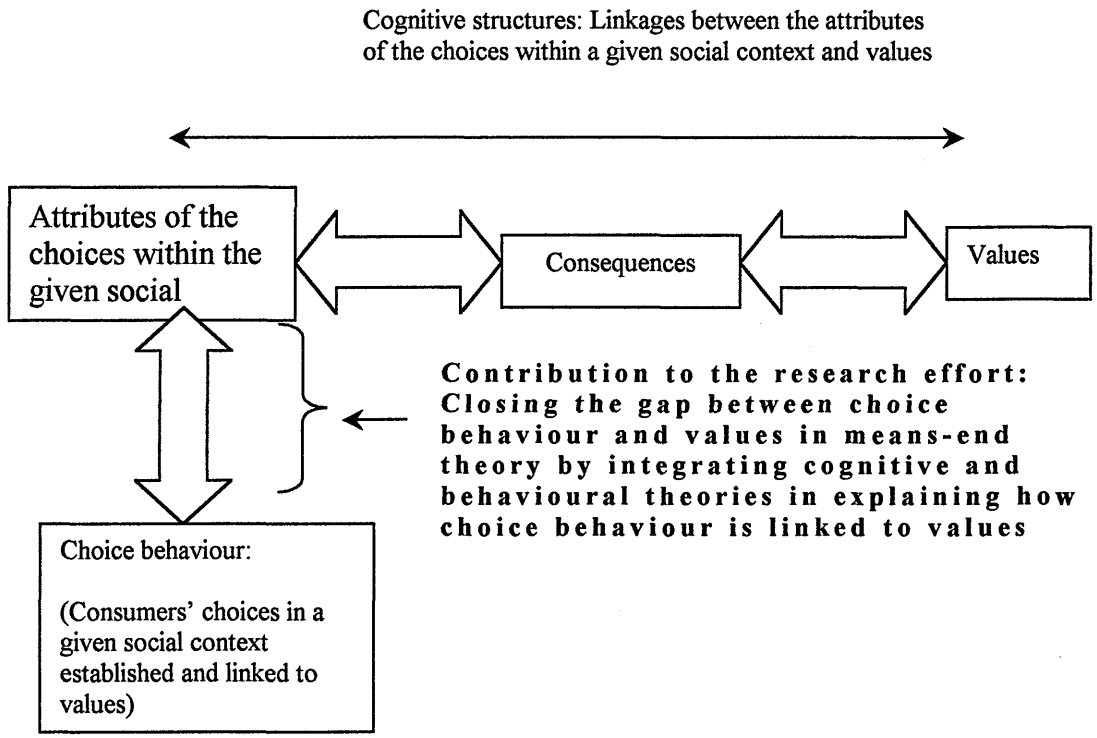
The main contribution of this study was in closing the gap between choice behaviour and values in means-end theory. Means-end theory reported in the existing literature is largely based on Gutman's (1982) means-end model. Gutman's means-end model involves the researcher in cognitive mapping when determining linkages between choice behaviour and values. The cognitive maps characteristically produce cognitive structures, i.e. the consumers' knowledge structures and perceptual orientations towards a given set of products. Consider, for example, cognitive structures in Gutman's means-end model, as shown in figure 21 overleaf. The arrow at the top of the diagram indicates the cognitive structures between the consumers' perceived attributes and values, established by way of laddering interviews. These cognitive structures linking product attributes to values are then assumed to represent linkages between choice behaviour and values, as shown by the dashed arrow between the conceptual categories of attributes and choice behaviour. The logic underpinning this assumption is based on the theory of choice behaviour from cognitive psychology. According to the cognitive theories of behaviour, cognitive orientations (i.e. knowledge structures, attitudes, and perceptions towards products) are consistent with choice behaviour. In other words, it is assumed that once consumers' perceptual orientations towards a given set of products have been determined, then, linkages choice behaviour and values have been established.

Figure 21: A simplified version of Gutman's means-end model showing the research gap



However, there is no empirical basis for assuming that cognition alone is necessarily consistent with actual behaviour, as was discovered when reviewing the literature. The lack empirical evidence of direct connection between cognition and choice behaviour implies that means-end theories based on cognitive theory of behaviour alone do not necessarily link choice behaviour to values. The contribution of this study was, then, to provide empirical evidence of how means-end theory can be extended to linking choice behaviour to values (see figure 22 overleaf). The diagram in figure 22 indicates the area of the contribution. The linkage is established by, first, determining choice behaviour in a particular social context, and, then linking the choice behaviour to values by in-depth and laddering interviews.

Figure 22: A simplified version of the means-end model showing the area of contribution of this study



2. Contribution to the conceptualisation of values

Researchers hold divergent views about the concept of values. Most researchers, however, agree that the concept of values includes notions of "goal orientation", "end states of existence", and "personal relevance". This study contributed to the conceptualisation of values by suggesting a definition that integrates these agreed aspects of values. As reported in chapter two, values are defined as:

> *Abstract goals, representing personal beliefs that certain end states of existence are personally desirable (cf. Gutman, 1982; Rokeach, 1973; Swartz, 1994)*

This definition of values is likely to be widely agreeable because it includes aspects of values that are accepted by most researchers.

3. Contribution to the criteria for evaluating conceptual categories of means-end structures

An algorithm for determining the conceptual categories of means-end structures was developed in this study. The algorithm (see figure 13 in chapter four) consists of three criteria, namely, concomitance, sequence, and precedence. As can be remembered, concomitance is the criterion for determining whether or not any two conceptual categories are located in the same ladder. The criterion of concomitance is important for determining whether or not the conceptual categories are linked together. Any inference of linkages between two conceptual categories can only be justified if the two conceptual categories are located in the same ladder. The second criterion, sequence, is the basis for determining whether the concomitant conceptual categories are directly or indirectly linked. The third criterion, precedence, is the basis for determining whether the conceptual categories are "consequences" or "values.

4. Contribution to the procedure followed in carrying out means-end studies

Some procedures were recommended on the basis of the exploratory phase of the study, reported in the methodology chapter. Firstly, it was recommended that it is worthwhile to invest time in building relationships between the researcher and the respondents. This is because it is necessary for the interviewer gain the interviewee's trust to be admitted into the homes of the respondents and to be told sensitive personal information in the investigation of choice behaviour and the underlying values. Another recommendation was that

at least two people visit respondents for the interviews. One member would carry out the one-to one interview whilst the other member engages the rest of the family during the interview session. This practice helps in reducing the possibilities of respondents giving answers that are influenced by people attending the interview session.

Implications of the Research Findings for Marketing Practice

This model of means-end theory linking choice behaviour to values directly could have the following implication to marketing practice.

The procedure followed in carrying means-end studies.

The process of research, in traditional means-end studies, typically starts with choosing the stimulus that is used as the bases for determining the conceptual categories of "attributes", "consequences", and "values". Choice behaviour is, therefore, not directly determined in traditional means-end studies. Rather, the respondents' choice behaviour is deduced from cognitive structures linking attributes of the stimulus to the end states representing values.

The procedure followed in the study of the proposed means-end theory, on the other hand, starts with the investigation of "choice behaviour" within a given social context. Once choice behaviour has been established, it then forms the bases of the investigation of other conceptual categories of "attributes", consequences, and "values". The advantage of this procedure of starting the research process with determining "choice behaviour" is that it obviates the need to predict choice behaviour on the basis of the discredited consumers' cognitions.

The Strengths and Weaknesses of the Means-End Model

The means-end model offers a realistic framework for the investigation of linkages between choice behaviour and values. The strength of the model is in obviating the need to use cognitions as surrogate for choice behaviour. The model avoids the use of cognitions as surrogate for behaviour because values are linked to actual choices in given social contexts.

The weakness of the means-end model is that it relies too much on the laddering technique in determining values. The laddering technique has its own limitations. These limitations are highlighted in the following section to remind readers, having explained them in chapter two.

Limitations of the Laddering Technique

1. *The respondent does not really know the answers to the laddering questions*

Some respondents might "fail" to give answers that can be developed into complete ladders. Respondent might fail to give appropriate answers if, for example, those respondents have low levels of knowledge of the product used as stimulus (Graeff, 1997) and /or have low levels of involvement with the product (Mulvey et al 1994). It is therefore advisable to take into account the respondents' levels of knowledge and involvement with the stimuli in selecting respondents.

2. Respondent has limited semantic skills

It is necessary that the respondent be able to verbalise answers to the research questions. This is because the success of the laddering technique depends on the ability of respondents to give answers to "why" or "how" types of questions. However, some respondents cannot easily express themselves. Consider, first, people who are natural introverts. Introverts are naturally not inclined to giving detailed responses to the laddering questions. Thus, laddering interviews are likely to be more successful when conducted with extroverts than with introverts. In addition, respondents from the working class are less likely to give answers that can easily be developed into complete ladders than respondents from the middle class. This is because people from the working class are likely to communicate less elaborately than those in the middle class (see Bernstein,

1971). According to Bernstein (1971), people from the working class are more likely to have restricted language codes whereas those from the middle class possess both the elaborated and the restricted codes.

3. The subject of discussion becomes sensitive

Laddering interviews characteristically involves the interviewer in multi- probes in the investigation of respondents' underlying motives for preferring certain attributes of products and/or outcomes of choices (see Manyiwa and Crawford, 2002). As the laddering interview moves from lower levels to higher levels of abstraction, the respondent might find the discussion becoming more sensitive. The respondent might feel too vulnerable to give personal information to a stranger. In such a case, the respondent might start to "waffle" or give incoherent answers. It is therefore advisable to build confidence with respondents before laddering interviews are carried out.

4. Level of generalisation of research findings

One of the well-documented weaknesses of the laddering technique is that the data can only be used in the generalisation to theory. The research data is not readily amenable to statistical generalisation. As reported in chapter two, Hofstede et al (1998:39) summarise this weakness, arguing:

> "Laddering has served as a very useful qualitative technique to reveal means-end chains. However, it also has its limitations. Because the laddering interview is time consuming and must be carried out by trained interviewers, it is an expensive data collection technique. Moreover, it places a serious burden on respondents, and the quality of the data may be affected by respondent fatigue and boredom. In sum, laddering is not suitable as an instrument to be used in large representative samples, nor was it intended to be used in this context.

As can been seen in Hofstede's comment above, the main limitation of the laddering technique is related to the practical difficulties of implementing it. As a result of these limitations, researchers often adopt a modified laddering procedure involving the respondents in filling self-administered questionnaires (see Bredahl, 1999; Claeys et al, 1995; Valette-Florence and Rapacchi, 1991). It is, however, not clear whether or not these modifications retain the essential benefits of the laddering technique.

The Strengths of the Case Research Method

As was explained in chapter four, the case research method was adopted for this study because of the strengths of the case research method in the investigation of choice behaviour and values. The case research method was particularly suitable for this study because for following reasons. First, the study was concerned with choice behaviour and values, phenomena that are contemporary and liable to be influenced by real life contexts. The case research method allowed the sustained closer study of the participants to determine the actual choices and the related values in dynamic social contexts. The second strength of the case research method was its suitability for the investigation of food choices in the family context. The phenomenon of food choices is so imbedded in the social context that the boundary between food choices and the influence of the context is difficult to separate. The case study is the most appropriate research method in situations of blurred boundaries between the study phenomenon and the context because it allows a closer and sustained study. The third strength of the case research method in the investigation of choice behaviour and values is that the research evidence can be collected from multiple sources. It was possible to collect data by the three methods of in-depth interviews, direct observations, and laddering interviews because the case research method was involved.

The weaknesses of the case research method with respect to this study was related to the potential limitations of the research design as explained below

Potential Limitations of the Research Design

As was explained in the methodology chapter, the research design was prone to a number of problems. The problems are reviewed in this section, highlighting the extent to which the potential limitations of the research design affected the results of this study.

Multiple sessions of observations and interviews

The participants were involved in a series of intense observations and interviews over a period of nine months. This long period of study could have resulted in "dropouts". Some of the participants could have dropped out if, for example, they had changed places of residences from the study area. Luckily, however, none of the participants withdrew from the study. All the participants continued to

live in the study area. Furthermore, the participants had agreed to take part in the study for the whole period of nine months. It was, therefore, likely that the participants were committed to take part in the study right from the beginning. The researcher had briefed the participants about the importance of collecting data from the same participants over the whole period of the empirical study.

Another potential problem of the intense multiple observations and interviews was a possible drop in the participant's interest in the study process. It was feared that the participants could become tired and bored of the monotonous and taxing interviewing sessions. The participants' lack of interest and boredom could have manifested in the cancelling of the appointments, limiting the time of interview sessions or any other form of distraction.

The participants in this study, however, did not exhibit signs of diminishing enthusiasm for the participation in the study. On the contrary, the participants gave a lot of support and cooperation throughout the period of the empirical study. It was of interest to note that mothers with young children made arrangements to send children to sleep before the interviews. Children might have caused distractions if they had been awake during the interviews.

Recommendations for Further Research

Linkages between choice behaviour and values

Means-end studies are based on the assumption that values are causally linked to choice behaviour. However, no research study has been done to determine the direction of the causal linkage. More particularly, it has not yet been established whether values cause behaviour, behaviour cause values, each causes the other, or there is no causal linkage. In the absence of the empirical research about the causal linkages, this study was based on the relatively modest assumption of "associative" or "connotative" linkages between values and choice behaviour. The assumption of connotative linkages between the concepts in means-end theory facilitated the determination of personally relevant meanings underlying different choices.

It is, however, suggested that a study be carried out to determine whether or not concepts in the means-end theory are causally linked, and if so, how they are linked. The research results could help researchers and marketers in determining whether to aim at changing consumers values or choice behaviour in attempt to increase sales.

References:

Ajzen, I. (1988). *Attitudes, Personality, and Behaviour.* Open University Press, Milton Keynes, UK

Ajzen, I. and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour.* Prentice-Hall, Englewood Cliffs, NJ

Albar, J. W., Hutchinson, J. W. and Lynch, J. G. (1991). Memory and Decision-Making. In: Robertson, T. S. and Kassarjian, H. H. (eds), *Handbook of Consumer Behaviour.* Prentice-Hall, Englewood Cliffs, NJ, 1-49

Alderson, W. (1941). Marketing Classification of Families. Journal of Marketing 6 (October) 143-146

Ali, H. and Birley, S. (1999). Integrating Deductive and Inductive Approaches in a Study of New Ventures and Customer Perceived Risk. *Qualitative Market Research: An International Journal 2 (2) 103-110*

Allen, M. W. and Ng, S. H. (1999). The Direct and Indirect Influence of Human Values on Product Ownership. *Journal of Economic Psychology 20 (1999) 5-39*

Allen, M. W. (2001). A Practical Method for Uncovering the Direct and Indirect Relationships Between Human Values and Consumer Purchases. *Journal of Consumer Marketing, 18(2), 102-120*

Allport, G. W. (1935). Attitudes. In: Murchinson, C. (ed.). *Handbook of Social Psychology*, Clark University Press, Worcester, M. A. 798-844

Allport, G. W. (1961). *Pattern and Growth in Personality.* New York: Holt, Rinehart, Winston.

Allport, G. W. and Vernon, P. E. (1931). *The Study of Values.* Boston: Houghton Mifflin.

Allport, G. W., Vernon, P. E., and Lindsey, G. (1960). *A Study of Values.* Boston: Houghton Mifflin

Andreasen, A. (1965). Attitudes and Customer Behavior: A Decision Model. In: Preston, L. E. (ed.), *New Research in Marketing*. University of California Press, Berkeley.

Assael, H. (1995). *Consumer Behavior and Marketing Action*. South-Western, New York

Atkin, C. (1978). Observation of Parent-Child Interaction in Supermarket Decision-Making. *Journal of Marketing 42 (October) 41-45*

Bagozzi, R. P. (1981). Attitudes, Intentions, and Behavior: A Test of Some Key Hypotheses. *Journal of Personality and Social Psychology, 41, 607-627*

Bagozzi, R. P. (1984). Expectancy-Value Attitude Models: An Analysis of Critical Measurement Issues. *International Journal of Research in Marketing, 1, 295-310*

Bagozzi, R. P. (1985). Expectancy-Value Attitude Models: An Analysis of Critical Theoretical Issues. *International Journal of Research in Marketing, 2, 43-60*

Bagozzi, R. P. (1988). The Rebirth of Attitude Research in Marketing. *Journal of Market Research Society, 30, 163-195*

Bagozzi, R. P. (1992). The Self-Regulation of Attitudes, Intentions, and Behavior. *Social Psychology Quarterly, 55, 178-204*

Bagozzi, R. P. (1994). Effects of Arousal on Organisation of Positive and Negative Affect and Cognition: Application to Attitude Theory. *Structural Equation Modelling, 1, 222-252*

Bagozzi, R. P. and Dabholkar, P. (1994). Consumer Recycling Goals and Their Effects on Decisions to Recycle: A Means-End Chain Analysis. *Psychology and Marketing, 11(4), 313-340*

Bagozzi, R. P. and Foxall, G. R. (1996). Construct Validation of a Measure of Adaptive-Innovative Cognitive Styles in Consumption. *International Journal of Research in Marketing, 13, 201-213*

Bagozzi, R. P. and Kimmel, S. K. (1995). A Comparison of Leading Theories for the prediction of Goal-Directed Behavior. *British Journal of Social Psychology, 34, 461-472*

Bagozzi, R. P. and Moore, D. J. (1994). Public Service Advertisement: Emotional and Empathy Guide Prosocial Behaviour. *Journal of Marketing, 58, 56-70*

Bagozzi, R. P. and VanLoo, M. F. (1978). Fertility as Consumption: Theories from the Behavioural Sciences. *Journal of Consumer Research, (March) 199-228*

Bagozzi, R. P. and Warshaw, P. R. (1990). Trying to Consume. *Journal of Consumer Behaviour Research, 17, 127-140*

Bagozzi, R. P. and Warshaw, P. R. (1992). An Examination of Etiology of the Attitude-Behaviour Relation for Goal-Directed Behaviour. *Multivariate Behavioural Research, 27, 601-634*

Baker, M. (ed.) (1994). *The Marketing Book*. Butterworth Heinemann

Baker, S. (1996). *Extending Means-End Theory Through an Investigation of the Consumer Benefit/Price Sensitivity Relationship in Two Markets*. Unpublished PhD dissertation (Cranfield University, UK).

Bandura, A (1969). *Principles of Behaviour Modification*. New York: Holt, Rinehart and Winston

Bandura, A. (1978). The Self-System in Reciprocal Determinism. *American Psychology, 33 (April), 344-358*

Barash, D. (1981). People in the Service of their Genes. In: Potter, D., Anderson, J., Clark, J., Coombes, P., Hall, S., Harris, L., Holloway, C. and Walton, T. (eds.). *Society and the Social Sciences, an Introduction*, Routledge

Barczak, G., Elen, P. S. and Pilling, B. K. (1998). Developing Typologies of Consumer Motives for Use of Technologically Based Banking Services. *Journal of Business Research 38 (2) 131-139*

Bassey, M. (1981). Pedagogic Research: On the Relative Merits of Research for Generalisation and Study of Single Events. *Oxford Review of Education 7 (1) 73-93*

Bearden, W. O. and Etzel, M. J. (1982). Reference Group Influence on Product and Brand Purchase Decisions. *Journal of Consumer Research 9, 183-194*

Bech-Larsen, T. and Nielsen, N. A. (1999). A Comparison of Five Elicitation Techniques for Elicitation of Attributes of Low Involvement Products. *Journal of Economic Psychology 20 (1999) 315-341)*

Beck, L. and Ajzen, I. (1991). Predicting Dishonest Actions Using the Theory of Planned Behaviour. *Journal of Research in personality, 25, 285-301*

Belch, G. E., Belch, M. A. and Gayle, C. (1985). Parental and Teenage Child Influence in Family Decision-Making. *Journal of Business Research 13 (April) 163-176*

Bellante, D. and Foster, A. C. (1984). Working Wives and Expenditure on Services. *Journal of Consumer Research 11 (September) 700-707*

Bentler, P. M. and Speckart, G. (1981). Attitudes "Cause" Behaviour: A Structural Equation Analysis. *Journal of Personality and Social Psychology, 40, 226-238*

Berey, L. A. and Pollay, R. W. (1968). The Influencing Role of the Child in Family Decision-Making. *Journal of Marketing Research 5 (February) 70-72*

Bernstein, B. (1971). *Class, Codes and Control* (Volume 1). London: Routledge and Kegan Paul

Bettman, J. R. (1979). *An Information Processing Theory of Consumer Choice*. Addison-Wesley, Reading, Ma

Bettman, J. R. (1986). Consumer Psychology. *Annual Review Psychology, 37, 257-289*

Bettman, J. R., Johnson, E. J., and Payne, J. W. (1991). Consumer Decision-Making. In: Robertson, T. S. and Kassarjian, H. H. (eds.), *Handbook of Consumer Behaviour*. Prentice-Hall, Englewood Cliffs, NJ, 50-84

Bhaskar, R. (1978). *Realist Theory of Science*. Wheatsheaf, Harvester.

Blaikie, N (2000). *Designing Social Research*. Polity Press.

Blau, P. (1964). *Exchange and Power in Social Life*. New York: Wiley

Bogardus, E. S. (1925). Measuring Social Distance. *Journal of Applied Sociology, 9, 299-308*

Bonoma, T. (1985). Case Research in Marketing: Opportunities, Problems, and Process. *Journal of Marketing Research 12, 199-208*

Booth, D. A. and Shepherd, R. (1988). Sensory Influences on Food Acceptance: The neglected Approach to Nutrition Promotion. *British Nutrition Foundation Nutrition Bulletin 13, 39-54*

Botschen, G. and Hemetsberger, A. (1998). Diagnosing Means-End Structures to Determine the Degree of Potential Marketing Program Standardization. *Journal of Business Research 42 (2) 151-159*

Botschen, G., Thelen, E. M. and Pieters, R. (1999). Using Means-End Structures for Benefit Segmentation: - An Application to Services. *European Journal of Marketing 33 (1/2) 38-58*

Boyd, B. and Wandersman, A. (1991). Predicting Undergraduate Condom Use With the Fishbein and Ajzen and the Triandis Attitude-Behaviour-Model: Implications for Public Health Interventions. *Journal of Applied Social Psychology, 21, 1810-1830*

Bredahl, L. (1999). Consumers' Cognitions With Regard to Genetically Modified Foods, Results of a Qualitative Study in Four Countries. *Academic Press 33, 343-360*

Brooks, P. C. (1969). *Research in Archives: The Use of Unpublished Sources*. Chicago: University of Chicago Press

Brown, S. P. and Stayman, D. M. (1992). Antecedents and Consequences of Attitudes Towards the Ad: A Meta- Analysis. *Journal of Consumer Research, 19, 34-51*

Bryman, A. (1988). *Quantity and Quality in Social Research*. Routledge

Bulmer, M. (1979). Concepts in the Analysis of Qualitative Data. *Social Review, 27(4) 651-677*

Bulmer, M. (1982). The Merits and Demerits of Covert Participant Observation. In: Bulmer, M. (ed.), *Social Research Ethics*. London: Macmillan, 217-251

Burnkrant, R. E. and Cousineau, A. (1975). Informational and Normative Social Influence in Buyer Behaviour. *Journal of Consumer Research 2, 206-215*

Campbell, D. T. and Stanley, J. C. (1963*). Empirical and Quasi-Experimental Design for Research.* Chicago: Rang McNally.

Carlson, L. and Grossbart, S. (1988). Parental Style and Consumer Socialisation of Children. *Journal of Consumer Research 15 (June) 77-94*

Carson, D., Gilmore, A., Perry, C. and Gronhaug, K. (2001). *Qualitative Marketing Research*. SAGE

Carver, C. S. and Scheier, M. F. (1982). Control Theory: A Useful Conceptual Framework for Personality, Social Clinical, and Health Psychology. *Psychological Bulletin, 92, 111-135*

Carver, C. S. and Scheier, M. F. (1990). Origins and Functions of Positive and Negative Affect: Control Process Review. *Psychological Review, 97, 19-35*

Chase, P. N. and Bjamadottir, G. S. (1992). Instructing Variability: Some Features of a Problem- Solving Repertoire. In: Hayes, S. C. and Hayes, L. J. (eds.), *Understanding Verbal Relations*. Context Press, Reno NV, 181-196

Chetty, S. (1996). The Case Study Method for Research in Small and Medium- Sized Firms. *International Small Business Journal 15(1) 173-185*

Chisnall, P. M. (1995). *Marketing: A Behavioural Analysis*. McGraw-Hill

Christian, C. G. (2000). Ethics and Politics in Qualitative Research. In: Denzin, N. K. and Lincoln, Y. S. (eds.), *Handbook of Qualitative Research*, Thousand Oaks, Sage, 133-155

Claeys, C., Swinnen, A. and Abeele, P. V. (1995). Consumers' Means-End Chains for "Think" and "Feel" Products. *International Journal of Research in Marketing 12 (1995) 193-208*

Cohen, D. (1987). Behaviourism. In Gregory, R. L. (ed.), *The Oxford Companion to the Mind*. New York: Oxford University Press, 71

Commuri, S. and Gentry, J. W. (2000). Opportunities for Family Research in Marketing. *Academy of Marketing Science Review* [Online] 00 (08) Available: http://www.amsreview.org/amsrev/theory/commuri08-00.html

Cox, E. P. (1975). Family Purchase Decision Making and the Process of Adjustment. *Journal of Marketing Research 12 (May) 189-195*

Cunningham, I. C. M. and Green, R. T. (1974). Purchasing Roles in the US Family, 1955 to 1973. *Journal Marketing 38 (October) 61-64*

Davis, H. L. (1976). Decision Making Within the Households. *Journal of Consumer Research 2 (March) 241-260*

Denzin, N. K. and Lincoln, Y. S. (1998). *Collecting and Interpreting Qualitative Materials*, Sage Publication

Denzin, N. K. and Lincoln, Y. S. (2000). *Handbook of Qualitative Research*. Sage Publication

Deutsch, M. and Gerard, H. B. (1955). A Study of Normative and Informational Social Influences upon Individual Judgement. *Journal of Abnormal and Social Psychology, 51, 624-636*

Dey, I. (1993). *Quantitative Data Analysis, a user-friendly guide for social scientists*, Routledge.

Dick, A. S. and Basu, K. (1994). Customer and Loyalty: Toward an Integrated Conceptual Framework. *Journal of the Academy of Marketing Science 22, (Spring) 1994:99-113*

Dittmar, H. (1992). *The Social Psychology of Material Possession: To Have is to Be.* New York: St. Martins

Doob, L. W. (1947). *The Behaviour of Attitudes.* Psychology Review, 54, 135-156

Durkheim, E. (1960). *The Division of Labour in Society.* Glencoe, III, Free Press.

East, R. (1992). The Effect of Experience on the Decision-Making of Expert and Novice Buyers. *Journal of Marketing Management, 8, 167-176*

East, R. (1996). Redress Seeking on Planned Behaviour. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour, 9, 27-34*

Easton, G. (1994). Methodology and Industrial Networks. In: Wilson, D. T. and Moller, K. (eds), *Relationships and Networks*: Theory and Application. PWS, Kent

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review 14 (4) 532-550*

Eisenhardt, K. M. (1991). Better Stories and Better Constructs: The Case for Rigor and Comparative Logic. *Academy of Management Review 16 (3) 620-627*

Eiser, J. R. (1980). *Cognitive Social Psychology: A Guide to Theory and Research.* McGraw-Hill, London

Eiser, J. R. (1986). *Social Psychology: Attitudes, Cognition and Social behaviour.* Cambridge University Press

Engel, J. F., Blackwell, R. D., and Miniard, P. W. (1993). *Consumer Behaviour.* Ft. Worth, TX: Dryden Press

England, G. W. and Lee, R. (1974). The Relationship Between Managerial Values and Managerial Success in the United States, Japan, India and Australia. *Journal of Applied Psychology 59 (1974): 411 –419*

Enis, B. M. and Cox, K. K. (1988). *Marketing Classics, A Selection of Influential Articles.* Allyn and Bacon, Inc.

Fazio, R. H. (1986). How Do Attitudes Guide Behaviour? In: Sorrentino, R. M. and Higgins, E. T. (eds.), *Handbook of Motivation and Cognition: Foundations of Social Behavior.* Wiley, Chichester, 204-243

Fazio, R. H. and Zanna, M. P. (1978a). Attitudinal Qualities Relating to the Strength of the Attitude-Behaviour Relationship. *Journal of Experimental Social Psychology, 14, 398-408*

Fazio, R. H. and Zanna, M. P. (1978). On the Predictive Validity of attitudes: The Role of Direct Experience and Confidence. *Journal of Personality, 46, 228-243*

Feather, N. T. (1971). Value Differences in Relation to Ethnocentrism, Intolerance of Ambiguity and Dogmatism. *Personality, 2 (1971), 349 – 366.*

Feather, N. T. (1975). *Values in Education and Society.* London: The Free Press

Firestone, W. A. (1993). Alternative Arguments for Generalising from Data as Applied to Qualitative Research. *Educational Research 22(4) 16-23*

Fishbein, (1963). An Investigation of the Relationship Between Belies About an Object and the Attitude Towards that Object. *Human Relations 16, 233-240*

Fishbein, M. (1966). The Relationships Between Beliefs, Attitudes, and Behavior. In: Feldman, S (ed.), *Cognitive Consistency.* Academic Press, New York.

Fishbein, M. (1972). The Search for Attitudinal-Behavioral Consistency. In: Cohen, J. S. (ed.), *Behavioral Science Foundations of Consumer Behavior.* Free Press, New York

Fishbein, M. and Ajzen (1975). *Belief, Attitude, Intention and Behavior.* Addison-Wesley, Reading, MA

Fishbein, M and Stasson, M (1990). The Role of Desires, Self Predictions, and Perceived Control in the Prediction of Training Sessions Attendance. *Journal of Applied Social Psychology, 20, 173-198*

Fisher, R. J. and Katz, J. E. (2000). Social Desirability Bias and the Validity of Self-Reported Values. *Psychology and Marketing*, John Wiley and Sons, Inc

Fiske, S. T. (1993). Social Cognition and Social Perception. *Annual Review of Psychology, 44, 155-194*

Fiske, S. T. and Taylor, S. E. (1991*). Social Cognition.* McGraw-Hill, Inc.

Foxall, G. R. (194). Consumer Decision Making. In: Baker, M. (ed.), *The Marketing Book.* Butterworth Heinemann

Foxall, G. R. (1997). *Marketing Psychology-The Paradigm in the Wings.* Macmillan

Foxall, G. R. and Goldsmith, R. E. (1994). *Consumer Psychology for Marketing.* Routledge, London and New York

Fredericks, A. J. and Dossett, D. L. (1983). Attitude-Behavior Relations: A Comparison of the Fishbein-Ajzen and Bentler-Speckart Models. *Journal of Personality and Social Psychology, 45, 501-512*

Fritzsche, D. J. (1981). Ana Analysis of Energy Consumption Patterns by Stage of Family Life Cycle. *Journal of Marketing Research 18 (May) 227-232*

Gable, G. G. (1994). Integrating Case Study and Survey Research Methods: An Example in Information Systems. *European Journal of Information Systems 3 (2) 112-126*

Garraghan, G. J. (1973). *A Guide to Historical Method. Westport, CT*: Greenwood Press

Gergen, M. M. and Gergen, K. J. (2000). Qualitative Inquiry. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research, 516-529, Thousand Oaks, CA: Sage*

Giles, M. and Cairns, E. (1995). Blood Donation and Ajzen's Theory of Planned Behaviour: An Examination of Perceived Behavioural Control. *British Journal of Social Psychology, 34, 173-188*

Glaser, B. and Strauss, A (1967). *The Discovery of Grounded Theory. Chicago*: Aldine.

Goldsmith, R. E. Freidman, J. B. and Kilsheimer, J. C. (1993). Social Values and Female Fashion Leadership: A Cross-Cultural Study. *Psychology and Marketing 10 (5) 399-412*

Goldsmith, R. E., Freidman, J. B., and Henderson, K. V. (1997). The Impact of Social Values on Food – Related Attitudes. British Food Journal, 99/9, 352 – 357.

Granberg, D. and Holmberg, S. (1990). The Intention-Behaviour Relationship Among US and Swedish Voters. *Social Psychology Quarterly, 53, 44-54*

Graeff, T. R. (1997). Comprehending Product Attributes and Benefits: The Role Product Knowledge and Means-End Chain Inferences. *Psychology and Marketing 14 (2) 163-183*

Green, R. T. and Cunningham, I. C. M. (1970). Employment Status, Feminine Role Perception, and Family Purchasing Decisions. *Journal of Business Research 4 (November) 313-324*

Grunert, K. G. (1995). Food Quality: A Means-End Perspective. *Food and Preference 6, 171-176.*

Grunert, K. G. and Grunert, S. C. (1995). Measuring Subjective Meaning Structures by the Laddering Method: Theoretical Considerations and Methodological Problems. *International Journal of Research in Marketing 12 (1995) 209-225*

Grunert, S. C., and Juhl, H. J. (1988). Values, Environmental Attitudes, and Buying of Organic Foods. *Journal of Economic Psychology, 16 (1), 39-62*

Grunert, K. G., Lähteenmäki, L., Nielsen, N. K., Poulsen, J. B. Ueland, O. and Aström, A. (2001). Consumer Perception of Food Products Involving Genetic Modification- Results From a Qualitative Study in Four Nordic Countries. *Food Quality and Preference, 12, 527-542*

Grunert, K. G., Sørensen, E., Bredahl, L. and Nielsen, N. A. (1995). Analysing Food Choice From A Means-End Perspective. In: Hansen, F. (ed), *European Advances in Consumer Research (pp. 366-371), Provo, UT: Association for Consumer Research*

Guba, E. G. (1990). Carrying on the Dialogue In E. G. Guba (eds.), *The Paradigm Dialogue* Newbury Park, CA: Sage 368-378.

Guba, E. G. and Y. S. Lincoln (1981). *Effective Evaluation: Improving the Effectiveness of Evaluation Results Through Responsive and Natural Approaches San Francisco*: Jossy-Bass.

Gutenberg J. S. and Kleist, C. E. (1984). Marketing to Volunteers: An Exploratory Study of Values and Other Characteristics of Contestant Fund – Raisers and Dropouts. In: Pitts and Woodside (eds), *Personal Values and Consumer Psychology*. Lexington Books: 297 – 307.

Guth, W. D. and Tagiuri, R. (1965). Personal Values and Corporate Strategies. *Harvard Business Review, 43 (1965) 123 – 132*

Gutman, J. (1982). A Means-End Chain Model Based On Consumers' Categorisation Process. *Journal of Marketing 46 (Spring 1983): 60 – 72.*

Gutman, J. (1997). Means-End Chain as Goal Hierarchies *Psychology and Marketing 14(6) 543-560*

Haley, R. I. (1968). The Logic of Means-End Analysis. *Quality and Quantity, 20(1986), 339-356*

Haley, R. I. (1968). Benefit Segmentation. A Decision Oriented Research Tool. *Journal of Marketing, 32, 30-35*

Hamel, J. with Dufour, S. and Fortin, D. (1993). *Case Study Methods*. Sage.

Haralambos, M. (1990). *Sociology, Themes and Perspectives*. Collins Educational.

Hedges, A. (1985). Group Interviewing. In: Walker, R (ed), *Applied Qualitative Research*. Gower, Aldershot

Heffring, M. P. (1980). Measuring Family Decision Making: Problems and Prospects. *Advances in Consumer Research, 7, 492-498*

Heider, F. (1958). *The Psychology of Interpersonal Relations*. New York: Wiley

Herriott, R. E. and Firestone, W. A. (1983). Multisite Qualitative Policy Research: Optimising Description and Generalisation. *Education Research, 12 14-19*

Hines, T. (2000). An Evaluation of Two Qualitative Methods (Focus Group Interviews and Cognitive Maps) for Conducting Research into Entrepreneurial Decision Making *Qualitative Research: An International Journal 3(1) 7-16.*

Hirschman, E. C. (1980). Attributes of Attributes and Layers of Meaning. *Advances in Consumer Research, 7, 7-12*

Hirschman, E. C., and Holbrook, M. (1982). Hedonic Consumption: Emerging Concepts, Methods and Propositions. *Journal of Marketing, Summer, 92-101*

Hofstede, G. (1980). Culture's Consequences: International Differences in Work-Related Values: Beverly Hills, CA: Sage

Hofstede, F., Audenaert, A., Steenkamp, J. E. M., and Wedel, M. (1998). An investigation into the Association Pattern Technique as a Quantitative Approach to Measuring Means-End Chains. *International Journal of Research in Marketing, 15(1998), 37-50*

Hofstede, F., Steenkamp, J. –B. E. M. and Wedel, M. (1999). International Market Segmentation Based on Consumer-Product Relations. *Journal of Marketing Research, 36, 1-17*

Hojat, M., Brigham, T., Gottheil, E., Xu, G., Glaser, K. and Veloski, J. J. (1998). Medical Students' Personal Values and Their Career Choices a Quarter -Century later. *Psychology Reports, 83 (1998), 243-248*

Holloway, C. (1981). The Individual and Society. In Potter, D., Anderson, J., Clark, J., Coombes, P., Hall, S., Harris, L., Holloway, C. and Walton, T. (eds.) *Society and the Social Sciences, an Introduction,* Routledge

Homer, P. M., and Kahle, L. R. (1988). A Structural Equation Test of the Value-Attitude- Behaviour Hierarchy. *Journal of Personality and Social Psychology, 54, 638-645*

Howard, J. A. (1977). Consumer Behaviour: *Application and Theory.* New York: McGraw Hill Book Company.

Howard, J. A. and Sheth, J. N. (1969). *The Theory of Buyer Behaviour.* Wiley, New York

Howe, K. and Eisenhardt, M. (1990). Standards for Qualitative (and Quantitative) Research: A Prolegomenon. *Educational Research, 19 (4) 2-9*

Hyman, H. H. (1942). The Psychology of Status. *Archives of Psychology, 269, 94-102*

Ito, Y. (1994). Models and Problem Solving: Effects and Use of the "Views of Probability". In: Hayes, S. C. Hayes, L. J., Sato, M. and Ono, K. (eds.), *Behavior Analysis of Language and Cognition.* Context Press, Reno, NV, 259-280

Jaeger, S. R. and MacFie, H. J. H. (2001). The Effect of Advertising Format and Means-End Information on Consumer Expectation for Apples. *Food Quality and Preferences, 12, 189-205*

Jamal, A. (1998). Food Consumption Among Ethnic Minorities: The Case of British Pakistanis in Bradford, UK. *British Food Journal 100(5) 221-227*

Jolly, J. P., Reynolds, T. J. and Slocum, J. W. (1988). Application of the Means-End Theory for Understanding the Cognitive Bases of Performance Appraisal. *Organisational Behaviour and Human Decision Processes 41, 153-179*

Kahle, L. R. and Kennedy, P. (1989). Using the List of Values (LOV) To Understand Consumers. *The Journal of Consumer Marketing 6 (3): 5 – 12.*

Kelman, H. C. (1961). Processes of Opinion Change. *Public Opinion Quarterly, 25, 57-78*

Khan, M. A. (1981). Evaluation of Food Selection Patterns and Preferences. *CRC Critical Review in Food Science and Nutrition, 15, 129-153.*

Kidder, L. and Judd, C. M. (1986). *Research Methods in Social Relations*. New York: Holt, Rinehart and Winston

Kotler, P. (1997). *Marketing Management: Analysis, Planning, Implementation and Control*. Prentice-Hall International

Klenosky, B., Gengler, C. E., Mulvey, S. (1993). Understanding the Factors Influencing Ski Destination Choice: A Means-End Analytic Approach. *Journal of Leisure Research 25 (4) 362-379*

Kluckhohn, F. R. and Strodtbeck, R. L. (1961). *Variation in Value Orientations*. Evanston, III: Row, Peterson and Company.

Kuznesof, S., Tregear, A. and Moxey, A. (1997). Regional Foods: A Consumer Perspective. *British Food Journal 99(6) 199-206*

Kvale, S. (ed), (1989). *Issues of Validity in Qualitative Research*. Lund, Sweden: Student-Litteratur

Kvale, S. (1994). *Validation as Communication and Action*. Paper Presented at the Annual Meeting of the American Education Research Association, New Orleans

Lambin, J. J. (2000). *Market-Driven Management. Strategic And Operational Marketing*. Macmillan.

Lane, J. (1986). The Logic of Means-End Analysis. *Quality and Quantity, 20(1986), 339-356*

Langer, E. J. (1989a). *Mindfulness*. Addison-Wesley, Reading, MA

Langer, E. J. (1989b). Minding Matters: The Consequences of Mindlessness-Mindfulness. In: Berkowitz, L. (ed), *Advances in Experimental Social Psychology*. Academic Press, San Diego, CA 22, 137-373

La Piere, R. T (1934). Attitudes vs Actions. *Social Forces, 13*

Lawson, R. (1997). Consumer Decision Making Within a Goal-Driven Framework. *Psychology and Marketing, 14(5), 427-449*

Layder, D. (1993). *New Strategies in Social Research.* Polity Press.

Likert, R. (1932). A technique for the Measurement of Attitudes. *Archives of Psychology, 140, 5-53*

Lincoln, Y. S. and E. G. Guba (1985). *Naturalist Inquiry*, Beverly Hills, CA: Sage Publication

Lincoln, Y. S. and Guba, E. G. (2000). Paradigmatic Controversies, Contradictions, and Emerging Confluences. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research, Thousand Oaks, Sage 163-188*

Lindgreen, A. (2000). *The Emergence and Rise of Relationship Marketing*. Unpublished PhD Thesis, Cranfield University, UK

Liska, A. E. (1984). A Critical Examination of the Causal Structure of the Fishbein/Ajzen Attitude-Behavioural Model. *Social Psychology Quarterly, 47, 621-674*

Long, M. M., and Schiffman, L. G. (2000). Consumption Values and Relationships: Segmenting the Market for Frequency Programmes. *Journal of Consumer Marketing, 17(3), 214-232*

Magee, B. (1998). *The Story of Philosophy*. Dorling Kindersley

Mainland, D. (1998). Health and Demand for Food in Scotland: Economic and Demographic Effects. *British Food Journal 100 (6) 273-277*

Maio, G. R. and Olson, J. M. (1994). Value-Attitude-Behaviour Relations: The Moderating Role of Attitude Functions. *British Journal of Social Psychology, 33, 301-312*

Manstead, A. S. R. and Parker, D. (1995). Evaluating and Extending the Theory of Planned Behaviour. In: Stroebe, W. and Hewstone, M. (eds.), *European Review of Psychology, 6, 69-95*

Manyiwa, S. and Crawford, I. (2002). Determining Linkages between Consumer Choices in a Social Context and the Consumer's Values: A Means-End Approach. *Journal of Consumer Behaviour, An International review, 2 (1) 54-70*

Marsh, A. and Matheson, J. (1983). *Smoking Attitudes and Behaviour*. HMSO, London

Marshall, C. and G. B. Rossman (1999). *Designing Qualitative Research,* Sage Publication

McCarty, J. A., and Shrum, L. J. (1994). The Recycling of Solid Wastes: Personal Values, Value Orientations, and Attitudes About Recycling as Antecedents of Recycling Behavior. *Journal of Business Research, 30, 53-62*

McCracken, G. D. (1988). *Culture and Consumption: New Approach to the Symbolic Character of Consumer Goods and Activities*. Bloomington. In: Indiana University

McDonald, M. and Dunbar, I. (1998). *Market Segmentation. How to Do It, How to Profit from It.* Macmillan

McGuire, L. (1997). Case Studies: Story Telling or Scientific Research Method? In: Foster, Brown, and Steane (eds), *Case Study Methods*. Monash University, Melbourne

McMurry, N. N. (1963). Conflict in Human Values. *Harvard Business Review, 40, 130 – 145*

Midgley, M. (1981). Have We a Nature? In Potter, D., Anderson, J., Clark, J., Coombes, P., Hall, S., Harris, L., Holloway, C. and Walton, T. (eds.). *Society and the Social Sciences, an Introduction*, Routledge

Miles, M. B. and Huberman, A. M. (1994). *Qualitative Data Analysis*. Sage

Mitchell, D. C. (1983). Case and Situation Analysis. *Sociological Review 31 (2) 187-211.*

Montanari, M. (1994). *The Culture of Food*. Blackwell, Oxford.

Mulvey, M. S., Olson, J. C. and Celsi, R. L. (1994). Exploring the Relationships Between Means End Knowledge and Involvement. *Advances in Consumer Research 21, 51-57*

Munson, J. M. (1984). "Personal Values: Consideration of their Measurement and Application to Five Areas of Research Inquiry". In: Pitts, R. E. (ed.), *Personal Values and Consumer Psychology*. Lexington Books 13-33

Murcott, A. (1997). The Nation's Diet. An Overview of Early Results. *British Food Journal 99(3) 89-96*

Murgraff, V., White, D. and Phillips, K. (1998). Exploring "Means to an End": The Application of Bagozzi Theory to Riskier Single Occasion Drinking. *British Journal of Health Psychology 3 (2) 147-157*

Myers, J. M. (1976). Benefit Structure Analysis: A New Tool for Product Planning. *Journal of Marketing, 40 (October) 23-32*

Ness, T. E., and Stith, M. T. (1984). Middle- Class Values in Blacks and Whites. In: Pitts and Woodside (eds), *Personal Values and Consumer Psychology*. Lexington Books, 231 – 237.

Neuman, W. L. (1994). *Social Research Methods, Qualitative And Quantitative Approaches*, Allyn and Bacon

Newman, J. W. and Werbel, R. A. (1973). Multivariate Analysis of Brand Loyalty for Major Household Appliances. *Journal of Marketing Research, 10, 404-409*

Nicosia, F. M. (1966). *Consumer Decision Processes.* Prentice-Hall, Englewood Cliffs, NJ

Nielsen, N. A., Bech-Larsen, T. and Grunert, K. G. (1998). Consumer Purchase Motives and Product Perception: A Laddering Study on Vegetable Oil in Three Countries. *Food Quality and Preference 9 (6) 455-466*

Nord, W. R. and Peter, P. (1980). A Behavioral Modification Perspective on Marketing. *Journal of Marketing 44 (Spring), 36-47*

Oleson, V. L. (2000). Feminism and Qualitative Research at and into the Millennium. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research, 215-255*

Olson, J. And Reynolds, T. J. (1983). Understanding Consumers' Cognitive Structures: Implications for Advertising Strategy in L. Percy and A. Woodside (eds), *Advertising and Consumer Psychology, Lexington Books, Lexington, Mass.*

Olson, J. C. (1989). Theoretical Foundations of Means-End Chains. *Werberforschung and Praxis, 5, 174-178*

Ostrom, T. M., Prior, J. B. and Simpson, D. D. (1981). The Organization of Social Information. In: Higgins, E. T., Herman, C. P. and Zanna, M. P. (eds.), *Social Cognition*: The Ontario Symposium, Erlbaum, Hillsdale, NJ 3-38

Park, C. W., Hughes, R. W., Thukral, V., and Friedmann, R. (1981). Consumers' Decision Plans and Subsequent Choice Behavior. *Journal of Marketing, 45, 33-47*

Parker, D., Manstead, A. S. R. and Stradling, S. G. (1995). Extending the Theory of Planned Behaviour: The Role of the Personal Norm. *British Journal of Social Psychology, 34, 127-138*

Parkhe, A. (1993). Messy Research, Methodological Predispositions and Theory Development in International Joint Ventures. *Academy of Management Review 18 (2) 227-268*

Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods*. Sage

Perry, C. (1998). Processes of a Case Study Methodology for Postgraduate Research in Marketing. *The European Journal of Marketing 32 (9/10) 785-802*

Perry, C. (2001). Case Research in Marketing. *The Marketing Review, 1, 303-323*

Peter, J. P. and Olson, J. C. (1990). *Consumer Behavior*, Homewood, IL: Irwin

Pieters, R., Baumgartner, H. and Allen, D. (1995). A Means-End Chain Approach to Consumer Goal Structures. *International Journal of Research in Marketing, 12 (1995), 227-244*

Pieters, R. G. M. and Verplanken, B. (1995). Intention-Behaviour Consistency: Effects of Consideration Set Size, Involvement, and Need Recognition. *European Journal of Social Psychology 25, 531-543*

Pilgrim, F. J. (1957). The Components of Food Acceptance and Their Measurement. *American Journal of Clinical Nutrition, 5,171-175*

Powell, T. E and H. Valencia (1984). An Examination of Hispanic Subcultural and Regional Value Orientations. In: Pitts and Woodside (eds), *Personal Values and Consumer Psychology*. Lexington Books: 219 – 230.

Prakash, V (1984). Personal Values and Product Expectations. In: Pitts and Woodside (eds), *Personal Values and Consumer Psychology*. Lexington Books: 145 – 154.

Punch, M. (1994). Politics and Ethics in Qualitative Research. In: Denzin, N. K. and Lincoln, Y. S. (eds.), *Handbook of Qualitative Research*, Thousand Oaks, CA: Sage, 83-97

Qualls, W. J. (1984). Sex Roles, Husband-Wife Influence, and Family Decision Behaviour. *Advances in Consumer Research, 11, 270-275*

Randall, E. and Sanjur, D. (1981). Food Preferences-their Conceptualisation and Relationship to Consumption. *Ecology of Food and Nutrition, 11,151-161*

Rees, H. W. (1992a). Rules as Nonverbal Entities. In: Hayes, S. C. and Hayes, L. J. (eds.), *Understanding Verbal Relations.* Context Press, Reno, NV, 121-134

Rees, H. W. (1992b). Problem Solving by Algorithms and Heuristics. In: Hayes, S. C. and Hayes, L. J. (eds.), *Understanding Verbal Relations.* Context Press, Reno, NV, 153-180

Rees, H. W. (1994). Cognitive and Behavioural Approaches to Problem-Solving. In: Hayes, S. C., Hayes, L. J., Sato, M. and Ono, K. (eds.), *Behavioral Analysis of Language and Cognition.* Context Press, Reno, NV, 197-258

Reiss, A. J. Jr. (1979). Government Regulations of Scientific Inquiry: Some Paradoxical Consequences. In: Clockars, C. B. and O' Connor, F. W. (eds.), *Deviance and Decadence. The Ethics of Research with Human Subjects.* Berverly Hills, CA: Sage, 61-95

Reynolds, T. J. (1985). Implications for Value Research: A Macro Vs Micro Perspective. *Psychology and Marketing, 2 (4), 297-305*

Reynolds, T. J., Gengler, C. E. and Howard, D. J. (1995). A Means-End Analysis of Brand Persuasion Through Advertising. *International Journal of Research in Marketing 12 (1995) 257-266*

Reynolds, T. J. and Gutman, J. (1988). Laddering Theory, Method, Analysis and Interpretation. *Journal of Advertising Research – February / March: 11-31.*

Richardson, L. (1997). *Fields of Play: Constructing an Academic Life, New Brunswick, N. J.*: Rutgers University Press.

Richardson, L. (1994). Writing: A Method of Inquiry. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research, 516-529, Thousand Oaks, CA: Sage*

Richardson, N. J., Shepherd, R. and Elliman, N. A. (1993). Current Attitudes and Future Influences on Meat Consumption in the UK. *Appetite, 21, 41-51*

Richins, M. L. (1994). Valuing Things: The Public and Private Meaning of Possessions. *Journal of Consumer Research, 21(3), 504-521*

Rigaux-Bricmount, B. (1978). Explaining Marital Influences in the Family Economic Decision Making Process. In: Jain, S. C. (ed.), AMA 1978 Educators Proceedings. *American Marketing Association, 126-129*

Rim, Y. (1970). Values and Personality. *Personality 243 – 250*

Robson, C. (1993*). Real World Research: A Resource for Social Scientists and Practitioners-Researchers.* Oxford, Blackwell

Rokeach, M. J. (1968). *Beliefs, Attitudes and Values.* San Francisco: Jossey Bass.

Rokeach, M. J. (1973). *The Nature of Human Values.* New York: Random.

Romano, C. (1989). Research Strategies for Small Business: A Case Study. *International Small Business Journal 7 (4) 35-43*

Ronis, D. L., Yates, J. F. and Kirscht, J. P. (1989). Attitudes, Decisions, and Habits as Determinants of Repeat Behaviour. In: Pratkanis, A. R., Breckler, S. J. and Greenwald, A. G. (eds.), *Attitudes Structure and Function.* Erlbaum, Hillsdale, NJ, 213-240

Rosch, E. (1978). Principles of Categorisation. In: Rosch, E. and Lloyd (ed.), *Cognition and Categorisation.* Hillsdale, N.J.: John Wiley and Sons, 25-49

Rosenberg, M. (1956). Cognitive Structure and Attitudinal Effect. *Journal of Abnormal and Social Psychology, 53, 367-372*

Ross, L. (1977). Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process. In: Berkwitz, L. (ed). *Advances in Experimental Social Psychology*. New York: Academic Press 10, 174-221

Routledge (2000). *Concise Routledge Encyclopaedia of Philosophy*, Routledge

Ryan, M. J. and Bonfield, E. H. (1980). Fishbein's Intention Model: A Test of External and Pragmatic Validity. *Journal of Marketing, 44 (Spring), 82-95*

Ryan, K. E., Green, J. C., Lincoln, Y. S., Mathison, S. and Mertens, D. (1998). Advantages and Challenges of Using Inclusive Evaluation Approaches in Evaluation Practice. *American Journal of Evaluation, 19, 101-122*

Sartre, J. -P. (1946). *Influential, brief, statements of Sartre's Existentialist Views*: Philosophical Library

Scanzoni, J. (1977). Changing Sex Roles and Emerging Directions in Family Decisions Making. *Journal of Consumer Research 4 (December) 185-188*

Schaninger, C. M. and Allen, C. T. (1981). Wife's Occupation Status as a Consumer Behaviour Construct. *Journal of Consumer Research 8 (September) 189-196*

Scheurich, J. J. (1996). Validity. *International Journal of Qualitative Studies in Education, 9, 49-60*

Scheurich, J. J. (1997). *Research Methods in Postmodern*. London: Fulmer

Schiffman, L. G. and Kanuk, L. L. (2000). *Consumer Behaviour*. Prentice Hall

Schneier, C. E. (1974). Behaviour Modification in Management: A Review and Critique. *Academy of Management Journal, 17, 528-548*

Schwandt, T. A. (1989). Recapturing Moral Discourse in Evaluation. *Education Researcher, 18 (8) 11-16*

Schwandt, T. A. (1996). Farewell to Criteriology. *Qualitative Inquiry, 2, 58-72*

Schwartz, S. H. (1994). Are There Universal Aspects in the Structure and Contents of Human Values. *Journal of Social Issues, 50(4) 19-45*

Searle, J. (1999). *Mind, Language, and Society. Philosophy in the Real World.* Weidenfeld and Nicolson

Segall, M. H., Dasen, P. R., Berry, J. W. and Poortinga, Y. H. (1990). *Human Behaviour in Global Perspective: - An Introduction to Cross-Cultural Psychology.* Allyn and Bacon

Shafer, R. J. (1980). *A Guide to Historical Method,* Homewood, 1L: Dorsey

Shepherd, R. (1989). *Handbook of the Psychology of Human Eating.* John Wiley and Sons Ltd

Sheppard, B. H., Hartwick, J. and Warshaw, P. R. (1988). The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research. *Journal of Consumer Research, 15, 325-343*

Sheth, J. N., Newman, B. I., and Gross, B. L. (1991). Why We Buy What We Buy: A Theory of Consumption Values. *Journal of Business Research, 22(1991), 159-170*

Silverman, D. (1993). *Interpreting Qualitative Data: - Methods for Analysing Talk, Text and Interaction.* Sage Publication.

Sirsi, A. K, Ward, J.C. and Reingen, P. H. (1996). Micro Cultural Analysis of Variation in Sharing of Causal Reasoning About Behaviour. *Journal of Consumer Research 22 (March 1996): 345 – 370.*

Skinner, B. F. (1953). *Science and Human Behaviour.* New York: Mcmillan

Skinner, B. F. (1969). *Contingencies of Reinforcement: A Theoretical Analysis.* New York: Apple-Century-Crofts.

Skinner, B. F. (1974). *About Behaviourism.* Knopf, New York

Skinner, B. F. (1981). Behaviour or Cognition? In Potter, D., Anderson, J., Clark, J., Coombes, P., Hall, S., Harris, L., Holloway, C. and Walton, T. (eds.). *Society and the Social Sciences: - An Introduction,* Routledge

Smith, M. B. (1969). *Social Psychology and Human Values*. Chicago: Aldine

Soble, A. (1978). *Deception in Social Science Research: Is Informed Consent Possible*? Hastings Centre Report, 40-46

Sparks, P. and Shepherd, R. (1992). Self Identity and the Theory of Planned Behaviour: Assessing the Role of Identification with "Green Consumption". *Social Psychology Quarterly, 55, 388-399*

Sparks, P., Shepherd, R. and Frewer, L. J. (1995). Assessing and Structuring Attitudes Towards the Use of Gene Technology in Food Production: The Role of Perceived Ethical Obligations. *Basic and Applied Social Psychology, 16, 267-285*

Stake, R. E. (1994). Case Studies. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research. Sage.*

Stake, R. (2000). Case Studies. In: Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research*. Sage

Staats, A. W. (1975). *Social Behaviorism*. Homewood, IL: The Dorsey Press

Steenkamp, J. E. M. and van Trijp, H. C. M. (1996). Task Experience and Validity in Perceptual Mapping: A Comparison of Two Consumer-Adaptive Techniques. *International Journal of Research in Marketing, 13, 265-276*

Szanton, P. (1981). *Not Well Advised. New York*: Russell Sage Foundation and the Ford Foundation

Szybillo, G. J. and Sosanie, A. (1977). Family Decision Making: Husband, Wife, and Children. In: Perreault, W. D. (ed), *Advances in Consumer Research, 4, 46-49*

Terry, D. J. and O'Leary, J. E. (1995). The Theory of Planned Behaviour: The Effects of Perceived Behavioural Control and Self-Efficacy. *British Journal of Social Psychology, 34, 199-220*

Thompson, M. (2001). *Philosophy of Mind.* Hodder and Stoughton

Thompson, K. E. and Chen, Y. L. (1998). Retail Store Image: A Means-End Approach. *Journal of Marketing Practice: Applied Marketing Science 4 (6) 161-173*

Towler, G. and Shepherd, R. (1991). Modification of Fishbein and Ajzen's Theory of Reasoned Action to Predict Chip Consumption. *Food Quantity and Preference, 3, 37-45*

Troldahl, V. C., and Powell, F. A. (1965). A Short- Form Dogmatism Scale for Use in the Field Studies. *Social Force, 44 (1965), 211 – 215*

Tsoukas, H. (1989). The Validity and Idiographic Research Explanations. *Academy of Management Review, 24 (4) 551-561*

Tversky, A (1972). Elimination by Aspects: A Theory of Choice. *Psychology Review, 79 (July), 281-299*

Urmson, J. O. and J. Rée (eds.), *The Concise Encyclopaedia Of Western Philosophy and Philosophers*, Unwin Hyman.

Valette-Florence, P and Rapacchi, B. (1991). Improvements in Means-End Chain Analysis-Using Graph Theory and Correspondence Analysis. *Journal of Advertising Research, Feb/March, 1991.*

Veatch, R. M. (1996). From Nuremberg through the 1990s: The Priority of Autonomy. In: Vanderpool, H. Y. (ed), *The Ethics of Research Involving Human Subjects: Facing the 21st Century.* Frederick, MD: University Publishing Group, 45-58

Vesey, G. and P. Foulkes (1990). *Collins Dictionary of Philosophy*, Collins

Vinson, D. E., Scott, J. E. and Lamont, L. M (1977). The Role Of Personal Values in Marketing and Consumer Behavior. *Journal of Marketing, 14 (April) 44- 50.*

Walker, B. A. and Olson, J. C. (1991). Means-End Chains: Connecting Products with Self. *Journal of Business Research 22, 11-118.*

Watson, J. B. (1981). Are Mental Traits Inherited? In Potter, D., Anderson, J., Clark, J., Coombes, P., Hall, S., Harris, L., Holloway, C. and Walton, T. (eds.) *Society and the Social Sciences, an Introduction,* Routledge

Wells, W. C. and Gubar, G. (1966). The Life Cycle Concept in Marketing Research. *Journal of Marketing Research 3 (November) 355-363*

Wicker, A. W. (1969). Attitudes vs Actions: The Relationships of Overt Responses to Attitude Object. *Journal of Social Issues, 25.*

William, W. (1980). Do Trends in Attitudes Predict Trends in Behavior? In Olshavsk, R. (ed.), Attitudes Research Enters the 80s. *American Marketing Associations, Chicago*

Wind, Y. (1973). A New Procedure for Concept Evaluation. *Journal of Marketing, 37, 2-11*

Wolcott, H. F. (1990). *Writing Up Qualitative Research.* Sage Publications, Newbury Park, California

Wyer, R. S. and Srull, T. K. (1986). Human Cognition in Its Social Context. *Psychology Review, 93, 322-359*

Wyer, R. S. and Srull, T. K. (1989). *Memory and Cognition in its Social Context.* Erlbaum, Hillsdale, NJ

Yankelovich, D. (1981). *New Rules.* New York: Random House

Yin, R. K. (1994). Case Study Research: *Design and Methods. Newbury Park, CA*: Sage.

Young, S. and Feigin, B. (1975). Using the Benefit Chain For Improved Strategy Formulation. *Journal of Marketing, 39 (July): 72 – 74.*

Zettle, R. D. and Hayes, S. C. (1982). Rule-Government Behavior: A Potential Framework for Cognitive Behavioral Therapy. In: Kendall, P. C. (ed.), *Advances in Cognitive Behavioral Research and* Therapy. Academic Press, New York, 73-117

Zhao, J., He, N. and Lovrich, P. N. (1998). Individual Value Preference Among American Police Officers, The Rokeach Theory of Human Values Revisited. *Policing: An International Journal of Police Strategies and Management, 21(1), 22-37*

Zikmund, W. G. (2000). *Exploring Marketing Research.* Dryden Press, Orlando, Florida

APPENDIX 1

The Case Study Protocol

Basic Information

1. Case reference number ☐

2. Position of interviewee in the family:

   Mother ☐ Father ☐ Other (state) .....

3. Socio-Economic Group (Occupation of the Household Head)

   - Professional ☐
   - Managerial ☐
   - Administrative ☐
   - Supervisory ☐
   - Clerical ☐
   - Skilled manual ☐
   - Semi-skilled/ unskilled manual ☐

4. Number of children in age groups:

   - Less than 5 years old ☐
   - 5 years old, less than 16 years old ☐
   - 16 years old or older ☐

Guidelines for Data Collection[1]

1. Direct Observation (Pantry Audits)

Record of food items in stock

2. Interviews to establish food items taken on relevant consumption occasions

- ❖ Record of food items that the respondent chose for their own consumption on relevant consumption occasions

- **Breakfast**
- **Relevant mid week evening meal**
- **Sunday lunch meal**

[1] This guide is not a questionnaire. The responses were recorded on separate sheets.

- ❖ Record food items that respondent chose for the children's consumption at relevant consumption occasions

  - **Breakfast**
  - **Relevant mid week evening meal**
  - **Sunday lunch meal**

3. Elicitation of constructs used to describe the choices of food items and consumption occasions

(In-depth Interviews and construct direct elicitation techniques)

Asking respondents to **describe**, **compare**, and **differentiate**:

- Food choices for own consumption
- Food choices for others' consumption

4. Laddering Interviews: Establishing Consequences and Values

Asking 'why' questions about *food items, meal occasions* and *attributes* of the food items and meal occasions established in section 1

Below are examples of types of questions that could be asked. (The examples used start from response number 2 above)[2]:

[2] The reverse (inverse) version of the questions, e.g. 'why is that **not** important for you' are asked when the respondent indicates that the stimulus is not important to him or her

1. *Forward and reverse laddering*

'Why is that important/not important to you?'

Example: 'Why are roast potatoes important to you?'

2. *Imagining absences of stimulus and/or consequences*

'Imagine that you did not have------ (**the stimulus**), what do you think you would miss?'

Example: Imagine that you were given potaotoes that were not roast, what would you do about that?

3. Third-person reference or projection technique

Why do you think other people buy this for themselves or their children?

Example: 'Why do you think many people prefer roast potatoes on Sunday', or 'why do you think some people find it preferable to prepare roast potaoes for visitors on Sunday?'

APPENDIX 2

THE STUDY RESULTS

The research results: Case 1 179

The research results: Case 2 186

The research results: Case 3 193

The research results: Case 4 199

The research results: Case 5 205

The research results: Case 6 211

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The research results: Case 8 223

The Study Results: Case 1

Table A1: Background information: Case 1

1.	Occupation of the participant	Nurse
2.	Spouse's occupation	Ophthalmologist (Eye specialist)
3.	Number of children	1 eight-year old daughter
4.	Type of family accommodation	3 bedrooms, semi-detached house

Table A2: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 1

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother, Daughter	Cereals (Weetabix), Jordan's crunch's, cornflakes, toast tea, apple juice, squash	-In-depth interviews of the participant -Pantry audits
Evening Meal occasion ("supper")	Mother, daughter, father	Chicken pieces in sauce, beef, potatoes, shepherd's pie, runner beans, ice cream	-Interviewing mother and father -Pantry audits
Lunch on Sunday	Mother, daughter, father	Sandwiches, tea, fruit juice (orange, apple juice)	-Interviewing mother and father -Food records from pantry audits

Figure A1: Ladders for breakfast, evening meals, Sunday lunch, and the food choices on the meal occasions: Case 1

Ladders for the breakfast occasion and the food choices

1. Breakfast ····· a sit down meal —— good family routine encourages family harmony —— builds family relationships

2. Tea ····· early morning —— wakes me up —— makes me feel good all day

3. Tea····· sugar free —— good taste —— I enjoy my tea without sugar

4. Tea····· no milk —— good taste —— I enjoy my tea without milk

5. Bread ····· wheat bread —— contains more fibre —— good for health —— to live a healthy life

6. Toast ····· Tradition —— I just do it, I don't why

7. Cereals ····· give me chance to take full cream milk —— good for "R" [daughter] and for me —— we both need to put on more weight after losing weight in Mali —— good for our health

8. Cereals ····· without too much sugar —— she can balance between health and taste —— trains her to enjoy food without too much sugar —— protect her teeth —— save her dental bills in future —— she can have piece of mind when she grows up

9. Cereals ····· without too much sugar —— trains daughter to enjoy food without too much sugar —— to preserve her health —— It is my responsibility to protect her health

10. Corn flakes ····· I eat them occasionally —— good taste when eaten occasionally —— to enjoy what I eat

11. Apple juice and black currant squash ····· my daughter's own choice —— important to let her choose —— so that she enjoys drinks —— I get satisfaction from seeing her enjoying what she eats and drink

Ladders for the evening meal occasion and the food choices

12. Evening meal occasion ····· family occasion —— for family togetherness —— builds relationships in the family

13. Meat ····· variety —— to avoid monotony in eating food —— so that I can continue to like meat —— to enjoy

14. Potatoes ..... boiled or baked or roast —— for variety —— to enjoy potatoes and avoid monotony

Ladders for Sunday lunch and the food choices

15. Sunday Lunch ..... light meal —— one cooked meal per day, in the evening —— saves time —— everybody like it that way

16. Sandwich ..... good taste —— to enjoy what I eat

17. Sandwich ..... variety of fillings —— to enjoy different fillings of sandwiches

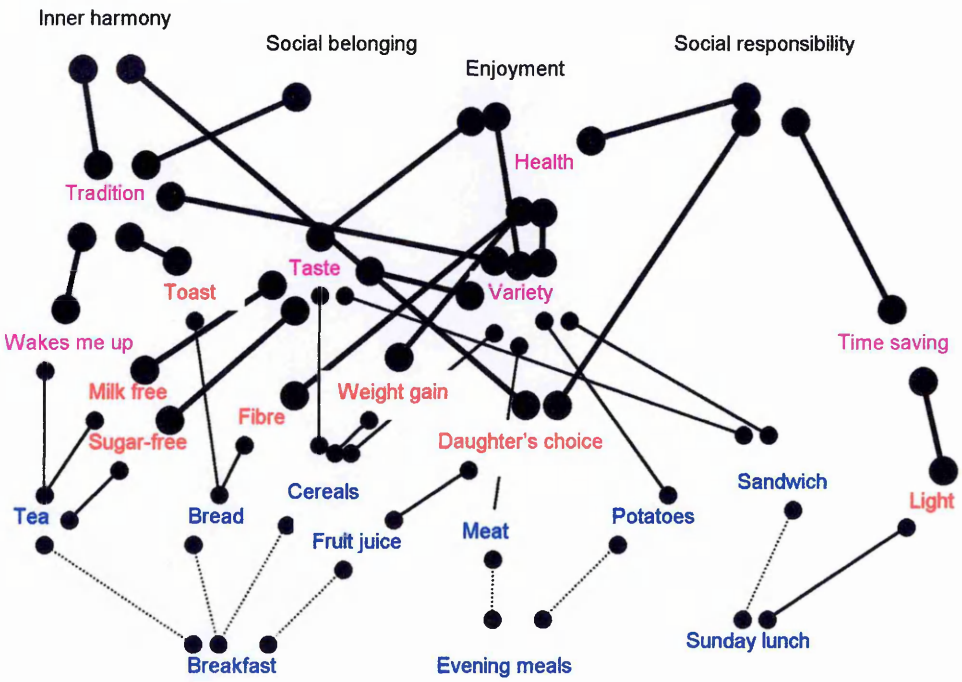
Table A3: Conceptual categories: Attributes, consequences, and the "end states" representing values: Case 1

Selected Food products and meal occasions	Attributes of meal occasions and food products	Consequences	"End states", representing values
Breakfast occasion	Sit down meal, good routine	Encourages family harmony,	Builds family relationships
Tea	Early morning, sugar free, milk free	Good taste, god taste, wakes me up reminds me of my family origin, to enjoy	Feeling good, to enjoy
Cereals	Wide choice, occasional food	Gives chance to take milk, weight gain, healthy, good taste, protect daughter's teeth, preserves daughter's health, saves dental bills	Personal responsibility, enjoyment
Fruit juice	Daughter's choice	To let the daughter choose, let the daughter enjoy what she eats	Satisfaction
Evening meal/ dinner	Simple meal, Family occasion	Saves time, togetherness	Convenience, builds relationships
Meat	Wide variety	To avoid monotony, to like what I eat	Enjoyment
Potatoes	Boiled, roast	Wide variety, good taste	To enjoy
Sunday lunch	Light meal	Saves time	Pleases family members
Sandwich	Wide variety, taste		To enjoy

Table A4: Value domains of the "end states": Case 1

"End states", representing values	Orientation of the "end states"	Values domain
Builds family relationships	Others	Social belonging
Feeling good	Self	Inner harmony
To enjoy (enjoyment)	Self	Enjoyment
Personal responsibility	Others	Social responsibility
Satisfaction	Self	Inner harmony
Pleases family members	Others	Social belonging
Convenience	Self, others	Inner harmony, social responsibility

Figure A2: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 1



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table A5: The number of direct linkages between the conceptual categories in the Hierarchical Value Map: Case 1

	Choices	Attributes	Consequences	Values
Choices	-	7	6	0
Attributes	-	-	6	2
Consequences	-	-	-	6
Values				-

The research results: Case 2

Table A6: Background information: Case 2

1.	Participant's occupation	Teacher working part time
2.	Spouse's occupation	Architect
3.	Number of children	Two boys of 9 and 11 years old
4.	Types of family accommodation	3 bedrooms, detached house

Table A7: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 2

Meal occasion	Participating members of the family	Food eaten on the occasion	Sources of evidence
Breakfast	Mother	Bread, cereals, milk, orange juice	-Interviewing the mother -Pantry audits
Evening meal occasion ("tea time")	Mother Father Children	Chicken, beef, pork casserole, potatoes, rice, peas	-Interviewing the mother -Pantry audits
Sunday lunch	Mother, Father Children (Visitors)	Potatoes, beef, pork, chicken, lamb, broccoli, cauliflower, carrots	-Interviewing the mother, -Pantry audits

Figure A3: Ladders for the evening meals occasion, Sunday lunches*, and the food choices on the occasions: Case 2

Ladders for food choices on breakfast

1. Bread ····· toast —— get a treat —— to enjoy food —— its important to enjoy what we eat
2. Cereals····· wide variety—— avoid boredom —— to enjoy food
3. Cereals ····· quick meal —— convenience —— to feel good
4. Cereals ····· healthy —— good for children's health —— my responsibility to look after children's health
5. Milk ·····semi skimmed —— good for children's health —— my responsibility to look after children's health
6. Milk ····· semi skimmed —— for my health —— for a healthy life
7. Orange juice ····· has vitamins —— for good health —— for healthy life

Ladders for the evening meal occasions and the food choices on the occasion

8. Evening meal occasion ····· family time —— to be together as a family —— strengthen family relations
9. Potatoes ····· roast —— nice taste —— to give ourselves a treat —— to enjoy
10. Potatoes ····· fried —— we enjoy fried potatoes though they can be unhealthy if eaten too often —— important to enjoy food —— to enjoy life
11. Casserole ····· wide to variety —— to enjoy a wide variety of food
12. Casserole ····· easy cook —— saves time —— convenience
13. Rice ····· easy to prepare—— convenience —— makes life easy
14. Rice ····· tasty —— to enjoy food —— Important to enjoy what you eat

* Ladders of the breakfast occasion could not be elicited from the participant

Ladders for Sunday lunch and the food choices on the occasion

15. Sunday lunch ····· family occasion —— builds family bond

16. Potatoes ····· roast —— fatty —— enjoy them

17. Potatoes ····· roast —— easy to cook —— convenience

18. Meat ····· roast —— easy to cook —— convenience

19. Meat ····· wide variety —— to enjoy different kinds of meat

20. Meat ····· good tasty —— to enjoy meat

21. Meat ····· it is healthy —— for good health —— quality life

22. Vegetables ····· tasty —— to enjoy what we eat

23. Vegetables ····· The are healthy —— to live an active and independent life

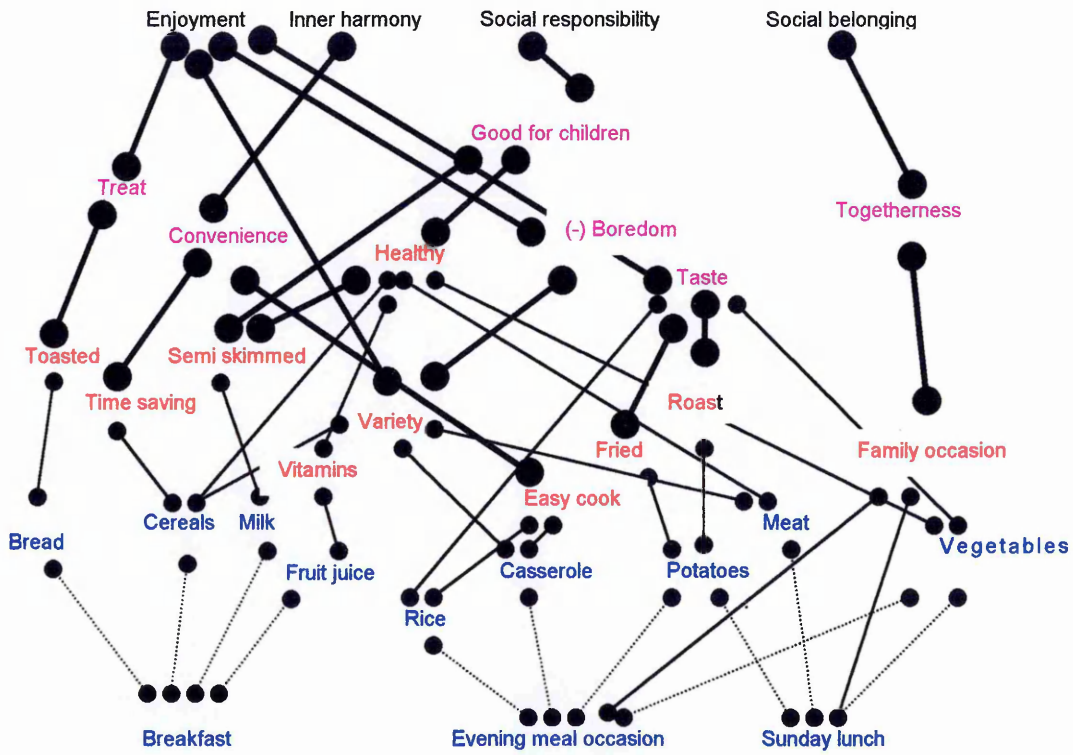
Table A8: Conceptual categories: Attributes, consequences, and the "end states" representing values: Case 2

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Bread	Toast	Get a treat, to	To enjoy
Cereals	Wide variety, quick meal, healthy	Avoid boredom, convenience, good for children's health	To enjoy, feeling good, responsibility
Milk	Semi skimmed	Good for children, for my healthy	Responsibility, Healthy life
Orange juice	Has vitamins	Good Health	Healthy life
Potatoes	Roast, fried, boiled, fatty, easy cook	To enjoy, convenience	To enjoy
Rice	Easy to prepare, tasty	Saves time, to enjoy	Convenience, easy life
Casserole	Wide variety, easy cook	convenience	To enjoy
Meat	Roast, wide variety, healthy, tasty	To enjoy	Convenience, enjoy life, feel happy
Vegetables	Tasty, healthy	-	To enjoy, active life
Sunday lunch	Family occasion	-	To build family bond
Evening meal	Family occasion	Togetherness	To enhance family relations

Table A9: Values domains of the "end states": Case 2

"End states", representing values	Orientation of the "end states"	Values domain
Enjoy life	Self	Enjoyment
Feeling good	Self	Inner harmony
Responsibility	Others	Social responsibility
Healthy life	Self	Inner harmony
Saves time	Self, others	Inner harmony, social responsibility
Easy life	Self	Inner harmony
Convenience	Self, others	Inner harmony, social responsibility
Feel happy	Self	Inner harmony
Active life	Self	Inner harmony
Family bond	Others	Social responsibility

Figure A4: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunches: Case 2



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table A10: The number of direct linkages between conceptual categories: Case 2

	Choices	Attributes	Consequences	Values
Choices	-	**14**	**1**	**0**
Attributes	-	-	**9**	**0**
Consequences	-	-	-	**6**

The research results: Case 3

Table A11: Background Information: Case 3

1. Participant's Occupation	Part-time office assistant
2. Spouse's occupation	Middle Management
3. Number of children	Two children of 14 and 16 years of age
4. Type of family accommodation	3 bedrooms, semi-detached, owner-occupied house

Table A12: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 3

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Participant (Mother)	Cereals, milk, tea	-Interviews of the participant -Pantry audits
Evening Meal occasion ("dinner")	Mother, children, father	Potatoes, Vegetables, Meat	-Interviews of participant and father
Sunday Lunch	Mother, children, father	Potatoes, Beef, Chicken, Pork, Lamb, Broccoli, Cauliflower, Carrots, Yorkshire pudding	-Interviews -Pantry audits

Figure A5: Ladders for breakfast, evening meals, Sunday lunch, and the food choices on the occasion: Case 3

Ladders for the breakfast occasion and the food choices

1. Breakfast ····· take alone —— for convenience —— to please everybody
2. Cereals ·····frosted wheat —— sugar coated —— good taste —— I enjoy them
3. Milk ····· full fat —— more flavour —— enjoyable
4. Tea·····hot drink ——warmth —— healthy

Ladders for the evening meal occasion and the food choices

5. Evening meal ·····family occasion —— builds relationship
6. Potatoes ····· staple food——for filling —— satisfying
7. Vegetables····· They are healthy —— for healthy life
8. Vegetables·····wide variety —— to enjoy
9. Meat ····· wide variety —— good taste —— to enjoy

Ladders for Sunday lunch and the food choices

10. Sunday lunch ····· social event —— builds relationships —— keeps family together
11. Vegetables····· two kinds —— it a tradition
12. Potatoes ····· roast —— it is tradition
13. Potatoes ····· staple food —— filling —— satisfying all day
14. Meat ····· wide variety —— to enjoy a variety of meat
15. Yorkshire pudding ····· it is nice — we enjoy them

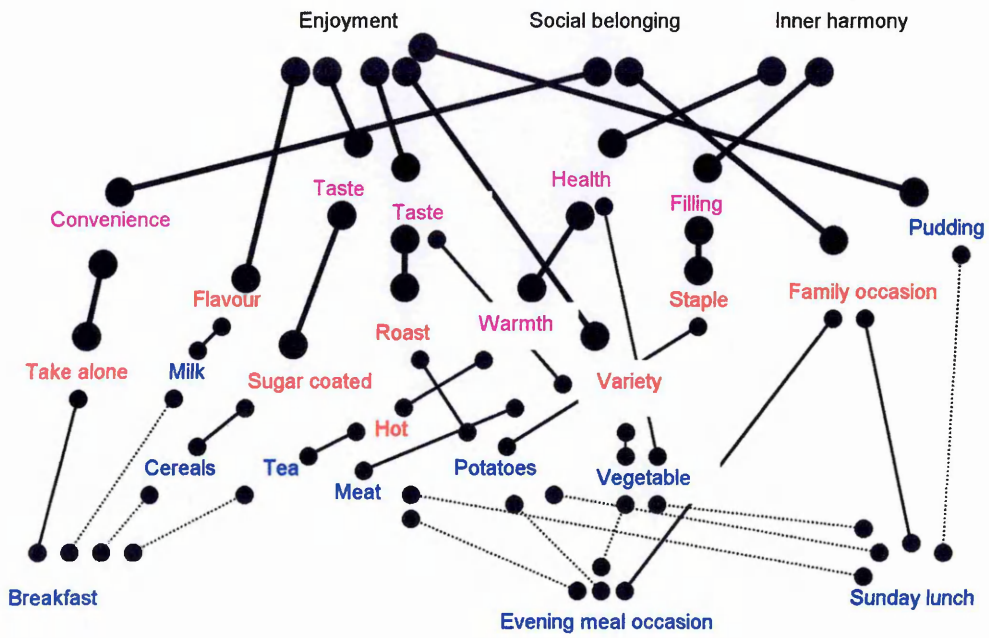
Table A13: Conceptual categories: Attributes, consequences, and values: Case 3

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Breakfast	Take alone	Convenience	Please everybody
Cereals	Sugar-coated	Good taste	I enjoy them
Milk	Full-fat, more flavour		I enjoy it
Tea	Hot drink	Get warmth	Healthy
Evening meal	Dinner, family occasion		Builds relationship
Potatoes	Staple food, roast	Filling	Satisfying
Vegetables	Healthy, wide variety, two kinds		Health life, to enjoy, tradition
Meat	Wide variety	Taste	To enjoy
Sunday lunch	Social occasion	Builds relationships	Keeps family together
Yorkshire pudding			To enjoy

Table A14: Classification of "end states" into the domains of values: Case 3

"End states"	Orientation of the "end states"	Values domains
Makes everybody happy	Others	Social responsibility
Enjoyment	Self	Enjoyment
Healthy life	Self	Inner harmony
Builds relationship	Others	Social belonging
Satisfying	Self	Inner harmony
To keep tradition	Self/others	Social belonging, Inner harmony
Keeps family together	Others	Social responsibility

Figure A6: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunches: Case 3



Key:

Stimuli used in laddering	Stimuli
Attributes	Attribute
Consequences	Consequence
Values	Values

Table A15: The number of direct linkages between conceptual categories: Case 3

	Choices	Attributes	Consequences	Values
Choices	-	10	2	1
Attributes			5	2
Consequences				5

The research results: Case 4

Table A16: Background information: Case 4

1.	Participant's Occupation	Teacher, working part-time
2.	Spouse's occupation	Housing safety engineer
3.	Number of children	Two children of 14 and 16 years of age
4.	Type of family accommodation	4 bedrooms, detached, owner-occupied house

Table A17: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 4

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother	Bread, tea	-Interviews of the participant -Pantry audits
Evening Meal occasion	Mother, Children, Father	Potatoes, carrots, broccoli, cabbage, cauliflower, pork, chicken, lamb	-Interviewing the participants -Pantry audits
Sunday Lunch	Mother, Father, Children, Visitors,	Potatoes, chicken, pork, turkey, broccoli, cauliflower, carrots	-Interviewing participant

Figure A7: Ladders for breakfast, evening meals, Sunday lunch, and the food choices on the occasions: Case 4

Ladders for food choices on breakfast occasion

1. Breakfast ····· take alone —— convenience —— to have peace of mind
2. Bread ····· toast —— it is a habit
3. Bread ····· brown —— natural —— Health
4. Tea ····· hot —— refreshing —— Feeling good

Ladders for evening meal occasions and the food choices

5. Evening meal ····· family time —— togetherness to —— preserve family relations
6. Potatoes ····· boiled —— good taste —— to enjoy
7. Potatoes ····· boiled —— wide variety —— to enjoy
8. Vegetables ····· cheap —— buy what we can afford —— keeps us happy
9. Vegetable ····· healthy food —— Healthy life
10. Vegetables ····· easy to cook —— convenience —— Feeling good
11. Meat ····· balanced diet —— healthy lives for the family
12. Meat ····· white meat —— healthy food —— good for health

Ladders for Sunday lunch and the food choices

13. Sunday lunch ····· social event —— to please friends —— to keep relations
14. Potatoes ····· roast —— tradition
15. Meat ····· white —— healthy life —— satisfying life
16. Meat ····· variety —— to avoid boredom —— to keep on enjoying meat
17. Vegetables ····· variety —— to enjoy
18. Vegetables ····· healthy —— for healthy life

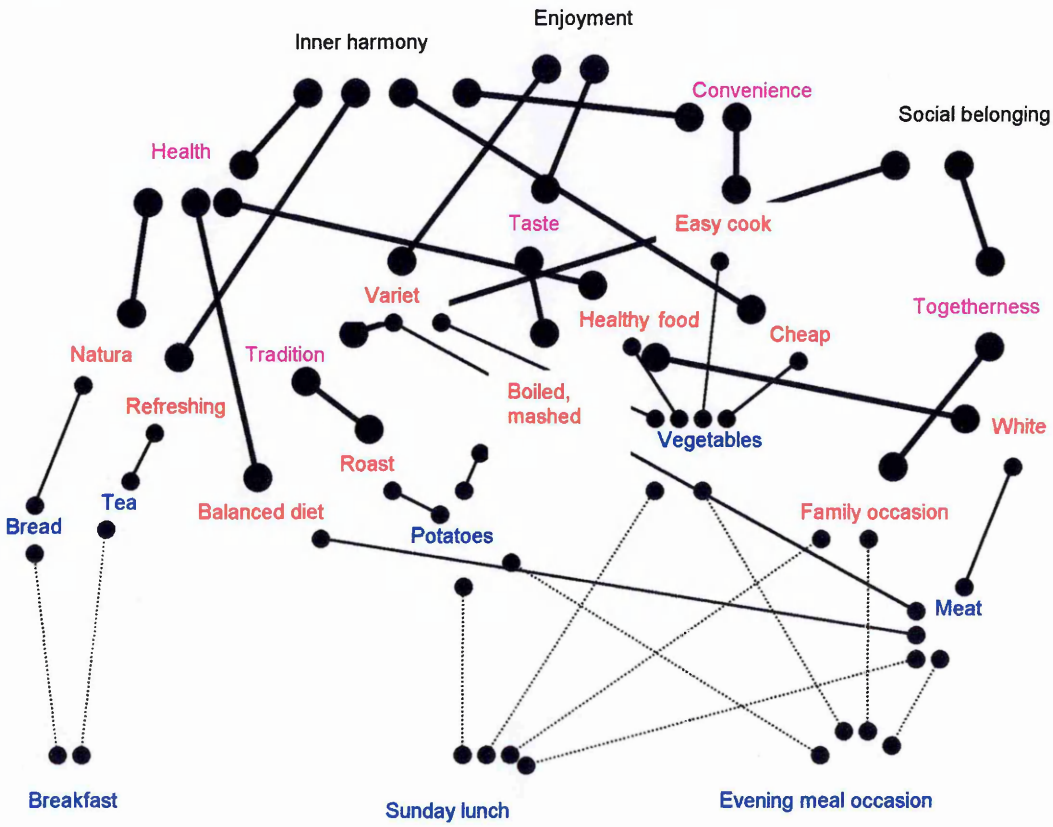
Table A18: Conceptual categories: Attributes, consequences, and "end states", representing values: Case 4

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Bread	Toast, brown, natural		Good health
Tea	Hot	Refreshing	Feeling good
Evening meals	Dinner, family occasion	Togetherness	To preserve family relations
Sunday lunch	Social event	To please friends	To keep relations
Potatoes	Boiled, roast	Good taste, wide variety	To enjoy, tradition
Vegetables	Cheap, healthy, easy to cook, wide variety	Healthy life, convenience	Feeling good, keeps us happy, healthy life, to enjoy
Meat	Balanced diet, white, wide variety	Healthy life, convenience, avoid boredom	Family health, own health, satisfying, enjoyment

Table A19: Classification of "end states" into the domains of values: Case 4

"End states"	Orientation of "end states"	Values domain
Peace of mind	Self	Inner harmony
Own health	Self	Inner harmony
Family health	Self, others	Inner harmony, Social responsibility
Feeling good	Self	Inner harmony
To keep us happy	Self, Others	Inner harmony, social responsibility
To enjoy	Self	Enjoyment
To keep relations	Self, Others	Social belonging
Tradition	Self, others	Inner harmony, social belonging
Satisfying life	Self	Inner harmony

Figure A8: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunches: Case 4



Key:

Stimuli used in laddering	Stimuli
Attributes	Attribute
Consequences	Consequence
Values	Values

Table A20: The number of direct linkages between conceptual categories: Case 4

	Choices	Attributes	Consequences	Values
Choices	-	13	0	0
Attributes	-	-	7	1
Consequences	-	-	-	4
Values	-	-	-	-

The research results: Case 5

Table A21: Background information: Case 5

1.	Participant's Occupation	Not formally employed
2.	Spouse's occupation	Minister of religion
3.	Number of children	Four children aged 10, 12, 14 and 16 years of age
4.	Type of family accommodation	4 bedrooms, detached house

Table A22: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 5

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother, Children	Cereals, milk, tea, bread	-Interviews: Mother
Evening Meal occasion	Mother, Father Children,	Beef, chicken, pork, lamb, potatoes, carrots, peas, cauliflower	-Interviews -Pantry audits
Sunday Lunch	Mother, Father, Children, (Visitors)	Beef, chicken, pork, lamb, potatoes, carrots, peas, cauliflower	-Interviews: Mother

Figure A9: Ladders for breakfast, evening meals, Sunday lunch, and the food choices on the occasions: Case 5

Ladders for food choices on breakfast*

1. Cereals ····· low sugar content —— health
2. Cereals ····· high fibre content —— health
3. Cereals ····· sweet —— treat for children —— to please children
4. Milk ····· semi skimmed —— less fat content —— health
5. Milk ····· whole milk —— high calcium content —— strong bones and teeth for children —— good health for children —— my responsibility
6. Bread ····· toast —— hot and crunchy —— to enjoy

Ladders for evening meals occasion and the food choices

5. Evening meal ····· sit down meal for family —— train children good manners —— motherly responsibility
6. Casserole ····· easy and quick to prepare —— saves time —— makes me happy
7. Casserole ····· wide variety —— to enjoy food
8. Potatoes ····· mashed —— variety —— to enjoy food
9. Potatoes ····· they are healthy —— for health
10. Vegetables ····· wide variety —— to enjoy food
11. Vegetables ····· healthy food —— healthy life

Ladders for Sunday lunch and the food choices

12. Sunday lunch ····· family meal —— togetherness —— family security
13. Meat ····· wide variety —— balanced diet —— Quality life
14. Meat ····· roast —— tradition
15. Potatoes ····· roast —— to enjoy
16. Potatoes ····· roast —— tradition
17. Vegetables ····· wide variety —— balanced diet —— Healthy life
18. Vegetables ····· two kinds for the meal —— healthy

* Ladders of the breakfast occasion were not elicited from the participant

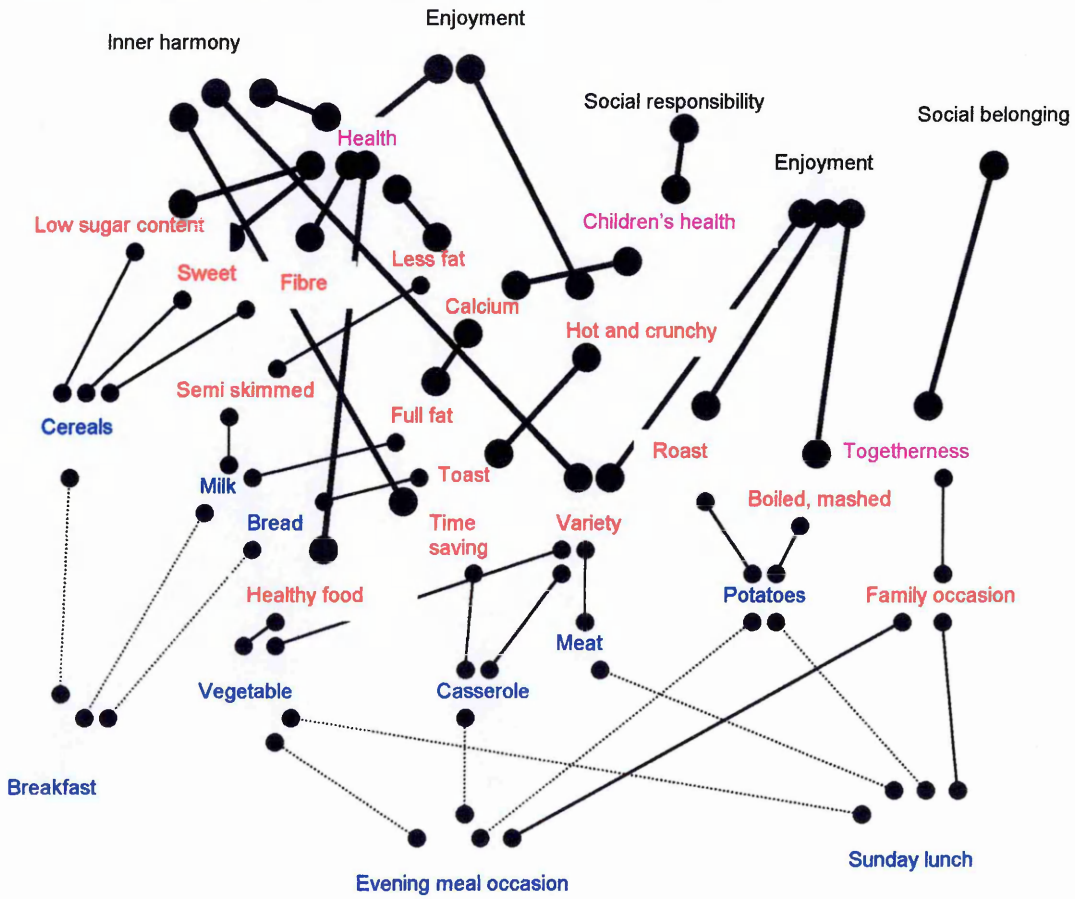
Table A23: Conceptual categories: Attributes, consequences, and "end states" representing values: Case 5

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Cereals	Low sugar contents, high fibre content, sweet	A treat for children	Healthy life, to please children
Milk	Semi-skimmed, less fat content, whole milk, high calcium content	Strong bones and teeth for children	Healthy life, motherly responsibility
Bread	Toast, hot, crunchy		To enjoy
Evening meal occasion	Sit down – family meal occasion	To train children good manners	Motherly responsibility
Casserole	easy, quick	Wide variety, saves time	To enjoy
Meat	Wide variety, roast,	Balanced diet	Quality life, tradition
Potatoes	Mashed, roast, healthy	Variety	To enjoy, health, tradition
Vegetables	Wide variety, healthy, two kinds for a meal	Healthy food	To enjoy, healthy life

Table A24: Classification of "end states" into the domains of values: Case 5

"End states"	Orientation of the "end states"	Values domain
Mother's responsibility	Others	Social responsibility
To enjoy	Self	Enjoyment
Quality life	Self	Inner harmony
Tradition	Self, others	Inner harmony, social belonging
Children's health	Others	Social responsibility
Own healthy life	Self	Inner harmony
To please children	Others	Social responsibility

Figure A10: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunches: Case 5



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table A25: The number of direct linkages between conceptual categories: Case 5

	Choices	Attributes	Consequences	Values
Choices	-	15	0	0
Attributes	-	-	6	5
Consequences	-	-	-	5
Values	-	-	-	-

The research results: Case 6

Table A26: Background information: Case 6

1.	Participant's Occupation	Not formally employed
2.	Spouse's occupation	Skilled plumber
3.	Number of children	2 children, one of 8 years old and another of 6 years old
4.	Type of family accommodation	3 bedrooms, semi-detached house

Table A27: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 6

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother	Coco pops, semi-skimmed milk, tea	-Interviewing the mother -Pantry audits
Evening Meal occasion	Mother, children, father	On interview day: burgers, chicken, beef, salad in bun, oven chips	-Interviewing the mother
Sunday Lunch	Mother, Father, children,	Potatoes, chicken, pork, dumplings, mixed vegetables	-Interviewing the mother -Pantry audits

Figure A11: Ladders for meal occasions and the food choices on breakfast, evening meals, and Sunday lunch: Case 6

Ladders for food choices on the breakfast occasion

1. Coco pops cereals ····· chocolate taste —— tastes nice —— to enjoy

2. Cereals····· wide variety —— choice for children —— to please the children —— they eat when happy —— my responsibility to make sure children eat well

3. Milk ····· semi skimmed —— gives me nice figure —— I feel happy

4. Milk ····· semi skimmed —— healthy food —— healthy life

5. Tea ····· like it hot —— get me going —— feel good

Ladders for evening meals occasion and the food choices

6. Dinner ·····family occasion—— get together with children —— get togetherness as a family

7. Chicken salad ····· get a variety of food —— habit

8. Potatoes ····· oven chips —— less fatty —— for healthy life —— to live long

9. Salad in bun ····· variety of vegetables —— healthy food —— Good health

Ladders for Sunday lunch and the food choices

10. Sunday lunch ····· family meal —— be together —— builds relations —— keep family relations warm

11. Potatoes ····· boiled —— they are lovely —— I enjoy them

12. Potatoes ····· roast —— get a treat —— to enjoy

13. Meat ····· wide variety —— healthy life

14. Vegetables····· wide variety —— get a treat —— to please family members

15. Vegetables ····· mixed vegetables —— healthy foods healthy life

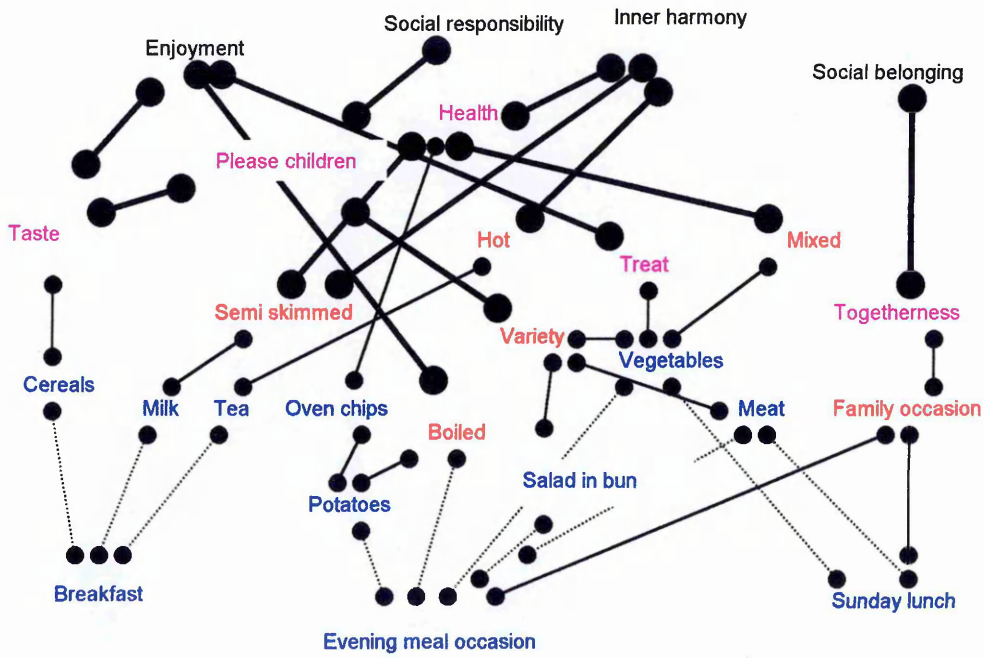
Table A28: Conceptual categories: Attributes, Consequences, and values: Case 6

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Cereals	Contain chocolate, wide variety, children's choice	Nice taste, to please children	To enjoy, motherly responsibility
Milk	Skimmed milk	Healthy body, nice figure	Feel good, health
Tea	Hot	Gets me going	Feel good
Evening meal	Dinner, family occasion	For togetherness	Family togetherness
Potatoes (including oven chips)	Less fat, roast, boiled, lovely food	Good health, treat	To live long, to enjoy,
Salad in bun	Contains a variety of vegetables	Healthy food	Good health
Sunday lunch		Family togetherness	Keep family relations warm

Table A29: Classification of "end states" into the domains of values: Case 6

"End states"	Orientation of the "end states"	Values domain
To enjoy life	Self	Enjoyment
Motherly responsibility	Others	Social responsibility
Feel good	Self	Inner harmony
Own health	Self	Inner harmony
Long life	Self	Inner harmony
Keep family relations warm	Others	Social belonging

Figure A12: Hierarchical Value Map: Food choices at breakfast, evening meal occasion, and Sunday lunches: Case 6



Key:

Stimuli used in laddering	Stimuli
Attributes	Attribute
Consequences	Consequence
Values	Values

Table A30: The number of direct linkages between conceptual categories: Case 6

	Choices	Attributes	Consequences	Values
Choices	-	10	3	0
Attributes	-	-	3	2
Consequences	-	-	-	5

The research results: Case 7

Table A31: Background information: Case 7

1. Participant's Occupation	Part-time Hair Dresser
2. Spouse's occupation	Transport Operator
3. Number of children	2 children, one 6 years old and the other 9 years old
4. Type of family accommodation	3 bedrooms, semi-detached house

Table A32: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 7

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother	Bread, Tea, Cereals (given to children)	Interviews
Evening Meal occasion	Mother, Father	Potatoes, Salad, Eggs	Interviewed the mother
Sunday Lunch	Mother, Father, children,	Potatoes, Beef, Chicken, Pork, Peas, Cabbage, Cauliflower, Broccoli, Yorkshire pudding	-Interviews -Pantry audits

Figure A13: Ladders for meal occasions and the food choices on breakfast, evening meal occasion, and Sunday lunch: Case 7

Ladders for food choices on breakfast

1. Tea ····· warm drink —— wakes me up —— Feeling good
2. Cheese ····· tasty —— I enjoy them
3. Bread ····· toast —— lots of goodness —— I enjoy it

Ladders for food choices on evening meals

4. Evening meal occasion ····· social occasion —— builds relationship
5. Potatoes ····· They fill —— satisfaction —— contented
6. Salads ····· appetisers —— help enjoy food —— enjoy life

Ladders for food choices on Sunday lunch

7. Sunday lunch ····· family time —— to please the family
8. Potatoes ····· staple food —— filling —— satisfying
9. Potatoes ····· roast —— good taste —— to enjoy
10. Meat ····· roast —— good taste —— to enjoy
11. Meat ····· wide variety —— to enjoy food
12. Vegetables ····· wide variety —— to enjoy
13. Vegetables ····· healthy foods —— active life

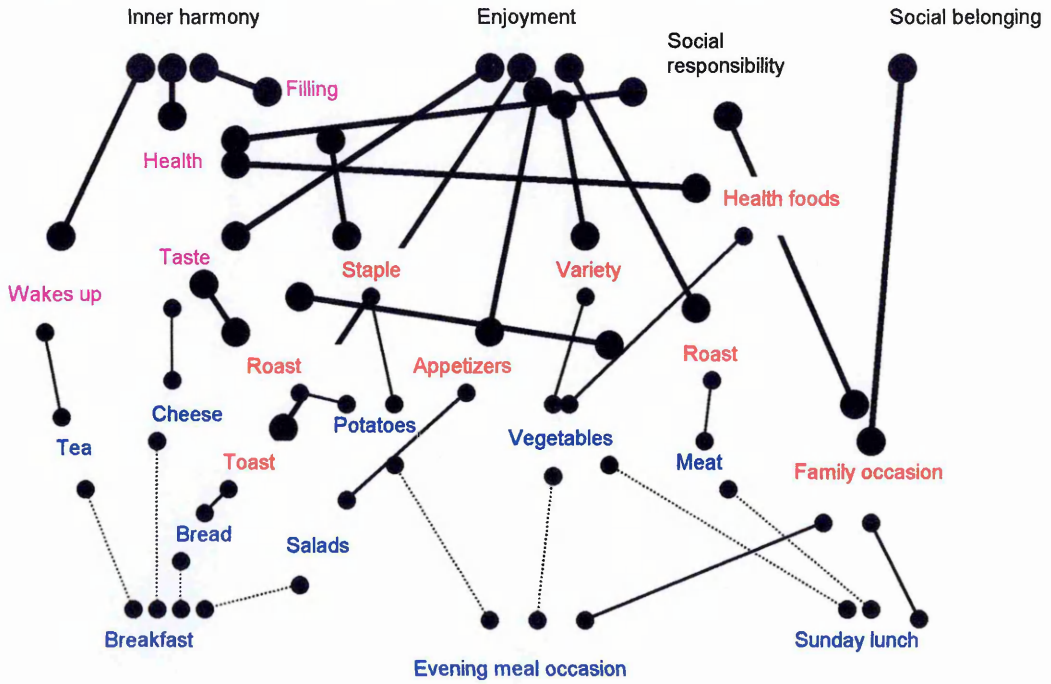
Table A33: Conceptual categories: Attributes, consequences, and the "end states", representing values: Case 7

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Bread	Toast	Lots of goodness	To enjoy
Cheese	Tasty		To enjoy
Tea	Warm	Wakes me up	I feel good
Cereals	Fattening, good for children, not for me	(-) fatten, vanity,	Children to grow well, For me to look good
Evening meal occasion	Dinner, social occasion	Togetherness	Builds relationships
Potatoes	Filling, roast	Satisfying	Feel good, enjoy
Salads		Enhances appetite	To enjoy, healthy life
Sunday lunch	Family time	Togetherness	To please the family
Meat	Wide variety, roast		To enjoy
Vegetables	Full of goodness	Good for children's health	Motherly responsibility

Table A34: Classification of "end states" into the domains of values: Case 7

"End states"	Orientation of the "end states"	Values domain
To enjoy	Self	Enjoyment
Feeling good	Self	Inner harmony
Children to grow well	Others/Self	Social responsibility
To look good/ vanity	Self	Inner harmony
Builds relationships	Others	Social responsibility
Healthy life	Self	Inner harmony
To please the family	Others	Social belonging

Figure A14: Hierarchical Value Map: Food choices at breakfast evening meal occasion, and Sunday lunches: Case 7



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table A35: The number of direct linkages between conceptual categories: Case 7

	Choices	Attributes	Consequences	Values
Choices	-	9	1	0
Attributes	-	-	13	4
Consequences	-	-	-	4
Values	-	-	-	-

The research results: Case 8

Table A36: Background information: Case 8

1. Participant's occupation	Not formally employed (qualified teacher)
2. Spouse's occupation	Administrative Officer
3. Number of children	4 children: - The eldest was 7 years old and youngest was 6 months old
4. Type of family accommodation	4 bedrooms, detached house

Table A37: Food choices at breakfast, evening meal occasion, and Sunday lunch: Case 8

Meal occasion	Family members who ate the food on the meal occasion	Food selected on the meal occasion	Sources of evidence
Breakfast	Mother	Toast, tea, cereals, milk, fruit juice	-Interviewing the mother, the father, and -Pantry audits
Evening Meal occasion	Mother, children, father	Potatoes, broccoli, carrots, chicken, pork, tuna, banana, orange fruit, biscuits	-Interviewing the mother, the father, and -Pantry audits
Sunday Lunch	Mother, Father, children, (Visitors)	Potatoes, chicken, apple pie, Yorkshire pudding, custard cream	-Interviewing the mother, father, -Pantry audits

Figure 15: Ladders for breakfast, evening meal occasion, and Sunday lunch: Case 8

Ladders for the breakfast occasion and food choices

1. Breakfast occasion ····· mum and children —— to make sure children eat well in the morning —— my responsibility as the mother
2. Cereals ····· fortified —— good for children's health —— my responsibility as the mother
3. Bread ····· toast —— taste —— to enjoy
4. Tea····· without milk —— taste —— to enjoy

Ladders for the evening meal occasion and the food choices

5. Evening meal ····· Family occasion —— togetherness —— Helps to preserve family relations
6. Potatoes ····· boiled —— filling —— satisfying
7. Potatoes ····· oven chips —— good taste —— to enjoy
8. Meat ····· wide variety —— good taste —— to enjoy
9. Chicken nuggets ····· Children love them —— Feel happy to see children eat what they want
10. Tuna····· good taste —— to enjoy
11. Vegetables ····· attractive colour —— to enjoy food
12. Vegetables ····· high roughage content —— healthy life

Ladders for the Sunday lunch and the food choices

13. Sunday lunch ····· social event —— builds relationships
14. Potatoes ····· roast —— good taste —— to enjoy
15. Meat····· roast —— tradition
16. Meat····· wide variety —— to enjoy
17. Vegetables —— high roughage content —— healthy
18. Apples ····· a treat —— to please visitors
19. Custard cream ····· a treat —— to please visitors —— builds relationship
20. Yorkshire pudding ····· a treat —— to please visitors builds relationships

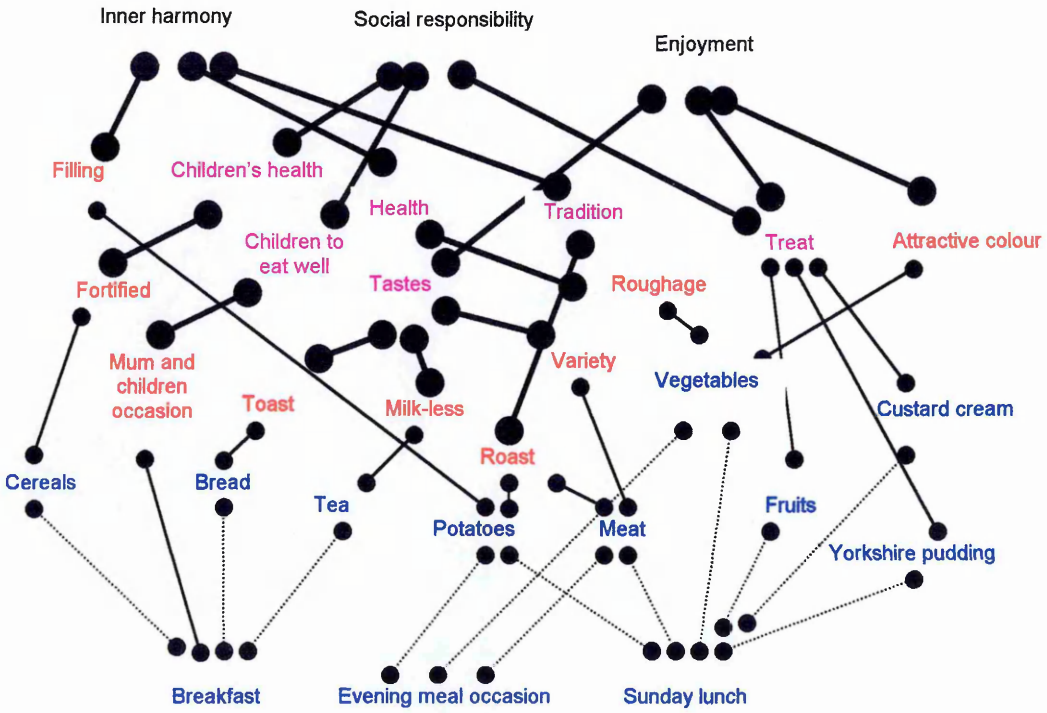
Table A38: Conceptual categories: Attributes, consequences, and values: Case 8

Stimulus	Attributes of the stimulus	Consequences	"End states", representing values
Breakfast	Mother and children's time	To ensure children eat well	Motherly responsibility
Bread	Toast	Good taste	To enjoy
Tea	Milk-free	(-)Taste of milk	Makes me sick
Cereals	Milk added, fortified, contain vitamins,	Good for children's health	Motherly responsibility
Evening meal	Family time	Togetherness	Helps to preserve family relations good
Potatoes	Boiled, filling, oven chips	Good taste	Satisfying, to enjoy
Vegetables	Good colouring, high roughage content	Good flavour, healthy life	To enjoy food, promotes good health
Chicken nuggets	-	Children love them	I feel happy to give children what they want
Tuna	Good taste	-	To enjoy
Sunday lunch	Social occasion	Togetherness	Builds relationships
Apple pie and custard cream	Good for visitors	To please visitors	Helps to build relationships
Yorkshire pudding	They are lovely	-	Tradition, builds relationships
Meat	White, roast	Good taste	To enjoy, tradition

Table A39: Classification of "end states" into the domains of values: Case 8

"End states"	Orientation of the "end states"	Values domain
To enjoy	Self	Enjoyment
Motherly responsibility	Others	Social responsibility
Satisfying	Self	Inner harmony
Please children	Others	Social responsibility
Builds relationships	Others	Social responsibility
Own Health	Self	Inner harmony
Preserve family relations	Others	Social responsibilities

Figure A16: Hierarchical Value Map Food choices on breakfast, evening meal occasion, and Sunday lunches: Case 8



Key:

Stimuli used in laddering — Stimuli

Attributes — Attribute

Consequences — Consequence

Values — Values

Table A40: Number of direct linkages between conceptual categories: Case 8

	Choices	Attributes	Consequences	Values
Choices	-	9	3	0
Attributes	-	-	6	2
Consequences	-	-	-	6
Values	-	-	-	-